



2026 Det-Tronics Product Catalog



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MULTISPECTRUM INFRARED

Note: Det-Tronics product videos can be found at: www.YouTube.com/@DetTronicsUSA/videos

X3301 Multispectrum Infrared Flame Detector



X3301 Multispectrum Infrared Flame Detector (Spec Sheet: 90-1218, 90-1219) establishes the benchmark in hydrocarbon based fire detection performance and false alarm rejection. The detector utilizes advanced signal processing algorithms supported by an embedded 32-bit microprocessor to provide continuous protection in the presence of false alarm sources and environments with infrared radiation present. Multiple sensitivity and output options are available enabling the X3301 to be used in a variety of applications such as offshore oil/gas platforms. Standard outputs include fire alarm, auxiliary alarm and fault relays, with RS-485 Modbus. Optional 0-20 mA, HART, Pulse, or Eagle Quantum Premier outputs are also available. Hangar Mode processing option provides an increased verification time to a sustained fire while maintaining extended detection range capability. Hangar mode provides additional false alarm rejection capability for applications that contain temporary sources of alarm.

- Model options available that are optimized for Aircraft Hangars, Turbines, and Automotive Paint Spray Booth applications.
- Models available with SIL 2 certification
- Increased detection range compared to traditional detectors
- Third-party certified performance to multiple fuel types
- Terminal block allows for Class X Pathway Designation per NFPA 72
- 125 feet (38.1m) of detection range on axis for methane
- Microprocessor controlled heated optics enable optimal performance in adverse environments
- Data logger for event time and date stamping
- Automatic o_i (optical integrity) continuously verifies each sensors ability to detect fire
- Calibrated manual testing/magnetic o_i , no test lamp required
- Four conduit entries for easy installation
- Division Approval Ratings: FM and CSA
- Zone Approval Ratings: FM, CSA, ATEX, and IECEx
- DNV, MED, ULC, USCG, EN 54 part 10 certified by VdS, LPCB, CPR
- AFNOR approved models available upon request (-NF)
- Meets Construction Product Regulation (CPR)
- Optional HART output, AMS aware, and FDT/DTM capable
- Tricolor LED on detector faceplate indicates detector status condition
- Automotive Model meets NFPA 33 response requirements for under 0.5 seconds

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X3301 Model Matrix

| MODEL | DESCRIPTION | |
|-------|---------------------------------|---------------------------------------------|
| X3301 | Multispectrum IR Flame Detector | |
| | TYPE | MATERIAL |
| | A | Aluminum (AL) |
| | S | Stainless Steel (SS) |
| | TYPE | THREAD TYPE |
| | 4M | 4 Port, M25 |
| | 4N | 4 Port, 3/4" NPT |
| | TYPE | OUTPUTS |
| | 11 | Relay |
| | 13 | Relay and 0-20 mA |
| | 14 | Eagle Quantum Premier (EQP) |
| | 15 | Relay and Pulse |
| | 21 | Relay - Automotive |
| | 22 | Eagle Quantum Premier - Automotive |
| | 23 [†] | HART, Relay, and 0-20 mA |
| | TYPE | APPROVALS [‡] |
| | B | INMETRO (BRAZIL) |
| | K | EAC (KAZAKHSTAN) |
| | S | SIL |
| | T ^{§§} | SIL/FM/CSA/ATEX/IECEX/ULC [§] /VdS |
| | U | UKRCEPRO (UKRAINE) |
| | W ^{§§} | FM/CSA/ATEX/IECEX/ULC [§] /VdS |
| | Y | CHINA |
| | TYPE | CLASSIFICATION |
| | 1 | Division/Zone Ex d e |
| | 2 | Division/Zone Ex d |

[†] Type 23 Output - When HART output chosen detector does not have RS-485 communication available.

[‡]Type Approvals can use one or more letters to designate the approvals of the product.

[§] ULC approval applies to output types 11, 13, 15, 21, and 23. Certified by QPS Evaluation Services, Inc.

^{§§} Type T and W Approvals: EN-54Part 10 only available on Output Types 11, 13, and 23 with CPR, LPCB, AFNOR, and VdS approvals. EN54 Part 10 only available on Output Type 14 with CPR and LPCB approvals. .

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Table A1 - X3301 Software Part Number Configuration Matrix***

| Dash | Sensitivity | Alarm Relay | Aux Relay | Fault Relay | Special |
|--------|-------------|------------------------------|------------------------------|---------------------------|-------------------------------------------|
| -001 | Medium | De-energized Non-latching | Energized Non-latching | Energized Non-latching | None |
| -002 | Very High | De-energized Non-latching | Energized Non-latching | Energized Non-latching | None |
| -003 | Very High | De-Energized Non-latching | Energized Non-latching | Energized Non-latching | Single-Stage Automotive |
| -004* | Low | De-energized Non-latching | Energized Non-latching | Energized Non-latching | 3 min o _i 10 fails to fault |
| -005† | Medium | De-energized Non-latching | De-energized Non-latching | Energized Non-latching | Automotive |
| -010* | T-Low | De-energized Non-latching | Energized Non-latching | Energized Non-latching | None |
| -012** | High | De-energized Non-latching | Energized Non-latching | Energized Non-latching | None |
| -038** | High | De-energized Non-latching | Energized Non-latching | Energized Non-latching | Hangar‡ |
| -034 | Medium | De-energized Non-latching | De-energized Non-latching | Energized Non-latching | Hangar‡ |
| -035 | Very High | De-energized Non-latching | De-energized Non-latching | Energized Non-latching | Hangar‡ |

* Compatible with EQP Controller firmware 11.08 and later.

** Compatible with EQP Controller Firmware 17.16 and X3301 LON Firmware 6.12 and later.

*** Not all configurations are performance approved. See applicable certificates and instruction manual appendices for details.

† Available only on type 21 & 22 (Automotive) output.

‡ See 95-8735 Hangar Mode Addendum and Consult Factory for Recommendations.

NOTE: The X3301 window heaters are set to 100% as a default but can be configured from 0-100% with the Enhanced Flame Inspector. Please refer to section E.3 for more details.

Application Guidelines

The following criteria should be considered when choosing a sensitivity level for the intended application:

- Potential for interference from IR emitting sources
- Speed of response based on fuel type and fire size
- Distance between the hazard and the flame detector

These are typical industry application settings. They may not be applicable to all installations. Contact factory for additional application guidance.

| | |
|-------------------------|-------------------------|
| Offshore | 001, 004 |
| Turbine | 010, 001 |
| Compressor | 001, 010 |
| Hangar | 034 or 035 |
| Petroleum Loading Racks | 034 |
| Automotive | 005, 003 (Single Stage) |
| High IR Backgrounds | 004, 010, 034 |

NOTE: Latching relays cannot be used in voted systems.

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X3301 Multispectrum Infrared Flame Detector - SIL / FM / CSA / ATEX / IECEx / ULC / VdS

| Model | Part Number * | Material | Threads | Output | Ex d e | Ex d |
|-----------------------------------------------------------------------------|---------------|----------|---------|---------------|--------|------|
| X3301A4N11T1 | 028234-XXX | AL | 3/4 NPT | Relay | X | |
| X3301A4M11T1 | 028235-XXX | AL | M25 | Relay | X | |
| X3301S4N11T1 | 028236-XXX | SS | 3/4 NPT | Relay | X | |
| X3301S4M11T1 | 028237-XXX | SS | M25 | Relay | X | |
| X3301A4N11T2 | 028238-XXX | AL | 3/4 NPT | Relay | | X |
| X3301A4M11T2 | 028239-XXX | AL | M25 | Relay | | X |
| X3301S4N11T2 | 028240-XXX | SS | 3/4 NPT | Relay | | X |
| X3301S4M11T2 | 028241-XXX | SS | M25 | Relay | | X |
| X3301A4N13T1 | 028258-XXX | AL | 3/4 NPT | Relay/0-20 mA | X | |
| X3301A4M13T1 | 028259-XXX | AL | M25 | Relay/0-20 mA | X | |
| X3301S4N13T1 | 028260-XXX | SS | 3/4 NPT | Relay/0-20 mA | X | |
| X3301S4M13T1 | 028261-XXX | SS | M25 | Relay/0-20 mA | X | |
| X3301A4N13T2 | 028270-XXX | AL | 3/4 NPT | Relay/0-20 mA | | X |
| X3301A4M13T2 | 028271-XXX | AL | M25 | Relay/0-20 mA | | X |
| X3301S4N13T2 | 028272-XXX | SS | 3/4 NPT | Relay/0-20 mA | | X |
| X3301S4M13T2 | 028273-XXX | SS | M25 | Relay/0-20 mA | | X |
| X3301A4N23T1 | 028244-XXX | AL | 3/4 NPT | Rly/0-20/HART | X | |
| X3301A4M23T1 | 028245-XXX | AL | M25 | Rly/0-20/HART | X | |
| X3301S4N23T1 | 028246-XXX | SS | 3/4 NPT | Rly/0-20/HART | X | |
| X3301S4M23T1 | 028247-XXX | SS | M25 | Rly/0-20/HART | X | |
| X3301A4N23T2 | 028248-XXX | AL | 3/4 NPT | Rly/0-20/HART | | X |
| X3301A4M23T2 | 028249-XXX | AL | M25 | Rly/0-20/HART | | X |
| X3301S4N23T2 | 028250-XXX | SS | 3/4 NPT | Rly/0-20/HART | | X |
| X3301S4M23T2 | 028251-XXX | SS | M25 | Rly/0-20/HART | | X |
| X3301A4N14T1 | 028262-001 | AL | 3/4 NPT | EQP | X | |
| X3301A4M14T1 | 028263-001 | AL | M25 | EQP | X | |
| X3301S4N14T1 | 028264-001 | SS | 3/4 NPT | EQP | X | |
| X3301S4M14T1 | 028265-001 | SS | M25 | EQP | X | |
| X3301A4N14T2 | 028274-001 | AL | 3/4 NPT | EQP | | X |
| X3301A4M14T2 | 028275-001 | AL | M25 | EQP | | X |
| X3301S4N14T2 | 028276-001 | SS | 3/4 NPT | EQP | | X |
| X3301S4M14T2 | 028277-001 | SS | M25 | EQP | | X |
| Ship Weight: Aluminum = 7lb (3.2kg) Stainless Steel = 13.8lb (6.3kg) | | | | | | |

The standard EQP detectors are completely configurable using the S3 software and are shipped defaulted to the -001 setting.

*The last 3 digits of the part number identify the software configuration. Please see table A1 to choose the correct option.

MULTISPECTRUM INFRARED

X3301 Multispectrum Infrared Flame Detector - FM / CSA / ATEX / IECEx

| Model | Part Number* | Material | Threads | Output | Ex d e | Ex d |
|-----------------------------------------------------------------------------|--------------|----------|---------|----------------|--------|------|
| X3301A4N15W1 | 028112-XXX | AL | 3/4 NPT | Pulse/Relay | X | |
| X3301A4M15W1 | 028113-XXX | AL | M25 | Pulse/Relay | X | |
| X3301S4N15W1 | 028114-XXX | SS | 3/4 NPT | Pulse/Relay | X | |
| X3301A4N15W2 | 028132-XXX | AL | 3/4 NPT | Pulse/Relay | | X |
| X3301A4M15W2 | 028133-XXX | AL | M25 | Pulse/Relay | | X |
| X3301S4N15W2 | 028134-XXX | SS | 3/4 NPT | Pulse/Relay | | X |
| X3301A4N21W2 | 028118-005 | AL | 3/4 NPT | Automotive | | X |
| X3301A4M21W2 | 028119-005 | AL | M25 | Automotive | | X |
| X3301A4N14W1 | 028124-001 | AL | 3/4 NPT | EQP | X | |
| X3301A4M14W1 | 028125-001 | AL | M25 | EQP | X | |
| X3301S4N14W1 | 028126-001 | SS | 3/4 NPT | EQP | X | |
| X3301A4N14W2 | 028128-001 | AL | 3/4 NPT | EQP | | X |
| X3301A4M14W2 | 028129-001 | AL | M25 | EQP | | X |
| X3301S4N14W2 | 028130-001 | SS | 3/4 NPT | EQP | | X |
| X3301A4N22W2 | 028228-005 | AL | 3/4 NPT | EQP/Automotive | | X |
| Ship Weight: Aluminum = 7lb (3.2kg) Stainless Steel = 13.8lb (6.3kg) | | | | | | |

The standard EQP detectors are completely configurable using the S3 software and are shipped defaulted to the -001 setting.

(Automotive version and Hangar version are not configurable).

*The last 3 digits of the part number identify the software configuration. Please see table A1 to choose the correct option.

(Automotive versions are not configurable).

MULTISPECTRUM INFRARED

X3301 Multispectrum Infrared Flame Detector - SIL 2 / INMETRO (Brazil)

| Model | Part Number* | Material | Threads | Output | Ex d e | Ex d |
|-----------------------------------------------------------------------------|--------------|----------|---------|---------------|--------|------|
| X3301A4N13SB2 | 029656-XXX | AL | 3/4 NPT | Relay/0-20 mA | | X |
| X3301S4N13SB2 | 029657-XXX | SS | 3/4 NPT | Relay/0-20 mA | | X |
| X3301A4N14SB2 | 029658-001 | AL | 3/4 NPT | EQP | | X |
| X3301S4N14SB2 | 029659-001 | SS | 3/4 NPT | EQP | | X |
| X3301A4N23SB2 | 029660-XXX | AL | 3/4 NPT | Rly/0-20/HART | | X |
| X3301S4N23SB2 | 029661-XXX | SS | 3/4 NPT | Rly/0-20/HART | | X |
| Ship Weight: Aluminum = 7lb (3.2kg) Stainless Steel = 13.8lb (6.3kg) | | | | | | |

*The last 3 digits of the part number identify the software configuration. Please see table A1 to choose the correct option.

The EQP detectors are completely configurable using the S3 software and are defaulted to the -001 setting.

X3301 Multispectrum Infrared Flame Detector - INMETRO (Brazil)

| Model | Part Number* | Material | Threads | Output | Ex d e | Ex d |
|-----------------------------------------------------------------------------|--------------|----------|---------|--------|--------|------|
| X3301A4N14B2 | 028204-001 | AL | 3/4 NPT | EQP | | X |
| X3301S4N14B2 | 028205-001 | SS | 3/4 NPT | EQP | | X |
| Ship Weight: Aluminum = 7lb (3.2kg) Stainless Steel = 13.8lb (6.3kg) | | | | | | |

*The last 3 digits of the part number identify the software configuration. Please see table A1 to choose the correct option.

The EQP detectors are completely configurable using the S3 software and are defaulted to the -001 setting.

MULTISPECTRUM INFRARED

X3301 Multispectrum Infrared Flame Detector - UKRCEPRO (Ukraine)

| Model | Part Number* | Material | Threads | Output | Ex d e | Ex d |
|-----------------------------------------------------------------------------|--------------|----------|---------|---------------|--------|------|
| X3301A4M11U1 | 028152-XXX | AL | M25 | Relay | X | |
| X3301S4M11U1 | 028153-XXX | SS | M25 | Relay | X | |
| X3301A4M11U2 | 028154-XXX | AL | M25 | Relay | | X |
| X3301S4M11U2 | 028155-XXX | SS | M25 | Relay | | X |
| X3301A4M13U1 | 028156-XXX | AL | M25 | Relay/0-20 mA | X | |
| X3301S4M13U1 | 028157-XXX | SS | M25 | Relay/0-20 mA | X | |
| X3301A4M13U2 | 028158-XXX | AL | M25 | Relay/0-20 mA | | X |
| X3301S4M13U2 | 028159-XXX | SS | M25 | Relay/0-20 mA | | X |
| Ship Weight: Aluminum = 7lb (3.2kg) Stainless Steel = 13.8lb (6.3kg) | | | | | | |

*The last 3 digits of the part number identify the software configuration. Please see table A1 to choose the correct option.

X3301 Multispectrum Infrared Flame Detector - NEPSI / CCCF (China)

| Model | Part Number | Material | Threads | Output | Ex d e | Ex d |
|-----------------------------------------------------------------------------|-------------|----------|---------|--------------------|--------|------|
| X3301A4N13Y2 | 028284-001 | AL | 3/4 NPT | Relay/0-20mA | | X |
| X3301A4N13Y2 | 028284-002 | AL | 3/4 NPT | Relay/0-20 mA | | X |
| X3301A4N23Y2 | 028294-001 | AL | 3/4 NPT | Relay/0-20 mA/HART | | X |
| X3301A4M23Y2 | 028295-001 | AL | M25 | Relay/0-20 mA/HART | | X |
| X3301S4N23Y2 | 028296-001 | SS | 3/4 NPT | Relay/0-20 mA/HART | | X |
| X3301S4M23Y2 | 028297-001 | SS | M25 | Relay/0-20 mA/HART | | X |
| Ship Weight: Aluminum = 7lb (3.2kg) Stainless Steel = 13.8lb (6.3kg) | | | | | | |

MULTISPECTRUM INFRARED

X3302 Multispectrum Infrared Flame Detector



X3302 Multispectrum Infrared Flame Detector (Spec Sheet: 90-1232) provides a large field of view for hydrogen fire detection coupled with superior false alarm rejection. The detector utilizes advanced signal processing algorithms supported by an embedded 32-bit microprocessor to provide continuous protection in the presence of false alarm sources and environments with infrared radiation present. When configured for Very High Sensitivity, the X3302 has a detection range of 125 feet on axis and 100 feet off axis to a hydrogen fire and is recommended for any indoor/outdoor application. The detector is available in aluminum or stainless steel. Standard outputs include fire alarm, auxiliary alarm and fault relays, with RS-485 Modbus. Optional 0-20 mA, HART, Pulse, or Eagle Quantum Premier outputs are also available. Ideal applications include hydrogen storage, aerospace, battery rooms, and filling stations.

- Eagle Quantum Premier model
- Models available with SIL 2 certification
- Multiple sensitivities and certified performance to Hydrogen, Methane, Syngas and Methanol
- Terminal block allows for Class X Pathway Designation per NFPA 72
- 125 feet on axis *and* 100 feet off axis detection range for hydrogen fire
- Microprocessor controlled heated optics, enable optimal performance in adverse environments
- Data logger for event time and date stamping
- Optional HART output, AMS aware, and FDT/DTM capable
- Automatic σ_i (optical integrity) continuously verifies each sensors ability to detect fire
- Calibrated manual testing/magnetic σ_i , no test lamp required
- Four conduit entries for easy installation
- Division Approval Ratings: FM and CSA
- Zone Approval Ratings: FM, CSA, ATEX, and IECEx
- Tricolor LED on detector faceplate indicates detector status condition
- EN54 part 10 certified by CPR, LPCB, VdS (Very High only)

MULTISPECTRUM INFRARED

X3302 Model Matrix

| MODEL | DESCRIPTION | | | | | | | | | | |
|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------------------------|----|----------------------|----|-----------------------------|-----------------|-----------------------|-----------------|--------------------------|
| X3302 | Multispectrum IR Flame Detector | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>MATERIAL</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>Aluminum (AL)</td> </tr> <tr> <td>S</td> <td>Stainless Steel (SS)</td> </tr> </tbody> </table> | TYPE | MATERIAL | A | Aluminum (AL) | S | Stainless Steel (SS) | | | | |
| TYPE | MATERIAL | | | | | | | | | | |
| A | Aluminum (AL) | | | | | | | | | | |
| S | Stainless Steel (SS) | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>THREAD TYPE</th> </tr> </thead> <tbody> <tr> <td>4M</td> <td>4 Port, M25</td> </tr> <tr> <td>4N</td> <td>4 Port, 3/4" NPT</td> </tr> </tbody> </table> | TYPE | THREAD TYPE | 4M | 4 Port, M25 | 4N | 4 Port, 3/4" NPT | | | | |
| TYPE | THREAD TYPE | | | | | | | | | | |
| 4M | 4 Port, M25 | | | | | | | | | | |
| 4N | 4 Port, 3/4" NPT | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>OUTPUTS</th> </tr> </thead> <tbody> <tr> <td>13</td> <td>Relay and 0-20 mA</td> </tr> <tr> <td>14</td> <td>Eagle Quantum Premier (EQP)</td> </tr> <tr> <td>15</td> <td>Relay and Pulse</td> </tr> <tr> <td>23[†]</td> <td>HART, Relay, and 0-20 mA</td> </tr> </tbody> </table> | TYPE | OUTPUTS | 13 | Relay and 0-20 mA | 14 | Eagle Quantum Premier (EQP) | 15 | Relay and Pulse | 23 [†] | HART, Relay, and 0-20 mA |
| TYPE | OUTPUTS | | | | | | | | | | |
| 13 | Relay and 0-20 mA | | | | | | | | | | |
| 14 | Eagle Quantum Premier (EQP) | | | | | | | | | | |
| 15 | Relay and Pulse | | | | | | | | | | |
| 23 [†] | HART, Relay, and 0-20 mA | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>APPROVALS[‡]</th> </tr> </thead> <tbody> <tr> <td>B</td> <td>INMETRO (BRAZIL)</td> </tr> <tr> <td>S</td> <td>SIL</td> </tr> <tr> <td>T^{§§}</td> <td>SIL/FM/CSA/ATEX/IECEX</td> </tr> <tr> <td>W^{§§}</td> <td>FM/CSA/ATEX/IECEX</td> </tr> </tbody> </table> | TYPE | APPROVALS [‡] | B | INMETRO (BRAZIL) | S | SIL | T ^{§§} | SIL/FM/CSA/ATEX/IECEX | W ^{§§} | FM/CSA/ATEX/IECEX |
| TYPE | APPROVALS [‡] | | | | | | | | | | |
| B | INMETRO (BRAZIL) | | | | | | | | | | |
| S | SIL | | | | | | | | | | |
| T ^{§§} | SIL/FM/CSA/ATEX/IECEX | | | | | | | | | | |
| W ^{§§} | FM/CSA/ATEX/IECEX | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>CLASSIFICATION</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Division/Zone Ex d e</td> </tr> <tr> <td>2</td> <td>Division/Zone Ex d</td> </tr> </tbody> </table> | TYPE | CLASSIFICATION | 1 | Division/Zone Ex d e | 2 | Division/Zone Ex d | | | | |
| TYPE | CLASSIFICATION | | | | | | | | | | |
| 1 | Division/Zone Ex d e | | | | | | | | | | |
| 2 | Division/Zone Ex d | | | | | | | | | | |

[†]Type 23 Output - When HART output chosen detector does not have RS-485 communication available.

[‡]Type Approvals can use one or more letters to designate the approvals of the product.

^{§§} Type T and W Approvals: EN-54Part 10 only available on Output Types 13 and 23. CPR and LPCB (Very High only).

MULTISPECTRUM INFRARED

Table A2 - X3302 Software Part Number Configuration Matrix*

| Dash | Sensitivity | Alarm Relay | Aux Relay | Fault Relay | Special |
|------|-------------|------------------------------|---------------------------|---------------------------|-------------------------------------------|
| -001 | Medium | De-energized Non-latching | Energized Non-latching | Energized Non-latching | None |
| -002 | Very High | De-energized Non-latching | Energized Non-latching | Energized Non-latching | None |
| -004 | Low | De-energized Non-latching | Energized Non-latching | Energized Non-latching | 3 min o _i 10 fails to fault |
| -006 | Medium | De-energized Latching | De-energized Latching | Energized Non-latching | None |
| -007 | Very High | De-energized Latching | De-energized Latching | Energized Non-latching | None |
| -009 | Low | De-energized Latching | De-energized Latching | Energized Non-latching | 3 min o _i 10 fails to fault |
| -050 | High | De-energized Non-latching | Energized Non-latching | Energized Non-latching | None |
| -051 | High | De-energized Latching | De-energized Latching | Energized Non-latching | None |

* Not all configurations are performance approved. See applicable certificates and instruction manual appendices for details.

NOTE: The X3302 window heaters are set to 100% as a default but can be configured from 0-100% with the Enhanced Flame Inspector. Please refer to section E.3 for more details.

Application Guidelines

The following criteria should be considered when choosing a sensitivity level for the intended application:

- Speed of response based on fuel type and fire size
- Distance between the hazard and the flame detector

These are typical industry application settings. They may not be applicable to all installations. Contact factory for additional application guidance.

| | |
|-------------------------------------------------------------|----------|
| Fertilizer (Outdoor), Ammonia, Refrigerants | 001 |
| Aerospace, Hydrogen Storage | 050, 002 |
| Filling Stations, Turbines | 001, 004 |
| Fertilizer (Indoor), Refrigerants, Battery Manufacturing | 001, 050 |

NOTE: Latching relays cannot be used in voted systems.

MULTISPECTRUM INFRARED

X3302 Multispectrum Infrared Flame Detector - SIL 2 / FM / CSA / ATEX / IECEx

| Model | Part Number* | Material | Threads | Output | Ex d e | Ex d |
|-----------------------------------------------------------------------------|--------------|----------|---------|-------------------|--------|------|
| X3302A4N13T1 | 029008-XXX | AL | 3/4 NPT | Relay/0-20mA | X | |
| X3302A4M13T1 | 029009-XXX | AL | M25 | Relay/0-20mA | X | |
| X3302S4N13T1 | 029010-XXX | SS | 3/4 NPT | Relay/0-20mA | X | |
| X3302S4M13T1 | 029011-XXX | SS | M25 | Relay/0-20mA | X | |
| X3302A4N13T2 | 029012-XXX | AL | 3/4 NPT | Relay/0-20mA | | X |
| X3302A4M13T2 | 029013-XXX | AL | M25 | Relay/0-20mA | | X |
| X3302S4N13T2 | 029014-XXX | SS | 3/4 NPT | Relay/0-20mA | | X |
| X3302S4M13T2 | 029015-XXX | SS | M25 | Relay/0-20mA | | X |
| X3302A4N23T1 | 029032-XXX | AL | 3/4 NPT | Relay/0-20mA/HART | X | |
| X3302A4M23T1 | 029033-XXX | AL | M25 | Relay/0-20mA/HART | X | |
| X3302S4N23T1 | 029034-XXX | SS | 3/4 NPT | Relay/0-20mA/HART | X | |
| X3302S4M23T1 | 029035-XXX | SS | M25 | Relay/0-20mA/HART | X | |
| X3302A4N23T2 | 029036-XXX | AL | 3/4 NPT | Relay/0-20mA/HART | | X |
| X3302A4M23T2 | 029037-XXX | AL | M25 | Relay/0-20mA/HART | | X |
| X3302S4N23T2 | 029038-XXX | SS | 3/4 NPT | Relay/0-20mA/HART | | X |
| X3302S4M23T2 | 029039-XXX | SS | M25 | Relay/0-20mA/HART | | X |
| Ship Weight: Aluminum = 7lb (3.2kg) Stainless Steel = 13.8lb (6.3kg) | | | | | | |

*The last 3 digits of the part number identify the software configuration. Please see table A2 to choose the correct option.

MULTISPECTRUM INFRARED

X3302 Multispectrum Infrared Flame Detector - FM / CSA / ATEX / IECEx

| Model | Part Number* | Material | Threads | Output | Ex d e | Ex d |
|-----------------------------------------------------------------------------|--------------|----------|---------|--------|--------|------|
| X3302A4N14W1 | 029024-001 | AL | 3/4 NPT | EQP | X | |
| X3302S4N14W1 | 029026-001 | SS | 3/4 NPT | EQP | X | |
| X3302A4N14W2 | 029028-001 | AL | 3/4 NPT | EQP | | X |
| X3302S4N14W2 | 029030-001 | SS | 3/4 NPT | EQP | | X |
| Ship Weight: Aluminum = 7lb (3.2kg) Stainless Steel = 13.8lb (6.3kg) | | | | | | |

*The last 3 digits of the part number identify the software configuration. Please see table A2 to choose the correct option. The standard EQP detectors are completely configurable using the S3 software and are shipped defaulted to the -001 setting.

ULTRAVIOLET/INFRARED

X5200G UVIR Flame Detector



X5200G UVIR Flame Detector (Spec Sheet: 90-1156) meets the most stringent requirements worldwide with advanced ultra high speed detection capabilities and immunity to extraneous sources, combined with a superior mechanical design. The combination of Arc Rejection on the UV sensor and TDSA/Quick Fire on the IR sensor make this detector the highest false alarm immune UVIR available. The mounting arrangement allows the UV and IR sensors to monitor the same hazardous location with a 90-degree field of view. When both sensors simultaneously detect the presence of a flame, an alarm signal is generated.

The standard output configuration includes fire, fault, and auxiliary relays with RS-485 Modbus. Optional 0-20 mA, Eagle Quantum Premier, or HART outputs are also available. Auxiliary relay offers the flexibility to customize detection, using UV, IR, or both. A model with pulse output is available for easy retrofitting into existing Det-Tronics controller based systems.

The X5200G housing is available in aluminum or stainless steel, with Type 4X and IP66/IP67 rating. Typical applications include paper machines, munitions, petrochemical applications, and aerosol filling.

- Eagle Quantum Premier and Eagle Quantum compatible models available
- Models available with SIL 2 certification
- Responds to a fire in the presence of modulated blackbody radiation (i.e., heaters, ovens, turbines) without false alarm
- Ultra high speed capability
- Optional HART output, AMS aware, and FDT/DTM capable
- Heated optics for increased resistance to moisture and ice
- Automatic, manual, or magnetic σ_i (optical integrity)
- FM, CSA, ATEX, and IECEx
- EN 54 part 10 certified by CPR, LPCB, VdS
- AFNOR approved models available upon request (-NF)
- Meets Construction Product Regulation (CPR)
- Configurable auxiliary relay allows independent alarm signaling
- Terminal block allows for Class X Pathway Designation per NFPA 72
- EMI, RFI, EMC Directive Compliant
- Built-in data logging / event monitoring
- Tricolor LED on detector faceplate indicates detector status condition

ULTRAVIOLET/INFRARED

X5200G Model Matrix

| MODEL | DESCRIPTION | | | | | | | | | | | | |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------------------------|-----------|----------------------|-----------|-----------------------|-----------------------|-----------------------|-----------|--------------------|-----------------------|--------------------------|
| X5200G | UVIR Flame Detector with Standard Detector Tube, Kr ⁸⁵ free Source Tube (replaces X5200) | | | | | | | | | | | | |
| X5200GM* | UVIR Flame Detector with Molybdeneum Detector Tube, Kr ⁸⁵ free Source Tube (replaces X5200M) | | | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>MATERIAL</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>Aluminum (AL)</td> </tr> <tr> <td>S</td> <td>Stainless Steel (SS)</td> </tr> </tbody> </table> | TYPE | MATERIAL | A | Aluminum (AL) | S | Stainless Steel (SS) | | | | | | |
| TYPE | MATERIAL | | | | | | | | | | | | |
| A | Aluminum (AL) | | | | | | | | | | | | |
| S | Stainless Steel (SS) | | | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>THREAD TYPE</th> </tr> </thead> <tbody> <tr> <td>4M</td> <td>4 Port, M25</td> </tr> <tr> <td>4N</td> <td>4 Port, 3/4" NPT</td> </tr> </tbody> </table> | TYPE | THREAD TYPE | 4M | 4 Port, M25 | 4N | 4 Port, 3/4" NPT | | | | | | |
| TYPE | THREAD TYPE | | | | | | | | | | | | |
| 4M | 4 Port, M25 | | | | | | | | | | | | |
| 4N | 4 Port, 3/4" NPT | | | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>OUTPUTS</th> </tr> </thead> <tbody> <tr> <td>13</td> <td>Relay and 0-20 mA</td> </tr> <tr> <td>14</td> <td>Eagle Quantum Premier</td> </tr> <tr> <td>15</td> <td>Relay and Pulse</td> </tr> <tr> <td>24</td> <td>Eagle Quantum</td> </tr> <tr> <td>23†</td> <td>HART, Relay, and 0-20 mA</td> </tr> </tbody> </table> | TYPE | OUTPUTS | 13 | Relay and 0-20 mA | 14 | Eagle Quantum Premier | 15 | Relay and Pulse | 24 | Eagle Quantum | 23† | HART, Relay, and 0-20 mA |
| TYPE | OUTPUTS | | | | | | | | | | | | |
| 13 | Relay and 0-20 mA | | | | | | | | | | | | |
| 14 | Eagle Quantum Premier | | | | | | | | | | | | |
| 15 | Relay and Pulse | | | | | | | | | | | | |
| 24 | Eagle Quantum | | | | | | | | | | | | |
| 23† | HART, Relay, and 0-20 mA | | | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>APPROVALS[§]</th> </tr> </thead> <tbody> <tr> <td>B</td> <td>INMETRO (BRAZIL)</td> </tr> <tr> <td>S</td> <td>SIL</td> </tr> <tr> <td>T^{§§}</td> <td>SIL/FM/CSA/ATEX/IECEX</td> </tr> <tr> <td>U</td> <td>UKRCEPRO (UKRAINE)</td> </tr> <tr> <td>W^{§§}</td> <td>FM/CSA/ATEX/IECEX</td> </tr> </tbody> </table> | TYPE | APPROVALS [§] | B | INMETRO (BRAZIL) | S | SIL | T^{§§} | SIL/FM/CSA/ATEX/IECEX | U | UKRCEPRO (UKRAINE) | W^{§§} | FM/CSA/ATEX/IECEX |
| TYPE | APPROVALS [§] | | | | | | | | | | | | |
| B | INMETRO (BRAZIL) | | | | | | | | | | | | |
| S | SIL | | | | | | | | | | | | |
| T^{§§} | SIL/FM/CSA/ATEX/IECEX | | | | | | | | | | | | |
| U | UKRCEPRO (UKRAINE) | | | | | | | | | | | | |
| W^{§§} | FM/CSA/ATEX/IECEX | | | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>CLASSIFICATION</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Division/Zone Ex d e</td> </tr> <tr> <td>2</td> <td>Division/Zone Ex d</td> </tr> </tbody> </table> | TYPE | CLASSIFICATION | 1 | Division/Zone Ex d e | 2 | Division/Zone Ex d | | | | | | |
| TYPE | CLASSIFICATION | | | | | | | | | | | | |
| 1 | Division/Zone Ex d e | | | | | | | | | | | | |
| 2 | Division/Zone Ex d | | | | | | | | | | | | |

*Special Application - consult factory before ordering.
X5200GM does not have EN-54 part 10 approvals.

†Type 23 Output - When HART output chosen detector does not have RS-485 communication available.

§Type Approvals can use one or more letters to designate the approvals of the product.

§§ Type T and W Approvals: EN-54Part 10 only available on Output Types 11, 13, 14, and 23. CPR and LPCB.

The X5200G and X5200GM UVIR Flame Detectors contain a Kr85 free source tube. There are no differences in detection performance between the X5200 and X5200G, or between the X5200M and X5200GM.

Models X5200 and X5200M were retired in 2024, and are no longer available.

ULTRAVIOLET/INFRARED

Table B1 - X5200G Software Part Number Configuration Matrix

| Dash | UV Sensitivity | Arc Rejection | IR Sensitivity | Alarm Output IR Qualifications | Alarm Relay | Aux Output Function | ARC Rejection | Aux Output IR Qualifications | Aux Relay | Fault Relay |
|-------|----------------|---------------|----------------|--------------------------------|---------------------------|---------------------|---------------|------------------------------|---------------------------|------------------------|
| -001 | High | High | High | TDSA Only | De-Energized Non-latching | Follows Alarm | High | TDSA | Energized Non-latching | Energized Non-latching |
| -002 | High | Very High | High | TDSA or Quick | De-Energized Non-latching | Follows Alarm | Very High | TDSA or Quick | Energized Non-latching | Energized Non-latching |
| -003 | High | Off | Very High | TDSA or Quick | De-Energized Non-latching | UV or IR | Off | TDSA | Energized Non-latching | Energized Non-latching |
| -004 | High | High | Very High | TDSA Only | De-Energized Non-latching | Pre-Alarm | High | TDSA | Energized Non-latching | Energized Non-latching |
| -005 | Medium | High | High | TDSA or Quick | De-Energized Non-latching | UV or IR | High | TDSA | Energized Non-latching | Energized Non-latching |
| -006 | High | High | Low | TDSA Only | De-Energized Non-latching | Pre-Alarm | High | TDSA | Energized Non-latching | Energized Non-latching |
| -007 | High | High | High | TDSA Only | De-Energized Latching | Follows Alarm | High | TDSA | De-energized Latching | Energized Non-latching |
| -008 | High | Very High | High | TDSA or Quick | De-Energized Latching | Follows Alarm | Very High | TDSA or Quick | De-energized Latching | Energized Non-latching |
| -009 | High | Off | Very High | TDSA or Quick | De-Energized Latching | UV or IR | Off | TDSA | De-energized Latching | Energized Non-latching |
| -010 | High | High | Very High | TDSA Only | De-Energized Latching | Pre-Alarm | High | TDSA | De-energized Latching | Energized Non-latching |
| -011 | Medium | High | High | TDSA or Quick | De-Energized Latching | UV or IR | High | TDSA | De-energized Latching | Energized Non-latching |
| -012 | High | High | Low | TDSA Only | De-Energized Latching | Pre-Alarm | High | TDSA | De-energized Latching | Energized Non-latching |
| -013* | High | Off | High | TDSA or Quick | De-Energized Non-Latching | Follows Alarm | Off | TDSA or Quick | Energized Non-Latching | Energized Non-latching |
| -014* | High | Off | High | TDSA or Quick | De-Energized Latching | Follows Alarm | Off | TDSA or Quick | De-energized Latching | Energized Non-latching |
| -015 | Very High | Low | Very High | TDSA or Quick | De-Energized Non-Latching | Follows Alarm | Off | TDSA or Quick | Energized Non-Latching | Energized Non-latching |
| -016 | Very High | Low | Very High | TDSA or Quick | De-Energized Latching | Follows Alarm | Off | TDSA or Quick | De-energized Latching | Energized Non-latching |
| -019 | Very High | Off | Very High | TDSA or Quick | De-Energized Non-Latching | UV or IR | Off | TDSA | Energized Non-Latching | Energized Non-latching |
| -021 | Very High | Off | Very High | TDSA or Quick | De-Energized Latching | Follows Alarm | Off | TDSA or Quick | Energized Latching | Energized Non-latching |
| -022 | Very High | Off | Very High | TDSA or Quick | De-Energized Non-Latching | UV or IR | Off | TDSA or Quick | De-Energized Non-latching | Energized Non-latching |

*Available only on the X5200GM model

ARC = Arc Rejection. An algorithm that prevents false alarms from transient UV sources

TDSA = "Time Domain Signal Analysis" proprietary signal processing algorithm for superior IR false alarm rejection

Quick = Signal processing for explosive IR events

Application Guidelines

The following criteria should be considered when choosing a sensitivity level for the intended application:

- Speed of response based on fuel type and fire size
- Distance between the hazard and the flame detector

These are typical industry application settings. They may not be applicable to all installations. Contact factory for additional application guidance.

| | |
|-------------------|----------|
| Offshore | 001 |
| Compressor | 002 |
| Paper Machine | 003 |
| Engine Test Cells | 001 |
| Aerosol Fill | 013, 022 |
| Munitions | 013, 022 |
| High Speed | 013, 022 |

NOTE: Latching relays cannot be used in voted systems.

ULTRAVIOLET/INFRARED

X5200G UVIR Flame Detector - SIL 2 / FM / CSA / ATEX / IECEx

| Model | Part Number * | Material | Threads | Output | Ex d e | Ex d |
|-----------------------------------------------------------------------------|---------------|----------|---------|---------------|--------|------|
| X5200GA4N13T1 | 018508-XXX | AL | 3/4 NPT | Relay/0-20 mA | X | |
| X5200GA4M13T1 | 018509-XXX | AL | M25 | Relay/0-20 mA | X | |
| X5200GS4N13T1 | 018510-XXX | SS | 3/4 NPT | Relay/0-20 mA | X | |
| X5200GS4M13T1 | 018511-XXX | SS | M25 | Relay/0-20 mA | X | |
| X5200GA4N13T2 | 018512-XXX | AL | 3/4 NPT | Relay/0-20 mA | | X |
| X5200GA4M13T2 | 018513-XXX | AL | M25 | Relay/0-20 mA | | X |
| X5200GS4N13T2 | 018514-XXX | SS | 3/4 NPT | Relay/0-20 mA | | X |
| X5200GS4M13T2 | 018515-XXX | SS | M25 | Relay/0-20 mA | | X |
| X5200GA4N14T1 | 018516-001 | AL | 3/4 NPT | EQP | X | |
| X5200GA4M14T1 | 018517-001 | AL | M25 | EQP | X | |
| X5200GA4N14T1 | 018518-001 | SS | 3/4 NPT | EQP | X | |
| X5200GA4M14T1 | 018519-001 | SS | M25 | EQP | X | |
| X5200GA4N14T2 | 018520-001 | AL | 3/4 NPT | EQP | | X |
| X5200GA4M14T2 | 018521-001 | AL | M25 | EQP | | X |
| X5200GA4N14T2 | 018522-001 | SS | 3/4 NPT | EQP | | X |
| X5200GA4M14T2 | 018523-001 | SS | M25 | EQP | | X |
| X5200GA4N23T1 | 018658-XXX | AL | 3/4 NPT | Rly/0-20/HART | X | |
| X5200GA4M23T1 | 018659-XXX | AL | M25 | Rly/0-20/HART | X | |
| X5200GS4N23T1 | 018660-XXX | SS | 3/4 NPT | Rly/0-20/HART | X | |
| X5200GS4M23T1 | 018661-XXX | SS | M25 | Rly/0-20/HART | X | |
| X5200GA4N23T2 | 018662-XXX | AL | 3/4 NPT | Rly/0-20/HART | | X |
| X5200GA4M23T2 | 018663-XXX | AL | M25 | Rly/0-20/HART | | X |
| X5200GS4N23T2 | 018664-XXX | SS | 3/4 NPT | Rly/0-20/HART | | X |
| X5200GS4M23T2 | 018665-XXX | SS | M25 | Rly/0-20/HART | | X |
| Ship Weight: Aluminum = 7lb (3.2kg) Stainless Steel = 14.6lb (6.7kg) | | | | | | |

*The last 3 digits of the part number identify the software configuration. Please see table B1 to choose the correct option. The EQ and EQP detectors are completely configurable using the S3 configuration software and are shipped defaulted to the -001 setting.

X5200G UVIR Flame Detector - SIL 2 / FM / CSA / ATEX / IECEx

- For Aerosol Fill / Munitions / High Speed Applications

| Model | Part Number * | Material | Threads | Output | Ex d e | Ex d | Aux Relay |
|-----------------------------------------------------------------------------|---------------|----------|---------|---------------|--------|------|----------------|
| X5200GA4N13T1 | 018508-022 | AL | 3/4 NPT | Relay/0-20 mA | X | | UV or IR Alarm |
| X5200GA4M13T1 | 018509-022 | AL | M25 | Relay/0-20 mA | X | | UV or IR Alarm |
| X5200GA4N13T2 | 018512-022 | AL | 3/4 NPT | Relay/0-20 mA | | X | UV or IR Alarm |
| X5200GA4M13T2 | 018513-022 | AL | M25 | Relay/0-20 mA | | X | UV or IR Alarm |
| Ship Weight: Aluminum = 7lb (3.2kg) Stainless Steel = 14.6lb (6.7kg) | | | | | | | |

*The last 3 digits of the part number identify the software configuration (-022 is specification for this application).

ULTRAVIOLET/INFRARED

X5200G UVIR Flame Detector - FM / CSA / ATEX / IECEx

| Model | Part Number* | Material | Threads | Output | Ex d e | Ex d |
|-----------------------------------------------------------------------------|--------------|----------|---------|---------------|--------|------|
| X5200GA4N14W1 | 018532-001 | AL | 3/4 NPT | EQP | X | |
| X5200GA4M14W1 | 018700-001 | AL | M25 | EQP | X | |
| X5200GS4N14W1 | 018533-001 | SS | 3/4 NPT | EQP | X | |
| X5200GS4M14W1 | 018728-001 | SS | M25 | EQP | X | |
| X5200GA4N14W2 | 018703-001 | AL | 3/4 NPT | EQP | | X |
| X5200GA4M14W2 | 018701-001 | AL | M25 | EQP | | X |
| X5200GS4N14W2 | 018705-001 | SS | 3/4 NPT | EQP | | X |
| X5200GS4M14W2 | 018704-001 | SS | M25 | EQP | | X |
| X5200GA4N15W1 | 018524-XXX | AL | 3/4 NPT | Pulse/Relay | X | |
| X5200GA4M15W1 | 018525-XXX | AL | M25 | Pulse/Relay | X | |
| X5200GS4N15W1 | 018526-XXX | SS | 3/4 NPT | Pulse/Relay | X | |
| X5200GS4M15W1 | 018527-XXX | SS | M25 | Pulse/Relay | X | |
| X5200GA4N15W2 | 018528-XXX | AL | 3/4 NPT | Pulse/Relay | | X |
| X5200GA4M15W2 | 018529-XXX | AL | M25 | Pulse/Relay | | X |
| X5200GS4N15W2 | 018530-XXX | SS | 3/4 NPT | Pulse/Relay | | X |
| X5200GS4M15W2 | 018531-XXX | SS | M25 | Pulse/Relay | | X |
| X5200GA4N24W1 | 018556-001 | AL | 3/4 NPT | Eagle Quantum | X | |
| X5200GA4M24W1 | 018557-001 | AL | M25 | Eagle Quantum | X | |
| X5200GS4N24W1 | 018558-001 | SS | 3/4 NPT | Eagle Quantum | X | |
| X5200GA4N24W2 | 018560-001 | AL | 3/4 NPT | Eagle Quantum | | X |
| X5200GA4M24W2 | 018561-001 | AL | M25 | Eagle Quantum | | X |
| X5200GS4N24W2 | 018562-001 | SS | 3/4 NPT | Eagle Quantum | | X |
| Ship Weight: Aluminum = 7lb (3.2kg) Stainless Steel = 14.6lb (6.7kg) | | | | | | |

*The last 3 digits of the part number identify the software configuration. Please see table B1 to choose the correct option. The EQ and EQP detectors are completely configurable using the S3 configuration software and are shipped defaulted to the -001 setting.

ULTRAVIOLET/INFRARED

X5200GM UVIR Flame Detector - SIL 2 / FM / CSA / ATEX / IECEx

- For Aerosol Fill / Munitions / High Speed Applications

The X5200GM UV/IR detector utilizes a molybdenum (moly) sensing element. Moly-based sensors have an increased spectral range of 1850 to 2650 angstroms, which is better suited for detecting substances with unusual chemistry and some black powders.

| Model | Part Number | Material | Threads | Output | Ex d e | Ex d |
|-----------------------------------------------------------------------------|-------------|----------|---------|---------------|--------|------|
| X5200GMA4N13T1 | 018540-013 | AL | 3/4 NPT | Relay/0-20 mA | X | |
| X5200GMS4M13T1 | 018543-013 | SS | M25 | Relay/0-20 mA | X | |
| X5200GMA4N13T2 | 018544-013 | AL | 3/4 NPT | Relay/0-20 mA | | X |
| X5200GMS4N13T2 | 018546-013 | SS | 3/4 NPT | Relay/0-20 mA | | X |
| X5200GMS4M13T2 | 018547-013 | SS | M25 | Relay/0-20mA | | X |
| Ship Weight: Aluminum = 7lb (3.2kg) Stainless Steel = 14.6lb (6.7kg) | | | | | | |

*The last 3 digits of the part number identify the software configuration (-013 is specification for this application).

X5200GM UVIR Flame Detector - FM / CSA / ATEX / IECEx

- For Aerosol Fill / Munitions / High Speed Applications

The X5200GM UV/IR detector utilizes a molybdenum (moly) sensing element. Moly-based sensors have an increased spectral range of 1850 to 2650 angstroms, which is better suited for detecting substances with unusual chemistry and some black powders.

| Model | Part Number | Material | Threads | Output | Ex d e | Ex d |
|-----------------------------------------------------------------------------|-------------|----------|---------|-------------|--------|------|
| X5200GMA4N15W1 | 018548-013 | AL | 3/4 NPT | Pulse/Relay | X | |
| X5200GMA4N15W2 | 018552-013 | AL | 3/4 NPT | Pulse/Relay | | X |
| Ship Weight: Aluminum = 7lb (3.2kg) Stainless Steel = 14.6lb (6.7kg) | | | | | | |

*The last 3 digits of the part number identify the software configuration (-013 is specification for this application).

ULTRAVIOLET/INFRARED

X5200G UVIR Flame Detector - INMETRO (Brazil)

| Model | Part Number* | Material | Threads | Output | Ex d e | Ex d |
|-----------------------------------------------------------------------------|--------------|----------|---------|---------------|--------|------|
| X5200GA4N13B2 | 018643-XXX | AL | 3/4 NPT | Relay/0-20 mA | | X |
| X5200GS4N13B2 | 018644-XXX | SS | 3/4 NPT | Relay/0-20 mA | | X |
| X5200GA4N14B2 | 018645-001 | AL | 3/4 NPT | EQP | | X |
| X5200GS4N14B2 | 018646-001 | SS | 3/4 NPT | EQP | | X |
| X5200GA4N23B2 | 018647-XXX | AL | 3/4 NPT | Rly/0-20/HART | | X |
| X5200GS4N23B2 | 018648-XXX | SS | 3/4 NPT | Rly/0-20/HART | | X |
| Ship Weight: Aluminum = 7lb (3.2kg) Stainless Steel = 14.6lb (6.7kg) | | | | | | |

*The last 3 digits of the part number identify the software configuration. Please see table B1 to choose the correct option.

The EQP detectors are completely configurable using the S3 software and are defaulted to the -001 setting

X5200G UVIR Flame Detector - UKRCEPRO (Ukraine)

| Model | Part Number* | Material | Threads | Output | Ex d e | Ex d |
|-----------------------------------------------------------------------------|--------------|----------|---------|---------------|--------|------|
| X5200GA4M13U1 | 018576-XXX | AL | M25 | Relay/0-20 mA | X | |
| X5200GS4M13U1 | 018718-XXX | SS | M25 | Relay/0-20 mA | X | |
| X5200GA4M13U2 | 018578-XXX | AL | M25 | Relay/0-20 mA | | X |
| X5200GS4M13U2 | 018666-XXX | SS | M25 | Relay/0-20 mA | | X |
| Ship Weight: Aluminum = 7lb (3.2kg) Stainless Steel = 14.6lb (6.7kg) | | | | | | |

*The last 3 digits of the part number identify the software configuration. Please see table B1 to choose the correct option.

SINGLE FREQUENCY INFRARED

X9800 Single Frequency IR Flame Detector



The **X9800 IR Flame Detector** (Spec Sheet: 90-1160) meets the most stringent requirements worldwide with advanced detection capabilities and immunity to extraneous sources, combined with a superior mechanical design. The detector is equipped with dual signal processing (Quick Fire high speed operation and Time Domain Signal Analysis) and automatic/magnetic manual o_i (optical integrity) test capability. The detector has Division and Zone explosion-proof ratings and is suitable for use in indoor and outdoor applications.

The standard output configuration includes fire, fault, and auxiliary relays with RS-485 Modbus. Optional 0-20 mA, Pulse, Eagle Quantum Premier, or HART outputs are also available. A model with pulse output is available for easy retrofitting into existing Det-Tronics R74XX controller-based systems.

The X9800 housing is available in aluminum or stainless steel, with Type 4X and IP66/IP67 rating. Typical applications include: printing, petrochemical, automotive, and dirty environments.

- Models available with SIL 2 certification
- Unequaled false alarm rejection, TDSA
- Tricolor LED on detector faceplate indicates detector status condition
- Ultra High speed capability
- Heated optics for increased resistance to moisture and ice
- Automatic, manual, or magnetic o_i testing
- Optional HART output and AMS aware
- Tricolor LED indicates normal operation, fire, and fault conditions
- FM, CSA, ATEX, and IECEx
- EN 54 part 10 certified by CPR, LPCB, VdS
- AFNOR approved models available upon request (-NF)
- Mounting arm allows easy sighting
- Integral wiring compartment for ease of installation
- Terminal block allows for Class X Pathway Designation per NFPA 72
- Meets NFPA 33 response requirement for under 0.5 seconds (available when model selected)
- Built-in data logging / event monitoring

SINGLE FREQUENCY INFRARED

X9800 Model Matrix

| MODEL | DESCRIPTION | | | | | | | | | | | | |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------------------------|----|----------------------|-----------------|-----------------------|----|-----------------------|-----------------|-------------------|-----------------|--------------------------|
| X9800 | Single Frequency IR Flame Detector | | | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>MATERIAL</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>Aluminum (AL)</td> </tr> <tr> <td>S</td> <td>Stainless Steel (SS)</td> </tr> </tbody> </table> | TYPE | MATERIAL | A | Aluminum (AL) | S | Stainless Steel (SS) | | | | | | |
| TYPE | MATERIAL | | | | | | | | | | | | |
| A | Aluminum (AL) | | | | | | | | | | | | |
| S | Stainless Steel (SS) | | | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>THREAD TYPE</th> </tr> </thead> <tbody> <tr> <td>4M</td> <td>4 Port, M25</td> </tr> <tr> <td>4N</td> <td>4 Port, 3/4" NPT</td> </tr> </tbody> </table> | TYPE | THREAD TYPE | 4M | 4 Port, M25 | 4N | 4 Port, 3/4" NPT | | | | | | |
| TYPE | THREAD TYPE | | | | | | | | | | | | |
| 4M | 4 Port, M25 | | | | | | | | | | | | |
| 4N | 4 Port, 3/4" NPT | | | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>OUTPUTS</th> </tr> </thead> <tbody> <tr> <td>11</td> <td>Relay</td> </tr> <tr> <td>13</td> <td>Relay and 0-20 mA</td> </tr> <tr> <td>14</td> <td>Eagle Quantum Premier</td> </tr> <tr> <td>15</td> <td>Relay and Pulse</td> </tr> <tr> <td>23[†]</td> <td>HART, Relay, and 0-20 mA</td> </tr> </tbody> </table> | TYPE | OUTPUTS | 11 | Relay | 13 | Relay and 0-20 mA | 14 | Eagle Quantum Premier | 15 | Relay and Pulse | 23 [†] | HART, Relay, and 0-20 mA |
| TYPE | OUTPUTS | | | | | | | | | | | | |
| 11 | Relay | | | | | | | | | | | | |
| 13 | Relay and 0-20 mA | | | | | | | | | | | | |
| 14 | Eagle Quantum Premier | | | | | | | | | | | | |
| 15 | Relay and Pulse | | | | | | | | | | | | |
| 23 [†] | HART, Relay, and 0-20 mA | | | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>APPROVALS[‡]</th> </tr> </thead> <tbody> <tr> <td>S</td> <td>SIL</td> </tr> <tr> <td>T^{§§}</td> <td>SIL/FM/CSA/ATEX/IECEX</td> </tr> <tr> <td>U</td> <td>UKRCEPRO (UKRAINE)</td> </tr> <tr> <td>W^{§§}</td> <td>FM/CSA/ATEX/IECEX</td> </tr> </tbody> </table> | TYPE | APPROVALS [‡] | S | SIL | T ^{§§} | SIL/FM/CSA/ATEX/IECEX | U | UKRCEPRO (UKRAINE) | W ^{§§} | FM/CSA/ATEX/IECEX | | |
| TYPE | APPROVALS [‡] | | | | | | | | | | | | |
| S | SIL | | | | | | | | | | | | |
| T ^{§§} | SIL/FM/CSA/ATEX/IECEX | | | | | | | | | | | | |
| U | UKRCEPRO (UKRAINE) | | | | | | | | | | | | |
| W ^{§§} | FM/CSA/ATEX/IECEX | | | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>CLASSIFICATION</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Division/Zone Ex d e</td> </tr> <tr> <td>2</td> <td>Division/Zone Ex d</td> </tr> </tbody> </table> | TYPE | CLASSIFICATION | 1 | Division/Zone Ex d e | 2 | Division/Zone Ex d | | | | | | |
| TYPE | CLASSIFICATION | | | | | | | | | | | | |
| 1 | Division/Zone Ex d e | | | | | | | | | | | | |
| 2 | Division/Zone Ex d | | | | | | | | | | | | |

[†] Type 23 Output - When HART output chosen detector does not have RS-485 communication available.

[‡]Type Approvals can use one or more letters to designate the approvals of the product.

^{§§} Type T and W Approvals: EN-54Part 10 only available on Output Types 11, 13, 14, and 23. CPR and LPCB.

SINGLE FREQUENCY INFRARED

Table C1 - X9800 Software Part Number Configuration Matrix*

| Dash | IR Sensitivity | Alarm Output IR Qualification | Alarm Relay | Aux Output Function | Aux Output IR Qualification | Aux Relay | Fault Relay |
|------|----------------|-------------------------------|---------------------------|---------------------|-----------------------------|------------------------|------------------------|
| -001 | High | TDSA | De-Energized Non-latching | Follows Alarm | TDSA | Energized Non-latching | Energized Non-latching |
| -002 | High | TDSA or Quick | De-Energized Non-latching | Follows Alarm | TDSA or Quick | Energized Non-latching | Energized Non-latching |
| -003 | Very High | TDSA or Quick | De-Energized Non-latching | Follows Alarm | TDSA or Quick | Energized Non-latching | Energized Non-latching |
| -004 | Very High | TDSA | De-Energized Non-latching | Follows Alarm | TDSA | Energized Non-latching | Energized Non-latching |
| -005 | High | TDSA or Quick | De-Energized Non-latching | Independent | Quick | Energized Non-latching | Energized Non-latching |
| -006 | Low | TDSA | De-Energized Non-latching | Follows Alarm | TDSA | Energized Non-latching | Energized Non-latching |
| -007 | High | TDSA | De-Energized Latching | Follows Alarm | TDSA | De-energized Latching | Energized Non-latching |
| -008 | High | TDSA or Quick | De-Energized Latching | Follows Alarm | TDSA or Quick | De-energized Latching | Energized Non-latching |
| -009 | Very High | TDSA or Quick | De-Energized Latching | Follows Alarm | TDSA or Quick | De-energized Latching | Energized Non-latching |
| -010 | Very High | TDSA | De-Energized Latching | Follows Alarm | TDSA | De-energized Latching | Energized Non-latching |
| -011 | High | TDSA or Quick | De-Energized Latching | Independent | Quick | De-energized Latching | Energized Non-latching |
| -012 | Low | TDSA | De-Energized Latching | Follows Alarm | TDSA | De-energized Latching | Energized Non-latching |
| -013 | High | Quick | De-Energized Non-Latching | Pre-Alarm | None | Energized Non-Latching | Energized Non-latching |

* Not all configurations are performance approved. See applicable certificates and instruction manual appendices for details.

TDSA = "Time Domain Signal Analysis" proprietary signal processing algorithm for superior IR false alarm rejection

Quick = Signal processing for explosive IR events

Application Guidelines

The following criteria should be considered when choosing a sensitivity level for the intended application:

- Speed of response based on fuel type and fire size
- Distance between the hazard and the flame detector

These are typical industry application settings. They may not be applicable to all installations. Contact factory for additional application guidance.

| | |
|----------------|---------------|
| Offshore | 001 |
| Compressor | 002 |
| High Speed | 003 |
| Powder Coating | 013 |
| Automotive | 005 |
| Printing | 001, 002, 005 |

NOTE: Latching relays cannot be used in voted systems.

SINGLE FREQUENCY INFRARED

X9800 Single Frequency IR Flame Detector - SIL 2 / FM / CSA / ATEX / IECEx

| Model | Part Number* | Material | Threads | Output | Ex d e | Ex d |
|-----------------------------------------------------------------------------|--------------|----------|---------|---------------|--------|------|
| X9800A4N13T1 | 008800-XXX | AL | 3/4 NPT | Relay/0-20mA | X | |
| X9800A4M13T1 | 008801-XXX | AL | M25 | Relay/0-20mA | X | |
| X9800S4N13T1 | 008802-XXX | SS | 3/4 NPT | Relay/0-20mA | X | |
| X9800S4M13T1 | 008803-XXX | SS | M25 | Relay/0-20mA | X | |
| X9800A4N13T2 | 008804-XXX | AL | 3/4 NPT | Relay/0-20mA | | X |
| X9800A4M13T2 | 008805-XXX | AL | M25 | Relay/0-20mA | | X |
| X9800S4N13T2 | 008806-XXX | SS | 3/4 NPT | Relay/0-20mA | | X |
| X9800S4M13T2 | 008807-XXX | SS | M25 | Relay/0-20mA | | X |
| X9800A4N23T1 | 008808-XXX | AL | 3/4 NPT | Rly/0-20 HART | X | |
| X9800A4M23T1 | 008809-XXX | AL | M25 | Rly/0-20 HART | X | |
| X9800S4N23T1 | 008810-XXX | SS | 3/4 NPT | Rly/0-20 HART | X | |
| X9800S4M23T1 | 008811-XXX | SS | M25 | Rly/0-20 HART | X | |
| X9800A4N23T2 | 008812-XXX | AL | 3/4 NPT | Rly/0-20 HART | | X |
| X9800A4M23T2 | 008813-XXX | AL | M25 | Rly/0-20 HART | | X |
| X9800S4N23T2 | 008814-XXX | SS | 3/4 NPT | Rly/0-20 HART | | X |
| X9800S4M23T2 | 008815-XXX | SS | M25 | Rly/0-20 HART | | X |
| Ship Weight: Aluminum = 7lb (3.2kg) Stainless Steel = 14.6lb (6.7kg) | | | | | | |

*The last 3 digits of the part number identify the software configuration. Please see table C1 to choose the correct option.
The EQP detectors are completely configurable using the S3 configuration software and are shipped defaulted to the -001 setting.

SINGLE FREQUENCY INFRARED

X9800 Single Frequency IR Flame Detector - FM / CSA / ATEX / IECEx

| Model | Part Number* | Material | Threads | Output | Ex d e | Ex d |
|-----------------------------------------------------------------------------|--------------|----------|---------|-------------|--------|------|
| X9800A4N14W1 | 008716-001 | AL | 3/4 NPT | EQP | X | |
| X9800A4M14W1 | 008717-001 | AL | M25 | EQP | X | |
| X9800S4N14W1 | 008718-001 | SS | 3/4 NPT | EQP | X | |
| X9800S4M14W1 | 008719-001 | SS | M25 | EQP | X | |
| X9800A4N14W2 | 008720-001 | AL | 3/4 NPT | EQP | | X |
| X9800A4M14W2 | 008721-001 | AL | M25 | EQP | | X |
| X9800S4N14W2 | 008722-001 | SS | 3/4 NPT | EQP | | X |
| X9800S4M14W2 | 008723-001 | SS | M25 | EQP | | X |
| X9800A4N15W1 | 008724-XXX | AL | 3/4 NPT | Pulse/Relay | X | |
| X9800S4N15W1 | 008726-XXX | SS | 3/4 NPT | Pulse/Relay | X | |
| X9800S4M15W1 | 008727-XXX | SS | M25 | Pulse/Relay | X | |
| X9800A4N15W2 | 008728-XXX | AL | 3/4 NPT | Pulse/Relay | | X |
| X9800A4M15W2 | 008729-XXX | AL | M25 | Pulse/Relay | | X |
| X9800S4N15W2 | 008730-XXX | SS | 3/4 NPT | Pulse/Relay | | X |
| X9800S4M15W2 | 008731-XXX | SS | M25 | Pulse/Relay | | X |
| Ship Weight: Aluminum = 7lb (3.2kg) Stainless Steel = 14.6lb (6.7kg) | | | | | | |

*The last 3 digits of the part number identify the software configuration. Please see table C1 to choose the correct option.
The EQP detectors are completely configurable using the S3 configuration software and are shipped defaulted to the -001 setting.

X9800 Single Frequency IR Flame Detector - UKRCEPRO (Ukraine)

| Model | Part Number* | Material | Threads | Output | Ex d e | Ex d |
|-----------------------------------------------------------------------------|--------------|----------|---------|---------------|--------|------|
| X9800A4M11U2 | 008764-XXX | AL | M25 | Relay | | X |
| X9800A4M13U1 | 008766-XXX | AL | M25 | Relay/0-20 mA | X | |
| X9800S4M13U1 | 008767-XXX | SS | M25 | Relay/0-20 mA | X | |
| X9800A4M13U2 | 008768-XXX | AL | M25 | Relay/0-20 mA | | X |
| X9800S4M13U2 | 008769-XXX | SS | M25 | Relay/0-20 mA | | X |
| Ship Weight: Aluminum = 7lb (3.2kg) Stainless Steel = 14.6lb (6.7kg) | | | | | | |

*The last 3 digits of the part number identify the software configuration. Please see table C1 to choose the correct option.

ULTRAVIOLET

X2200G UV Flame Detector



X2200G UV Flame Detector (Spec Sheet: 90-1157) meets the most stringent requirements worldwide with advanced signal processing and immunity to extraneous sources, combined with Ultra-high speed capability. The detector is equipped with both automatic and manual ϕ_i (optical integrity). The detector has Division and Zone explosion-proof ratings and is suitable for use in a variety of applications.

The standard output configuration includes fire, fault, and auxiliary relays with RS-485 Modbus. Optional 0-20 mA, Pulse, Eagle Quantum Premier, or HART outputs are also available. A model with pulse output is available for easy retrofitting into existing Det-Tronics R74XX controller based systems.

The X2200G housing is available in aluminum or stainless steel, with Type 4X and IP66/IP67 rating. Typical applications include: HVDC converter stations, munitions, sulfur production, and silane storage.

- Models available with SIL 2 certification
- ARC rejection - Advanced signal processing
- Unequaled false alarm rejection - Solar blind
- Responds to a fire in the presence of modulated blackbody radiation without false alarm
- Ultra-High speed capability
- Optional HART output and AMS aware
- Automatic, manual, or magnetic ϕ_i (optical integrity) testing
- Pulse output for compatibility with Det-Tronics R74XX controller-based systems (optional)
- FM, CSA, ATEX, CE, and IECEx
- EN 54 part 10 certified by CPR, LPCB, VdS
- AFNOR approved models available upon request (-NF)
- Tricolor LED indicates normal operation, fire, and fault conditions
- Mounting arm allows easy sighting
- Integral wiring compartment for ease of installation
- Terminal block allows for Class X Pathway Designation per NFPA 72
- EMI, RFI, EMC Directive Compliant
- Built-in data logging / event monitoring
- Molybdenum Model available for applications that require increased spectral sensitivity

X2200G Model Matrix

| MODEL | DESCRIPTION | | | | | | | | | | | | |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------------------------|-----------|----------------------|-----------|-----------------------|-----------------------|-----------------------|-----------------------|--------------------------|-----------------------|-------------------|
| X2200G | UV Flame Detector with Standard Detector Tube, Kr ⁸⁵ free Source Tube (replaces X2200) | | | | | | | | | | | | |
| X2200GM* | UV Flame Detector with Molybdenum Tube, Kr ⁸⁵ free Source Tube (replaces X2200M) | | | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>MATERIAL</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>Aluminum (AL)</td> </tr> <tr> <td>S</td> <td>Stainless Steel (SS)</td> </tr> </tbody> </table> | TYPE | MATERIAL | A | Aluminum (AL) | S | Stainless Steel (SS) | | | | | | |
| TYPE | MATERIAL | | | | | | | | | | | | |
| A | Aluminum (AL) | | | | | | | | | | | | |
| S | Stainless Steel (SS) | | | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>THREAD TYPE</th> </tr> </thead> <tbody> <tr> <td>4M</td> <td>4 Port, M25</td> </tr> <tr> <td>4N</td> <td>4 Port, 3/4" NPT</td> </tr> </tbody> </table> | TYPE | THREAD TYPE | 4M | 4 Port, M25 | 4N | 4 Port, 3/4" NPT | | | | | | |
| TYPE | THREAD TYPE | | | | | | | | | | | | |
| 4M | 4 Port, M25 | | | | | | | | | | | | |
| 4N | 4 Port, 3/4" NPT | | | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>OUTPUTS</th> </tr> </thead> <tbody> <tr> <td>13</td> <td>Relay and 0-20 mA</td> </tr> <tr> <td>14</td> <td>Eagle Quantum Premier</td> </tr> <tr> <td>15</td> <td>Relay and Pulse</td> </tr> <tr> <td>23[†]</td> <td>HART, Relay, and 0-20 mA</td> </tr> <tr> <td>24</td> <td>Eagle Quantum</td> </tr> </tbody> </table> | TYPE | OUTPUTS | 13 | Relay and 0-20 mA | 14 | Eagle Quantum Premier | 15 | Relay and Pulse | 23[†] | HART, Relay, and 0-20 mA | 24 | Eagle Quantum |
| TYPE | OUTPUTS | | | | | | | | | | | | |
| 13 | Relay and 0-20 mA | | | | | | | | | | | | |
| 14 | Eagle Quantum Premier | | | | | | | | | | | | |
| 15 | Relay and Pulse | | | | | | | | | | | | |
| 23[†] | HART, Relay, and 0-20 mA | | | | | | | | | | | | |
| 24 | Eagle Quantum | | | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th></th> <th>APPROVALS[§]</th> </tr> </thead> <tbody> <tr> <td>B</td> <td>INMETRO (BRAZIL)</td> </tr> <tr> <td>S</td> <td>SIL</td> </tr> <tr> <td>T^{§§}</td> <td>SIL/FM/CSA/ATEX/IECEX</td> </tr> <tr> <td>U</td> <td>UKRCEPRO (UKRAINE)</td> </tr> <tr> <td>W^{§§}</td> <td>FM/CSA/ATEX/IECEX</td> </tr> </tbody> </table> | | APPROVALS [§] | B | INMETRO (BRAZIL) | S | SIL | T^{§§} | SIL/FM/CSA/ATEX/IECEX | U | UKRCEPRO (UKRAINE) | W^{§§} | FM/CSA/ATEX/IECEX |
| | APPROVALS [§] | | | | | | | | | | | | |
| B | INMETRO (BRAZIL) | | | | | | | | | | | | |
| S | SIL | | | | | | | | | | | | |
| T^{§§} | SIL/FM/CSA/ATEX/IECEX | | | | | | | | | | | | |
| U | UKRCEPRO (UKRAINE) | | | | | | | | | | | | |
| W^{§§} | FM/CSA/ATEX/IECEX | | | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th></th> <th>CLASSIFICATION</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Division/Zone Ex d e</td> </tr> <tr> <td>2</td> <td>Division/Zone Ex d</td> </tr> </tbody> </table> | | CLASSIFICATION | 1 | Division/Zone Ex d e | 2 | Division/Zone Ex d | | | | | | |
| | CLASSIFICATION | | | | | | | | | | | | |
| 1 | Division/Zone Ex d e | | | | | | | | | | | | |
| 2 | Division/Zone Ex d | | | | | | | | | | | | |

*Special Application - consult factory before ordering.

X2200GM does not have EN-54 Part 10 approvals.

[†]Type 23 Output - When HART output chosen detector does not have RS-485 communication available.

[§]Type Approvals can use one or more letters to designate the approvals of the product.

^{§§}Type T and W Approvals: EN-54Part 10 only available on Output Types 11, 13, 14, and 23. CPR and LPCB.

The X2200G and X2200GM UVIR Flame Detectors contain a Kr85 free source tube. There are no differences in detection performance between the X2200 and X2200G, or between the X2200M and X2200GM.

Models X2200 and X2200M were retired in 2024, and are no longer available.

ULTRAVIOLET

Table D1 - X2200G Software Part Number Configuration Matrix*

| Dash | UV Sensitivity | Arc Rejection | Alarm Relay | Aux Output Function | Aux Relay | Fault Relay |
|-------|----------------|---------------|---------------------------|---------------------|---------------------------|------------------------|
| -001 | High | High | De-Energized Non-latching | Follows Alarm | Energized Non-latching | Energized Non-latching |
| -002 | High | Very High | De-Energized Non-latching | Follows Alarm | Energized Non-latching | Energized Non-latching |
| -003 | High | Off | De-Energized Non-latching | Pre-Alarm | Energized Non-latching | Energized Non-latching |
| -005 | Medium | High | De-Energized Non-latching | Follows Alarm | Energized Non-latching | Energized Non-latching |
| -006 | High | High | De-Energized Non-latching | Pre-Alarm | Energized Non-latching | Energized Non-latching |
| -007 | High | High | De-Energized Latching | Follows Alarm | De-energized Latching | Energized Non-latching |
| -008 | High | Very High | De-Energized Latching | Follows Alarm | De-energized Latching | Energized Non-latching |
| -009 | High | Off | De-Energized Latching | Pre-Alarm | De-energized Latching | Energized Non-latching |
| -010 | Medium | High | De-Energized Latching | Follows Alarm | De-energized Latching | Energized Non-latching |
| 011 | High | High | De-Energized Latching | Pre-Alarm | De-energized Latching | Energized Non-latching |
| -013* | High | Off | De-Energized Non-latching | Follows Alarm | Energized Non-latching | Energized Non-latching |
| -014* | High | Off | De-Energized Latching | Follows Alarm | De-energized Latching | Energized Non-latching |
| -015 | Very High | Low | De-Energized Non-latching | Follows Alarm | Energized Non-latching | Energized Non-latching |
| -016 | Very High | Low | De-Energized Latching | Follows Alarm | De-energized Latching | Energized Non-latching |
| -017 | Very High | Off | De-Energized Non-latching | Pre-Alarm | Energized Non-latching | Energized Non-latching |
| -018 | Very High | Off | De-Energized Non-latching | Follows Alarm | Energized Non-latching | Energized Non-latching |
| -019 | Very High | Off | De-Energized Non-latching | Pre-Alarm | De-Energized Non-latching | Energized Non-latching |

**Not all configurations are performance approved. See applicable certificates and instruction manual appendices for details.

*Available only on the X2200GM model

ARC = Arc Rejection. An algorithm that prevents false alarms from transient UV sources

Application Guidelines

The following criteria should be considered when choosing a sensitivity level for the intended application:

- Speed of response based on fuel type and fire size
- Distance between the hazard and the flame detector

These are typical industry application settings. They may not be applicable to all installations. Contact factory for additional application guidance.

| | |
|------------|----------|
| HVDC | 005 |
| Compressor | 002 |
| High Speed | 003 |
| Automotive | 005 |
| Turbine | 006 |
| Munitions | 013, 019 |

NOTE: Latching relays cannot be used in voted systems.

X2200G UV Flame Detector - SIL 2 / FM / CSA / ATEX / IECEx

| Model | Part Number * | Material | Threads | Output | Ex d e | Ex d |
|-------------------------------------------------------------------------------------------------------------------------------------|---------------|----------|---------|---------------|--------|------|
| X2200GA4N13T1 | 018308-XXX | AL | 3/4 NPT | Relay/0-20 mA | X | |
| X2200GA4M13T1 | 018309-XXX | AL | M25 | Relay/0-20 mA | X | |
| X2200GS4N13T1 | 018310-XXX | SS | 3/4 NPT | Relay/0-20 mA | X | |
| X2200GS4M13T1 | 018311-XXX | SS | M25 | Relay/0-20 mA | X | |
| X2200GA4N13T2 | 018312-XXX | AL | 3/4 NPT | Relay/0-20 mA | | X |
| X2200GA4M13T2 | 018313-XXX | AL | M25 | Relay/0-20 mA | | X |
| X2200GS4N13T2 | 018314-XXX | SS | 3/4 NPT | Relay/0-20 mA | | X |
| X2200GS4M13T2 | 018315-XXX | SS | M25 | Relay/0-20 mA | | X |
| X2200GA4N14T1 | 018316-001 | AL | 3/4 NPT | EQP | X | |
| X2200GA4M14T1 | 018455-001 | AL | M25 | EQP | X | |
| X2200GS4N14T1 | 018318-001 | SS | 3/4 NPT | EQP | X | |
| X2200GS4M14T1 | 018456-001 | SS | M25 | EQP | X | |
| X2200GA4N14T2 | 018320-001 | AL | 3/4 NPT | EQP | | X |
| X2200GA4M14T2 | 018457-001 | AL | M25 | EQP | | X |
| X2200GS4N14T2 | 018458-001 | SS | 3/4 NPT | EQP | | X |
| X2200GS4M14T2 | 018459-001 | SS | M25 | EQP | | X |
| X2200GA4N23T1 | 018438-XXX | AL | 3/4 NPT | Rly/0-20/HART | X | |
| X2200GA4M23T1 | 018439-XXX | AL | M25 | Rly/0-20/HART | X | |
| X2200GS4N23T1 | 018440-XXX | SS | 3/4 NPT | Rly/0-20/HART | X | |
| X2200GS4M23T1 | 018441-XXX | SS | M25 | Rly/0-20/HART | X | |
| X2200GA4N23T2 | 018442-XXX | AL | 3/4 NPT | Rly/0-20/HART | | X |
| X2200GA4M23T2 | 018443-XXX | AL | M25 | Rly/0-20/HART | | X |
| X2200GS4N23T2 | 018444-XXX | SS | 3/4 NPT | Rly/0-20/HART | | X |
| X2200GS4M23T2 | 018445-XXX | SS | M25 | Rly/0-20/HART | | X |
| Ship Weight: Aluminum = 7lb (3.2kg) Stainless Steel = 14.6lb (6.7kg) | | | | | | |
| The EQP detectors are completely configurable using the configuration software and are shipped defaulted to the -001 setting | | | | | | |

*The last 3 digits of the part number identify the software configuration. Please see table D1 to choose the correct option. The EQP detectors can be configured via the configuration software and are shipped defaulted to the -001 setting.

X2200GM UV Flame Detector - SIL 2 / FM / CSA / ATEX / IECEx

- Molybdenum Detector Tube

The X2200GM UV detector utilizes a molybdenum (moly) sensing element. Moly-based sensors have an increased spectral range of 1850 to 2650 angstroms, which is better suited for detecting substances with unusual chemistry, sulfur fires, and some black powders.

| Model | Part Number * | Material | Threads | Output | Ex d e | Ex d |
|-----------------------------------------------------------------------------|---------------|----------|---------|---------------|--------|------|
| X2200GMA4N23T1 | 018446-XXX | AL | 3/4 NPT | Rly/0-20/HART | X | |
| X2200GMA4M23T1 | 018447-XXX | AL | M25 | Rly/0-20/HART | X | |
| X2200GMS4N23T1 | 018448-XXX | SS | 3/4 NPT | Rly/0-20/HART | X | |
| X2200GMS4M23T1 | 018449-XXX | SS | M25 | Rly/0-20/HART | X | |
| X2200GMA4N23T2 | 018450-XXX | AL | 3/4 NPT | Rly/0-20/HART | | X |
| X2200GMA4M23T2 | 018451-XXX | AL | M25 | Rly/0-20/HART | | X |
| X2200GMS4N23T2 | 018452-XXX | SS | 3/4 NPT | Rly/0-20/HART | | X |
| X2200GMS4M23T2 | 018453-XXX | SS | M25 | Rly/0-20/HART | | X |
| Ship Weight: Aluminum = 7lb (3.2kg) Stainless Steel = 14.6lb (6.7kg) | | | | | | |

*The last 3 digits of the part number identify the software configuration. Please see table D1 to choose the correct option.

ULTRAVIOLET

X2200G UV Flame Detector - FM / CSA / ATEX / IECEx

| Model | Part Number* | Material | Threads | Output | Ex d e | Ex d |
|-----------------------------------------------------------------------------|--------------|----------|---------|---------------|--------|------|
| X2200GA4N14W1 | 018317-001 | AL | 3/4 NPT | EQP | X | |
| X2200GA4M14W1 | 018723-001 | AL | M25 | EQP | X | |
| X2200GS4N14W1 | 018319-001 | SS | 3/4 NPT | EQP | | X |
| X2200GS4M14W1 | 018724-001 | SS | M25 | EQP | | X |
| X2200GA4N14W2 | 018711-001 | AL | 3/4 NPT | EQP | X | |
| X2200GA4M14W2 | 018725-001 | AL | M25 | EQP | X | |
| X2200GS4N14W2 | 018716-001 | SS | 3/4 NPT | EQP | | X |
| X2200GS4M14W2 | 018726-001 | SS | M25 | EQP | | X |
| X2200GA4N15W1 | 018324-XXX | AL | 3/4 NPT | Pulse/Relay | X | |
| X2200GS4N15W1 | 018326-XXX | SS | 3/4 NPT | Pulse/Relay | X | |
| X2200GS4M15W1 | 018327-XXX | SS | M25 | Pulse/Relay | X | |
| X2200GA4N15W2 | 018328-XXX | AL | 3/4 NPT | Pulse/Relay | | X |
| X2200GS4N15W2 | 018330-XXX | SS | 3/4 NPT | Pulse/Relay | | X |
| X2200GS4M15W2 | 018331-XXX | SS | M25 | Pulse/Relay | | X |
| X2200GA4N24W1 | 018356-001 | AL | 3/4 NPT | Eagle Quantum | X | |
| X2200GS4N24W1 | 018358-001 | SS | 3/4 NPT | Eagle Quantum | X | |
| X2200GA4N24W2 | 018360-001 | AL | 3/4 NPT | Eagle Quantum | | X |
| X2200GS4N24W2 | 018362-001 | SS | 3/4 NPT | Eagle Quantum | | X |
| Ship Weight: Aluminum = 7lb (3.2kg) Stainless Steel = 14.6lb (6.7kg) | | | | | | |

*The last 3 digits of the part number identify the software configuration. Please see table D1 to choose the correct option.

The EQ and EQP detectors are completely configurable using the configuration software and are shipped defaulted to the -001 setting.

X2200GM UV Flame Detector - SIL 2 / FM / CSA / ATEX / IECEx

- For Aerosol Filling / Munitions / High Speed Applications

The X2200GM UV detector utilizes a molybdenum (moly) sensing element. Moly-based sensors have an increased spectral range of 1850 to 2650 angstroms, which is better suited for detecting substances with unusual chemistry, sulfur fires, and some black powders.

| Model | Part Number* | Material | Threads | Output | Ex d e | Ex d |
|-----------------------------------------------------------------------------|--------------|----------|---------|---------------|--------|------|
| X2200GMA4N13T1 | 018340-013 | AL | 3/4 NPT | Relay/0-20 mA | X | |
| X2200GMS4M13T1 | 018343-013 | SS | M25 | Relay/0-20 mA | X | |
| X2200GMS4M13T2 | 018347-013 | SS | M25 | Relay/0-20 mA | | X |
| X2200GMS4N14T1 | 018374-001 | SS | 3/4 NPT | EQP | X | |
| X2200GMA4M14T2 | 018377-001 | AL | M25 | EQP | | X |
| X2200GMS4N14T2 | 018378-001 | SS | 3/4 NPT | EQP | | X |
| Ship Weight: Aluminum = 7lb (3.2kg) Stainless Steel = 14.6lb (6.7kg) | | | | | | |

*The last 3 digits of the part number identify the software configuration. Please see table D1 to choose the correct option. The EQP detectors are completely configurable using the S3 configuration software and are shipped defaulted to the -001 setting.

X2200GM UV Flame Detector - FM / CSA / ATEX / IECEx

- For Aerosol Filling / Munitions / High Speed Applications

The X2200GM UV detector utilizes a molybdenum (moly) sensing element. Moly-based sensors have an increased spectral range of 1850 to 2650 angstroms, which is better suited for detecting substances with unusual chemistry, sulfur fires, and some black powders.

| Model | Part Number* | Material | Threads | Output | Ex d e | Ex d |
|-----------------------------------------------------------------------------|--------------|----------|---------|--------|--------|------|
| X2200GMS4N14W1 | 018712-001 | SS | 3/4 NPT | EQP | X | |
| X2200GMS4M14W2 | 018715-001 | SS | M25 | EQP | | X |
| X2200GMS4N14W2 | 018719-001 | SS | 3/4 NPT | EQP | | X |
| Ship Weight: Aluminum = 7lb (3.2kg) Stainless Steel = 14.6lb (6.7kg) | | | | | | |

*The last 3 digits of the part number identify the software configuration. Please see table D1 to choose the correct option. The EQP detectors are completely configurable using the S3 software and are defaulted to the -001 setting

X2200G UV Flame Detector - INMETRO (Brazil)

| Model | Part Number* | Material | Threads | Output | Ex d e | Ex d |
|-----------------------------------------------------------------------------|--------------|----------|---------|---------------|--------|------|
| X2200GA4N13B2 | 018422-XXX | AL | 3/4 NPT | Relay/0-20 mA | | X |
| X2200GS4N13B2 | 018423-XXX | SS | 3/4 NPT | Relay/0-20 mA | | X |
| X2200GA4N14B2 | 018424-001 | AL | 3/4 NPT | EQP | | X |
| X2200GS4N14B2 | 018425-001 | SS | 3/4 NPT | EQP | | X |
| X2200GA4N23B2 | 018426-XXX | AL | 3/4 NPT | Rly/0-20/HART | | X |
| X2200GS4N23B2 | 018427-XXX | SS | 3/4 NPT | Rly/0-20/HART | | X |
| Ship Weight: Aluminum = 7lb (3.2kg) Stainless Steel = 14.6lb (6.7kg) | | | | | | |

*The last 3 digits of the part number identify the software configuration. Please see table D1 to choose the correct option. The EQP detectors are completely configurable using the S3 software and are defaulted to the -001 setting

ULTRAVIOLET

X2200G UV Flame Detector - UKRCEPRO (Ukraine)

| Model | Part Number* | Material | Threads | Output | Ex d e | Ex d |
|---------------|--------------|----------|---------|---------------|--------|------|
| X2200GA4M13U1 | 018462-XXX | AL | M25 | Relay/0-20 mA | X | |
| X2200GS4M13U1 | 018463-XXX | SS | M25 | Relay/0-20 mA | X | |
| X2200GA4M13U2 | 018464-XXX | AL | M25 | Relay/0-20 mA | | X |
| X2200GS4M13U2 | 018465-XXX | SS | M25 | Relay/0-20 mA | | X |

Ship Weight: Aluminum = 7lb (3.2kg) Stainless Steel = 14.6lb (6.7kg)

*The last 3 digits of the part number identify the software configuration. Please see table D1 to choose the correct option.

ULTRAVIOLET

X2200GM UV Flame Detector - SIL 2 / FM / CSA / ATEX / IECEx

- For Aerosol Fill / Munitions / High Speed Applications

In addition to having a Kr-85 free source tube, the X2200GM UV Flame Detector utilizes a molybdenum (moly) sensing element. Moly-based sensors have an increased spectral range of 1850 to 2650 angstroms, which is better suited for detecting substances with unusual chemistry, sulfur fires, and some black powders.

| Model | Part Number* | Material | Threads | Output | Ex d e | Ex d |
|-----------------------------------------------------------------------------|--------------|----------|---------|---------------|--------|------|
| X2200GMA4N13T2 | 018460-003 | AL | 3/4 NPT | Relay/0-20 mA | | X |
| X2200GMA4N13T2 | 018460-013 | AL | 3/4 NPT | Relay/0-20 mA | | X |
| X2200GMA4M13T2 | 018461-003 | AL | M25 | Relay | | X |
| X2200GMA4M13T2 | 018461-013 | AL | M25 | Relay | | X |
| Ship Weight: Aluminum = 7lb (3.2kg) Stainless Steel = 14.6lb (6.7kg) | | | | | | |

*The last 3 digits of the part number identify the software configuration. Please see table D1 to choose the correct option (configuration -013 is specification for this application).
The EQP detectors are completely configurable using the S3 configuration software and are shipped defaulted to the -001 setting.

X-SERIES FLAME DETECTOR SPARE PARTS & ACCESSORIES

X-Series Flame Detector Spare Parts

X-Series Sensor Modules - SIL 2 / FM / CSA / ATEX / IECEx

| Model | Part Number* | Material | Ex d e | Ex d | Ship Weight |
|-------------------------------------------------------------------------------------------------------------|--------------|----------|--------|------|---------------|
| X3301** | 029965-XXX | AL | X | | 2 lb (0.9 kg) |
| X3301** | 029966-XXX | SS | X | | 4 lb (1.8 kg) |
| X3301** | 029967-XXX | AL | | X | 2 lb (0.9 kg) |
| X3301** | 029968-XXX | SS | | X | 4 lb (1.8 kg) |
| X3301 EQP/LON† | 027866-001 | AL | X | | 2 lb (0.9 kg) |
| X3301 EQP/LON† | 027867-001 | SS | X | | 4 lb (1.8 kg) |
| X3301 EQP/LON† | 027868-001 | AL | | X | 2 lb (0.9 kg) |
| X3301 EQP/LON† | 027869-001 | SS | | X | 4 lb (1.8 kg) |
| **Replacement sensor modules for EQP/LON models dated January 2009 or newer. | | | | | |
| †Replacement sensor modules for EQP/LON models dated December 2008 or older (not capable of t-low setting). | | | | | |
| X3302 | 022340-001 | AL | X | | 2 lb (0.9 kg) |
| X3302 | 022341-001 | SS | X | | 4 lb (1.8 kg) |
| X3302 | 022342-001 | AL | | X | 2 lb (0.9 kg) |
| X3302 | 022343-001 | SS | | X | 4 lb (1.8 kg) |
| X5200G | 013370-XXX | AL | X | | 2 lb (0.9 kg) |
| X5200G | 013372-XXX | SS | X | | 4 lb (1.8 kg) |
| X5200G | 013371-XXX | AL | | X | 2 lb (0.9 kg) |
| X5200G | 013373-XXX | SS | | X | 4 lb (1.8 kg) |
| X5200GM | 013114-XXX | AL | X | | 2 lb (0.9 kg) |
| X5200GM | 013115-XXX | SS | X | | 4 lb (1.8 kg) |
| X5200GM | 013116-XXX | AL | | X | 2 lb (0.9 kg) |
| X5200GM | 013117-XXX | SS | | X | 4 lb (1.8 kg) |
| X9800 | 012138-XXX | AL | X | | 2 lb (0.9 kg) |
| X9800 | 012139-XXX | SS | X | | 4 lb (1.8 kg) |
| X9800 | 012140-XXX | AL | | X | 2 lb (0.9 kg) |
| X9800 | 012141-XXX | SS | | X | 4 lb (1.8 kg) |
| X2200G | 013070-XXX | AL | X | | 2 lb (0.9 kg) |
| X2200G | 013072-XXX | SS | X | | 4 lb (1.8 kg) |
| X2200G | 013071-XXX | AL | | X | 2 lb (0.9 kg) |
| X2200G | 013073XXX | SS | | X | 4 lb (1.8 kg) |
| X2200GM | 013105-XXX | AL | X | | 2 lb (0.9 kg) |
| X2200GM | 013106-XXX | SS | X | | 4 lb (1.8 kg) |
| X2200GM | 013107-XXX | AL | | X | 2 lb (0.9 kg) |
| X2200GM | 013108-XXX | SS | | X | 4 lb (1.8 kg) |

*The last 3 digits of the part number identify the software configuration.
The EQP detectors are completely configurable using the configuration software and are shipped defaulted to the -001 setting.

X5200G Sensor Modules - SIL 2 / FM / CSA / ATEX / IECEx

- For Aerosol Fill / Munitions / High Speed Applications

| Model | Part Number* | Material | Ex d e | Ex d | Ship Weight |
|--------|--------------|----------|--------|------|---------------|
| X5200G | 013374-022 | AL | | X | 2 lb (0.9 kg) |
| X5200G | 013375-022 | AL | X | | 2 lb (0.9 kg) |



X-SERIES FLAME DETECTOR SPARE PARTS & ACCESSORIES

X-Series Sensor Modules - FM / CSA / ATEX / IECEx

| Model | Part Number* | Material | Ex d e | Ex d | Ship Weight |
|------------------|--------------|----------|--------|------|---------------|
| X3301 | 027752-XXX | AL | X | | 2 lb (0.9 kg) |
| X3301 | 027753-XXX | AL | | X | 2 lb (0.9 kg) |
| X3301 | 027754-XXX | SS | X | | 4 lb (1.8 kg) |
| X3301 | 027755-XXX | SS | | X | 4 lb (1.8 kg) |
| X3301 Automotive | 027753-005 | AL | | X | 2 lb (0.9 kg) |
| X3302 | 028992-XXX | AL | X | | 2 lb (0.9 kg) |
| X3302 | 028993-XXX | AL | | X | 2 lb (0.9 kg) |
| X3302 | 028994-XXX | SS | X | | 4 lb (1.8 kg) |
| X3302 | 028995-XXX | SS | | X | 4 lb (1.8 kg) |
| X5200G | 013288-XXX | AL | X | | 2 lb (0.9 kg) |
| X5200G | 013289-XXX | AL | | X | 2 lb (0.9 kg) |
| X5200G | 013290-XXX | SS | X | | 4 lb (1.8 kg) |
| X5200G | 013291-XXX | SS | | X | 4 lb (1.8 kg) |
| X5200GM | 013110-013 | AL | X | | 2 lb (0.9 kg) |
| X5200GM | 013111-013 | AL | | X | 2 lb (0.9 kg) |
| X5200GM | 013112-013 | SS | X | | 4 lb (1.8 kg) |
| X5200GM | 013113-013 | SS | | X | 4 lb (1.8 kg) |
| X9800 | 007760-XXX | AL | X | | 2 lb (0.9 kg) |
| X9800 | 007761-XXX | AL | | X | 2 lb (0.9 kg) |
| X9800 | 007762-XXX | SS | X | | 4 lb (1.8 kg) |
| X9800 | 007763-XXX | SS | | X | 4 lb (1.8 kg) |
| X2200G | 013080-XXX | AL | X | | 2 lb (0.9 kg) |
| X2200G | 013081-XXX | AL | | X | 2 lb (0.9 kg) |
| X2200G | 013082-XXX | SS | X | | 4 lb (1.8 kg) |
| X2200G | 013083-XXX | SS | | X | 4 lb (1.8 kg) |
| X2200GM | 013084-XXX | AL | X | | 2 lb (0.9 kg) |
| X2200GM | 013085-XXX | AL | | X | 2 lb (0.9 kg) |
| X2200GM | 013086-XXX | SS | X | | 4 lb (1.8 kg) |
| X2200GM | 013087-XXX | SS | | X | 4 lb (1.8 kg) |

*The last 3 digits of the part number identify the software configuration.



X-SERIES FLAME DETECTOR SPARE PARTS & ACCESSORIES

X-Series Flame Detector EMI Output Boards

| Description | Part Number | Ship Weight |
|------------------------------------------------|-------------|------------------|
| EMI/Relay/0-20 Board (X-Series) | 007308-001 | <1 lb (<0.45 kg) |
| EMI/Pulse/Relay Board (X-Series) | 007308-002 | <1 lb (<0.45 kg) |
| EMI/EQP Board (X-Series) | 007308-003 | <1 lb (<0.45 kg) |
| EMI/EQ Retrofit Board (X2200G and X5200G only) | 007308-004 | <1 lb (<0.45 kg) |
| EMI/Relay/0-20/HART Board (X-Series) | 007308-005 | <1 lb (<0.45 kg) |
| EMI/Automotive Board (X3301) | 007308-006 | <1 lb (<0.45 kg) |



X-Series Miscellaneous Spare Parts

| Description | Part Number | Material | Ship Weight |
|---------------------------------------------------------------------------------------------------------------------|-------------|-----------------------|------------------|
| Note: o _i Replacement Kits consist of five (5) plates and a W6300B1003 | | | |
| o _i Replacement Kit, X3301 | 009208-001 | Black Plastic | <1 lb (<0.45 kg) |
| o _i Replacement Kit, X3301, SS | 010831-001 | SS | <1 lb (<0.45 kg) |
| o _i Replacement Kit, X3302 | 009208-003 | Black Plastic | <1 lb (<0.45 kg) |
| o _i Replacement Kit, X3302, SS | 010831-002 | SS | <1 lb (<0.45 kg) |
| o _i Replacement Kit, X5200/X9800/X2200 | 009208-002 | Black Plastic | <1 lb (<0.45 kg) |
| Note: o _i plates for any X-Series Flame Detector require a W6300 Inspector Connector to calibrate | | | |
| o _i Reflector Plate, X3301 | 007307-001 | Black Plastic | <1 lb (<0.45 kg) |
| o _i Reflector Plate, X3301, SS | 010830-001 | SS | <1 lb (<0.45 kg) |
| o _i Reflector Plate, X3302 | 007307-003 | Black Plastic | <1 lb (<0.45 kg) |
| o _i Reflector Plate, X3302, SS | 010830-002 | SS | <1 lb (<0.45 kg) |
| o _i Reflector Plate, X5200/X9800/X2200 | 007307-002 | Black Plastic | <1 lb (<0.45 kg) |
| O-ring - Rear Cover | 107427-040 | Viton | <1 lb (<0.45 kg) |
| O-ring - Rear Cover | 104346-154 | Fluorosilicone (blue) | <1 lb (<0.45 kg) |

NOTE: Not interchangeable - Reference instruction manual 95-8530 to determine the correct o_i replacement plate.

X-Series Flame Detector Accessories



W6300B Inspector Connector with Enhanced Flame Inspector Software (Manual: 95-8751) for use with X3301, X3302, X5200, X9800, and X2200 flame detectors. Allows for validation of configuration and uploading of important detector status data such as power-up/down, faults and alarms to a personal computer (PC) where it can be displayed, saved and/or printed. Enhanced Flame Inspector CD included

W6300 Inspector Connector - X-Series

| Model/Description | Part Number | Converter | Ship Weight |
|------------------------------------|-------------|-----------|------------------|
| W6300B1003 Connector with Software | 007819-002 | USB | <1 lb (<0.46 kg) |
| Replacement Converter RS485 to USB | 103881-001 | USB | <1 lb (<0.46 kg) |
| Enhanced Flame Inspector CD | 009207-001 | N/A | <1 lb (<0.46 kg) |



X-SERIES FLAME DETECTOR SPARE PARTS & ACCESSORIES

X-Series Miscellaneous Accessories

| Description | Part Number | Ship Weight |
|-------------------------------------------------|-------------|------------------|
| Magnet* | 102740-002 | <1 lb (<0.45 kg) |
| Magnet and Adapter for Extension Pole | 008082-001 | <1 lb (<0.45 kg) |
| Magnet and Extension Pole (6ft to 13ft) | 007739-001 | 2 lb (.91 kg) |
| Magnet and Extension Pole (8ft to 22ft) | 007739-002 | 4 lb (1.81 kg) |
| 14mm Hex Wrench | 103363-001 | <1 lb (<0.45 kg) |
| Screwdriver | 103406-001 | <1 lb (<0.45 kg) |
| 1 oz grease for detectors (non-silicon) | 005003-001 | <1 lb (<0.45 kg) |
| Black Static Cap for o ₂ Calibration | 102991-001 | <1 lb (<0.45 kg) |
| Window cleaner (6 pack) | 001680-001 | <1 lb (<0.45 kg) |

*1 magnet ships with each individual order of X-Series detectors, free of charge.



14mm Hex Wrench
103363-001



Magnet and Extension Pole
007739-001



Dome Head Stop Plug - Nickel Brass



Type A Stop Plug - Nickel Brass

Stop Plugs and Reducers

| ITEM NUMBER | STYLE | MATERIAL | OVERALL LENGTH (mm) | THREAD TYPE | HEX SIZE |
|-------------|---------------------|-----------------|---------------------|-------------|----------|
| 101197-001 | TYPE A STOP PLUG | ALUMINUM | 14.8 | 3/4 NPT | 12 |
| 101197-002 | TYPE A STOP PLUG | ALUMINUM | 14.5 | 1/2 NPT | 10 |
| 101197-003 | DOME HEAD STOP PLUG | STAINLESS STEEL | 21.5 | M25 | 12 |
| 101197-004 | TYPE A STOP PLUG | STAINLESS STEEL | 14.8 | 3/4 NPT | 12 |
| 101197-005 | DOME HEAD STOP PLUG | ALUMINUM | 21.5 | M25 | 12 |
| 101197-006 | DOME HEAD STOP PLUG | ALUMINUM | 21.5 | M20 | 10 |
| 101197-007 | DOME HEAD STOP PLUG | STAINLESS STEEL | 21.5 | M20 | 10 |
| 101197-008 | DOME HEAD STOP PLUG | NICKEL BRASS | 21.5 | M20 | 10 |
| 101197-009 | DOME HEAD STOP PLUG | NICKEL BRASS | 21.5 | M25 | 12 |
| 101197-010 | TYPE A STOP PLUG | NICKEL BRASS | 14.8 | 3/4 NPT | 12 |
| 101197-011 | TYPE A STOP PLUG | NICKEL BRASS | 14.5 | 1/2 NPT | 10 |
| 101197-012 | TYPE A STOP PLUG | STAINLESS STEEL | 14.5 | 1/2 NPT | 10 |
| 101197-501 | IP WASHER | NYLON | - | M20 | - |
| 101197-502 | IP WASHER | NYLON | - | M25 | - |
| 101197-503 | IP WASHER | TEFLON PTFE | - | M20 | - |
| 101197-504 | IP WASHER | TEFLON PTFE | - | M25 | - |
| 102804-001 | REDUCER | ALUMINUM | - | M25 to M20 | - |
| 102804-003 | REDUCER | STAINLESS STEEL | - | M25 to M20 | - |

Ship Weight: 1/2 NPT = 0.07lb (0.030kg), 3/4 NPT = 0.11lb (0.05kg), M20 = 0.14lb (0.062kg), M25 = 0.28lb (0.125 kg)
Available Stop Plug Approvals: ATEX, IECEx, CEC, NEC, EAC, INMETRO, SAC, UKRAINE, CCoE, ABS, LLOYD'S, RMRS

*TYPE 4 and IP66 rating requires addition of Teflon tape

**Metric threaded stop plugs are fitted with silicone O-Rings

***For silicone sensitive applications the silicone O-Ring can be removed from Metric stop plugs and fitted with an IP washer

DUAL SPECTRUM INFRARED

PM-5MPX Dual Spectrum Flame Detector



PM-5MPX Dual Spectrum Flame Detector (Spec Sheet: 90-1182) is optimized for the rigorous semiconductor fabrication industry, which is beset with many hazards that result in stringent and application-specific requirements for fire protection safety systems. Additionally, the PM-5MPX is well-suited for the detection of cutting oil fires within CNC machine grinding applications.

- Complies to FM wet bench performance standards
- Approved to FM3260: 2000
- Dual spectrum IR design
- Compact size
- LED indicator for operational status
- Built-in mounting plate
- Typical response of <0.5 sec
- Fast response—as fast as 25 milliseconds
- Polypropylene housing: excellent resistance to corrosion and contamination effects
- FM approved for intrinsic safety
- Highly resistant to false alarms
- May qualify for RoHS machine guarding exception

PM-5MPX Dual Spectrum IR Flame Detector

| Model | Part Number | Encl Material | Cable Length | FM | Ship Weight |
|---------|-------------|---------------|--------------|----|------------------|
| PM-5MPX | 421132-001 | Polypropylene | 50 ft | X | 0.5 lb (0.23 kg) |



PSS-ML

PM-5MPX Accessories

| Part Number | Description | Ship Weight |
|-------------|------------------|------------------|
| 007351-001 | PSS-ML Test Lamp | <1 lb (<0.45 kg) |

SMOKE DETECTORS

U5015 Explosion-Proof Smoke Detector



U5015 Explosion-Proof Smoke Detector (Spec Sheet: 90-1217) The U5015 Explosion-Proof Smoke Detector has Division and Zone explosion-proof ratings and is suitable for industrial and commercial applications. The detector is designed to operate effectively with both smoldering and rapidly growing fires, and will annunciate a fault condition ensuring no undisclosed failures. The U5015 Explosion-Proof Smoke Detector outputs include 0-20 mA, a localized LED, and relays.

- FM Approved for use in Class I, Division 1 and Class I, Zone 1 hazardous locations
- FM Approved for smoke detection performance (FM 3230)
- IECEx Zone approved
- Trouble-free photoelectric operation
- 0-20 mA output for DCS integration
- Self-checking circuitry ensures reliable smoke detection
- Alarm, Auxiliary and Fault relays for controlling annunciating devices or fire panel interface
- LED provides a visual indication that an alarm has occurred
- IP44 ingress protection level suitable for onshore or offshore requirements

U5015 Model Matrix

| MODEL | DESCRIPTION | |
|-------|--------------------------------|------------------------------|
| U5015 | Explosion-Proof Smoke Detector | |
| | TYPE | MATERIAL |
| | A | Aluminum (AL) |
| | TYPE | # OF PORTS |
| | 2 | 2 Port |
| | 4 | 4 Port |
| | TYPE | THREAD TYPE |
| | N | 3/4" NPT |
| | M | M25 |
| | TYPE | OUTPUTS |
| | 12 | 0-20 mA, Relay, Non-Latching |
| | 13 | 0-20 mA, Relay, Latching |
| | TYPE | APPROVAL |
| | A | FM/IECEX/CSA |

SMOKE DETECTORS

U5015 Explosion-Proof Smoke Detector (FM/IECEX/CSA)

| Model | Part Number | Housing Material | J-box Material | # of Ports | Latch | Non-Latch | Conduit Entry | FM/IECEX/CSA |
|---------------------------------|-------------|------------------|----------------|------------|-------|-----------|---------------|--------------|
| U5015A2N13A | 012500-302 | ABS | AL | 2 | X | | 3/4" NPT | X |
| U5015A4N13A | 012500-304 | ABS | AL | 4 | X | | 3/4" NPT | X |
| U5015A2M13A | 012500-306 | ABS | AL | 2 | X | | M25 | X |
| U5015A4M13A | 012500-308 | ABS | AL | 4 | X | | M25 | X |
| U5015A2N12A | 012500-312 | ABS | AL | 2 | | X | 3/4" NPT | X |
| U5015A4N12A | 012500-314 | ABS | AL | 4 | | X | 3/4" NPT | X |
| U5015A2M12A | 012500-316 | ABS | AL | 2 | | X | M25 | X |
| U5015A4M12A | 012500-318 | ABS | AL | 4 | | X | M25 | X |
| Ship Weight: 8lb (3.6kg) | | | | | | | | |

U5015 Spare Parts & Accessories

| Part Number | Description | Ship Weight |
|-------------|--------------------------------------------------|------------------|
| 104286-003 | U5015 REPL SENSOR MODULE (G2) | <1 lb (<0.45 kg) |
| 104234-001 | Phoenix Contact ME-MAX-NEF/QUINT20A Line Filter* | <1lb (<0.45kg) |
| 102740-002 | Magnet | <1 lb (<0.45 kg) |
| 007739-001 | Magnet with Extension Pole | <1 lb (<0.45 kg) |
| 101197-001 | Stop Plug, 3/4" NPT, AL | <1 lb (<0.45 kg) |
| 101197-005 | Stop Plug, M25, AL | <1 lb (<0.45 kg) |
| 000119-008 | Smoke Detector Tester (Canned Smoke) | <1 lb (<0.45 kg) |

* Required for Maritime Installations

SMOKE DETECTORS

Q5017R Duct Mount Accessory



Q5017R Duct Mount Accessory (Instruction Manual: 95-8752) is used with the U5015 explosion-proof smoke detector to detect smoke within air handling duct work. Mounted to the exterior of the duct wall, the Q5017R utilizes the differential pressure created between the inlet (sampling) and outlet (exhaust) tubes to drive a continuous air sample through the measurement chamber. The Q5017R is designed for hazardous industrial and commercial applications.

- Air Velocity Range of 300 to 4000 ft/min (91.4 to 1219 meters/min)
- Type 4X
- Prior to painting, the aluminum surfaces are coated with chemical film per MIL-DTL-SS41 TYPE II Class 1A and ISO 881.
- The Q5017R Duct Mount Accessory is painted with a deep-red epoxy. Qualification Tests per ISO 12944-6, Category C5-1 and CS-M.

Q5017R6 Duct Mount Accessory

| Model | Part Number | Inlet Tube Length |
|------------------------------------|-------------|-------------------|
| Q5017R-1 | 013901-101 | 1 ft (0.3 m) |
| Q5017R-3 | 013901-103 | 3 ft (0.9 m) |
| Q5017R-6 | 013901-106 | 6 ft (1.8 m) |
| Q5017R-10 | 013901-110 | 10 ft (3.1 m) |
| Ship Weight: 21.8lb (9.9kg) | | |

Q5017R and Legacy Q5016 Duct Mount Accessory Spare Parts

| Model | Part Number |
|---------------------------------------|-------------|
| Q5016 inlet tube 1 ft (0.3 m) w/stop | 013660-001 |
| Q5016 inlet tube 3 ft (0.9 m) w/stop | 013660-003 |
| Q5016 inlet tube 6 ft (1.8 m) w/stop | 013660-006 |
| Q5016 inlet tube 10 ft (3.0 m) w/stop | 013660-010 |
| Q5016 outlet tube, 1 ft | 013628-001 |
| Inlet tube stop plug | 013653-001 |
| Differential pressure adaptors (2x) | 013655-001 |
| Q5016 Chamber gasket | 013626-001 |
| Q5017R Chamber gasket | 013626-002 |
| Locknut, serrated flange | 400587-001 |

- All Q5016 Spare Parts are compatible with the Q5017R except for the Chamber Gasket.
- For existing installations of the Q5016 a conversion kit is available. This kit includes a new Chamber Cover, Chamber Gasket, Replacement Sensor Module, and necessary hardware.

Q5017R Retrofit Part

| Model | Part Number |
|------------------------------------|-------------|
| Q5017R-Kit Retrofit Cover Kit | 013975-001 |
| Ship Weight: 5.5 lb (2.5kg) | |

ACCESSORIES

Test Lamps



W8066G UV Test Lamp (Spec Sheet: 90-1055) is used for on-site testing of all UV detector types. It replaces W866. Consists of a UV lamp powered by a replaceable 9 volt battery and is contained in a plastic enclosure. "G" in the model indicates the Test Lamp is Kr85 Free.



W867 Explosion-Proof UVIR Test Lamp (Spec Sheet: 90-1055) is used for on-site testing of UV, single frequency IR, or UVIR detectors. Consists of a high-energy broad band lamp powered by rechargeable batteries and is contained in an explosion-proof non-ferrous metallic enclosure.



W8067 Test Lamp (Manual: 95-8626) for on-site testing of the UVIR and single frequency IR detectors.
NON EXPLOSION-PROOF - CANNOT BE USED IN HAZARDOUS LOCATIONS.

W8066 UV Test Lamp

| Model/Description | Part Number | FM | CSA | Ship Weight |
|----------------------------|-------------|----|-----|------------------|
| W8066G1001 Kr85-free | 004483-002 | | | 1.5 lb (0.7 kg) |
| W8066G Replacement Bulb | 002405-004 | | | <1 lb (<0.45 kg) |
| Screw-on cap, red for Lens | 004520-003 | | | 1.5 lb (0.7 kg) |
| Window, Fused Silica | 004648-001 | | | 1.5 lb (0.7 kg) |
| Seal, Pushbutton Boot | 102219-001 | | | 1.5 lb (0.7 kg) |

W867 Explosion-Proof UVIR Test Lamp

| Model/Description | Part Number | FM | Ship Weight |
|-----------------------------------------------------------|-------------|----|-----------------|
| W867C3004 Test Lamp 110/220 VAC* | 004000-006 | X | 14 lb (6.2 kg) |
| Universal Battery Charger for W867 and W8067, 110/220 VAC | 009997-002 | | 1 lb (0.4 kg) |
| Battery Charger, W8673001, 120 VAC | 009117-002 | | 1 lb (0.4 kg) |
| W867 Battery Pack Kit | 004611-002 | | 7 lb (3.2 kg) |
| W867 Bulb Replacement Assembly | 010543-001 | | <1 lb (<0.4 kg) |

*Includes Universal Battery Charger

W8067 Test Lamp

| Model/Description | Part Number | Ship Weight |
|-----------------------------------------------------------|-------------|------------------|
| W8067S1004 | 006439-004 | 2.0 lb (0.95 kg) |
| Universal Battery Charger for W867 and W8067, 110/220 VAC | 009997-002 | <1 lb (<0.4 kg) |
| W8067S Battery, 6V (2 required for 12V operation) | 103855-001 | <1 lb (<0.4 kg) |
| W8067S Battery, 12V | 103937-001 | <1 lb (<0.4 kg) |

Laser, Laser Aimer Holder



Laser Aimer is for use with the Q1201A and Q1201C Laser Holder in sighting and testing the area of flame detection coverage. When used with its holder, the laser beam identifies the center and edges of the detector's field of view (FOV). **NEW! Green laser available, for greater visibility. Preferred for most applications.** Includes battery.



Q1201C Laser Aimer Holder (Manual: 95-8596) is for use with X3301, X3302, X5200, X9800, X2200, and X3300 flame detectors. Designed to hold the Laser Aimer to show exact location of the center of the detector's FOV. Two additional holding positions are available for locating the outside edges of the FOV at either 30 degrees off center (75 degrees total FOV) or at 45 degrees off center (90 degrees total FOV). While the Laser Aimer is being used to locate edges of the FOV it can be rotated 360 degrees to identify the entire area of flame detection coverage.



Q1201C Accessory is used with the Q1201C to determine the top aim point of the flame detector when a 10 or 20 degree FOV sight limiter is to be installed.



The **Q1201A Adapter** (Bulletin: 31-1038) is a rubber grommet that allows the use of the Q1201C Laser Holder with Det-Tronics legacy flame detectors such as the C7050, U7679, U7602, C7098, C7052, and C7652. The Q1201A Adapter provides a secure fitment between these legacy detectors and the Q1201C, which allows easy aiming of Det-Tronics legacy flame detectors during system startup, checkout and re-alignments.

Laser, Laser Aimer Holder

| Model/Description | Part Number | For Use With | Ship Weight |
|---------------------|-------------|-----------------------------------------------|------------------|
| Red Laser Aimer | 006097-001 | Q1201A, B, and C | 1 lb (0.46 kg) |
| Green Laser Aimer | 006097-002 | Q1201A, B, and C | 1 lb (0.46 kg) |
| Battery, 3V Lithium | 102871-001 | Laser Aimer | <1 lb (<0.46 kg) |
| Q1201C1001 | 007255-001 | All X-Series | 2 lb (0.95 kg) |
| Q1201 Accessory | 012125-001 | Q1201C1001 (Provides 10° & 20° field of view) | 1 lb (0.46 kg) |
| Q1201A Adapter | 006066-002 | Legacy flame detectors | <1lb (<0.46 kg) |

Weather Shield, FOV Limiter



Q2000 X-Series Weather Shield provides added weather protection. Epoxy coated aluminum.

Q2000 X-Series Weather Shield

| Model | Part Number | Material* | Ship Weight |
|------------|-------------|-----------|---------------|
| Q2000A1001 | 007338-001 | AL | 1 lb (0.45kg) |

*Epoxy coated.



Q2033 Field of View (FOV) Limiter / Weather Shield for the X3301 or X3302

For applications with friendly fires or flares, which require a controlled cone of vision. Order the 10° model for the greatest reduction in field of view, the 20° for standard limitation, or the 30° to maintain the field of view and use as a weather shield.

Q2033 FOV Limiter for X3301 and X3302

| Model | Part Number | Material* | Ship Weight |
|-------------------------------------------|-------------|-----------|------------------|
| Q2033A10R 10° FOV Limiter for X3301/X3302 | 007338-010 | AL | 1 lb (0.45 kg) |
| Q2033A20R 20° FOV Limiter for X3301/X3302 | 007338-020 | AL | 1 lb (0.45 kg) |
| Q2033A30R 30° FOV Limiter for X3301/X3302 | 007338-030 | AL | 1 lb (0.45 kg) |
| Spare Restrictor Plate 10° FOV | 007912-010 | AL | <1 lb (<0.45 kg) |
| Spare Restrictor Plate 20° FOV | 007912-020 | AL | <1 lb (<0.45 kg) |
| Spare Restrictor Plate 30° FOV | 007912-030 | AL | <1 lb (<0.45 kg) |

*Epoxy coated.

ACCESSORIES

Flame Detector Hardware



Q1116 Universal Air Shield Assembly (Manual: 95-8597). Use on all X-Series flame detectors in areas with air-borne contaminants. Available in aluminum with a sintered air diffuser. Quick connect air line fitting accepts 1/4 inch OD nylon tubing for instrument grade air supply of 12 to 20 psi at 3 or more cubic feet per minute.

Q1116 Universal Air Shield Assembly

| Model | Part Number | Air Connection | Air Supply | Air Requirement | Ship Weight |
|------------|-------------|------------------------------------|------------|-----------------|---------------|
| Q1116A1001 | 007240-001 | 1/4" OD nylon tubing | 12-20 psi | 3 cfm minimum | 2 lb (0.9 kg) |
| N/A | 011990-001 | Q1116/Q1118 SINTER REPLACEMENT KIT | | | 2 lb (0.9 kg) |



Q1118 Universal Air Shield/Flange Mount Assembly (Manual: 95-8595). Use on all X-Series flame detectors in areas with air-borne contaminants. Available in either aluminum or stainless steel with a sintered air diffuser. Quick connect air line fitting accepts 1/4 inch OD nylon tubing for instrument grade air supply of 10 to 20 psi at 3 or more cubic feet per minute.

Q1118 Universal Air Shield / Flange Mount Assembly

| Model | Part Number | Material | Air Connection | Air Supply | Air Requirement | Ship Weight |
|------------|-------------|------------------------------------|----------------------|------------|-----------------|----------------|
| Q1118A1001 | 007818-001 | AL | 1/4" OD nylon tubing | 10-30 psi | 3-20 cfm target | 2 lb (0.9 kg) |
| Q1118S1001 | 007818-002 | SS | 1/4" OD nylon tubing | 10-30 psi | 3-20 cfm target | 6 lb (2.75 kg) |
| N/A | 011990-001 | Q1116/Q1118 SINTER REPLACEMENT KIT | | | | 2 lb (0.9 kg) |

NOTE: Not compatible with Q9033



Q1198 Dual Air Shield/Flange Mount Assembly (Manual: 95-8598). Use on X9800 in areas with high levels of powdered air-borne contaminants. Available in Aluminum with a sintered air diffuser. Provided with two quick connect air line fittings - one for constant air flow function and the second for quick clean/purge function. Both fittings accept 1/4 inch OD nylon tubing for instrument grade air supply of 10 to 60 psi at 3 or more cubic feet per minute.

Q1198 Dual Air Shield / Flange Mount Assembly for X9800

| Model | Part Number | Material | Air Connection | Air Supply | Air Requirement | Ship Weight |
|------------|-------------|----------|---------------------|------------|-----------------|---------------|
| Q1198A1001 | 009199-001 | AL | 6mm OD nylon tubing | 10-20 psi | 3-5 cfm min | 2 lb (0.9 kg) |

NOTE: Not compatible with Q9033

Flame Detector Mounting Hardware



Q9033A Aluminum Mounting Arm for all aluminum X-Series flame detectors.

NOTE: For use with aluminum detectors only.



Q9033B Stainless steel Mounting Arm for all X-Series flame detectors (DNV approved with X3301).

NOTE: For use with stainless steel and aluminum detectors.



Q9033 Collar Attachment (Manual: 95-8686) for all X-Series flame detectors . Used in conjunction with the Q9033A/B Mounting Arm. The Collar Attachment adds versatility to the mounted detector by allowing a wider (3-dimensional) range of motion and improved viewing angles (DNV approved with X3301).



Q1130 (Manual: 95-8662) Flange mount assembly for X3301 and X3302, allows the detector to be mounted externally to monitor storage or process areas. Not suitable for Zone 0 defined locations.

Flame Detector Mounting Hardware

| Model | Part Number | For Use With | Ship Weight |
|----------------------------|-------------|--------------------------------------|------------------|
| Q9033A1000 | 007290-002 | AL X2200, X5200, X9800, X3301, X3302 | 6 lb (2.75 kg) |
| Q9033B1000 | 007290-001 | SS X2200, X5200, X9800, X3301, X3302 | 14 lb (6.4 kg) |
| Q9033 Collar Attachment* | 011385-001 | Q9033A, Q9033B | 2.05 lb (0.9 kg) |
| Q9033 Collar Attachment† | 011385-002 | Q9033A, Q9033B | 2.05 lb (0.9 kg) |
| Q9033 Spare Lock Washer | 103019-002 | Q9033A, Q9033B | 0.04lb (0.02 kg) |
| Q9033A Spare M16 Top Screw | 400525-018 | Q9033A | 0.2 lb (0.1 kg) |
| Q1130A1001 | 010857-001 | X3301, X3302 | 2.8 lb (1.3 kg) |

*Note: Screws that connect collar halves enter from the top

†Note: Screws that connect collar halves enter from the bottom

ACCESSORIES



4-Inch Pipe Mount Bracket and U-Bolt Kit (Specification Sheet 90-1227) This kit is used to install an X-Series flame detector and Q9033 mounting arm to a 4-inch pipe. This kit includes a pipe mount plate, all hardware for installing mounting arm to plate, and U-Bolts and hardware for attaching the pipe mount plate to a 4-Inch pipe. All materials are 316 Stainless Steel.

4-Inch Pipe Mount Bracket and U-Bolt Kit

| Model | Part Number | Ship Weight |
|----------------------------------|-------------|-----------------|
| 4" Pipe Mnt Kit, SS, w/ Hardware | 000609-026 | 2.5 lb (1.3 kg) |



2-Inch U-Bolt Kit (Specification Sheet 90-1228) This kit is used to install an X-Series flame detector and Q9033 mounting arm to a 2-inch pipe. This kit includes two U-bolts, washers, lock washers, and hex nuts. All materials are 316 Stainless Steel

2-Inch Pipe Mount Bracket and U-Bolt Kit

| Model | Part Number | Ship Weight |
|------------------------|-------------|------------------|
| 2" Pipe Mt. U Bolt Kit | 000609-035 | 0.75 lb (0.3 kg) |



Sun shade for X-Series Flame Detectors (Specification Sheet 90-1229)The sun shade installs between the wall, pole surface, or pole mount bracket and the Q9033 mounting arm providing the flame detector with protection from the sun and precipitation. Material is 316 Stainless Steel. Detector in photo below is shown installed on a 4-inch pole using the 4-Inch Pipe Mount Bracket and U-Bolt Kit (Part number 000609-026) which is not included with the Sun Shade.

Sun shade for X-Series Flame Detectors

| Model | Part Number | Ship Weight |
|-------------------------------------------------------|-------------|------------------|
| Stainless Steel Sun Shade for X-Series Flame Detector | 000003-067 | 5 lbs. (2.27 kg) |

Power Supplies

EQP21XXPS Power Supplies can be used as singular or duplex. The power supply is available in a DIN rail mount or panel mount configuration for ease of mounting. Power supplies should be sized to approximately 50% of the power draw requirement or to local code requirements.

EQP21XX Power Supply

| Model | Part Number | Description | Ship Weight |
|-------------|-------------|--------------------------------|-----------------|
| EQP2120PS-B | 010988-001* | EQP2120PS-B 20A 120/220V PANEL | 3.7 lb (1.7 kg) |
| EQP2120PS | 010988-002 | EQP2120PS 20A 120/220V DIN | 3.7 lb (1.7 kg) |

*For FM approved system

LEGACY SPARE PARTS

Legacy / Miscellaneous Spare and Replacement Parts

Miscellaneous Detector Parts for Regular Maintenance

| Part Number | Description | Use With | Ship Weight |
|-------------|------------------------------------------------------------------------------------|----------------------|------------------|
| 001680-001 | K1003A1006 6PK Window Cleaner | - | 0.5 lb (0.26 kg) |
| 002507-001 | K1002A1001 UV window cleaning kit (2 bottles cleaner, 8 o _j rings) | - | 0.5 lb (0.26 kg) |
| 002519-001 | o _j ring for UV detectors | - | 0.5 lb (0.26 kg) |
| 003525-001 | o _j ring for IR detectors | - | 0.5 lb (0.26 kg) |
| 003996-001 | UVIR window cleaning kit (2 bottles cleaner, 4 ea of UVIR o _j rings) | - | 0.5 lb (0.26 kg) |
| 107427-004 | Viton O-ring (small) for UV and IR sensor housings | 2 per housing | 0.5 lb (0.26 kg) |
| 107427-040 | Viton O-ring | U7698E rear housings | 0.5 lb (0.26 kg) |
| 001981-001 | Banana jacks for base conversion to plug in sensor module (qty 4 required) | C7050 | 0.5 lb (0.26 kg) |

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ACOUSTIC

Note: Det-Tronics product videos can be found at: www.YouTube.com/@DetTronicsUSA/videos

FlexSonic® Acoustic Detector



The **FlexSonic® Acoustic Detector – comprised of the AC100 Acoustic Sensor and the ATX10 Acoustic Transmitter** (Spec Sheet: 90-1208) is designed to recognize the unique frequency content of events such as gas leaks. When a pressurized gas leak occurs, the frequency content of the sound being generated extends beyond the audible portion of the spectrum into the ultrasonic region (above 20 kHz). The intensity of the sound generated by a leak is determined by several factors including pressure differential, leak rate, gas viscosity, and distance from the leak source.

Acoustic detection is less susceptible to environmental factors (such as high winds) that can degrade the ability of traditional sensing technology based on gas concentration to detect the presence of a leak. When combined with line-of-sight and/or point gas detectors, the additional layer of protection provided by the FlexSonic Acoustic Detector offers the ultimate solution for gas leak detection.

- Analyzes 24 discrete ultrasonic bands
- Nearly instantaneous response
- Non-contact gas leak detection
- 4-20 mA output combined with HART
- Extensive data logging with removable storage that records the acoustic spectrum
- Superior false alarm discrimination with patented technology
- **Ideally suited for locations where traditional technologies are challenged, such as outdoor and unmanned operations**
- Large detection coverage area
- FM, CSA, ATEX, and IECEX
- Certified SIL 2 Capable for all gas types
- Globally approved Explosion-proof 316 stainless steel housing
- Integrated Acoustic Integrity Check (AIC)
- No routine calibration required
- Not affected by poisoning

FlexSonic AC100/ATX10 Kits

| Part Number | Description | Consists of: | SIL/FM/CSA/ ATEX/IECEX | SIL/ INMETRO | SIL/ RUSSIA |
|------------------------------------|-------------------------|----------------------------|---------------------------|-----------------|----------------|
| 012152-001 | AC100/ATX Kit, 3/4" NPT | AC100SNT2 ATX10S5N26T | X | | |
| 012153-001 | AC100/ATX Kit, M25 | AC100SMT2 ATX10S5M26T | X | | |
| 012152-601 | AC100/ATX Kit, 3/4" NPT | AC100SNSB2 ATX10S5N26SB | | X | |
| 012153-601 | AC100/ATX Kit, M25 | AC100SMSB2 ATX10S5M26SB | | X | |
| 012153-901 | AC100/ATX Kit, M25 | AC100MSR2 ATX10S5M26SR | | | X |
| Ship Weight: 18 lb (8.2 kg) | | | | | |

Kit includes individually packaged AC100 and ATX10.

Typical FlexSonic Customer Proposal

| Qty | Model | Part Number | Description |
|-----|----------------------|-------------|---------------------------------------|
| 1 | AC100/ATX10 KIT, M25 | 012153-001 | Consists of AC100SMT2 and ATX10S5M26T |

Spare Parts

| Qty | Model | Part Number | Description |
|-----|-------|-------------|----------------------------------------------------|
| 1 | N/A | 104155-001 | Micro SDHC Card, 4GB Industrial Temperature Rating |
| 1 | N/A | 009700-001 | Magnetic Tool |

Accessories

| Qty | Part Number | Description |
|-----|-------------|------------------------------------|
| 1 | 104218-001 | 35mm Socket for use with M25 model |
| 1 | 012401-001 | Acoustic Configurator Package |
| 2 | 101197-003 | Stop Plug, M25, SS, IP66 |

FlexSonic AC100 Model Matrix

| MODEL | DESCRIPTION | |
|-------|-----------------|-----------------------|
| AC100 | Acoustic Sensor | |
| | TYPE | MATERIAL |
| | S | Stainless Steel |
| | TYPE | THREAD TYPE |
| | N | 3/4" NPT |
| | M | M25 |
| | TYPE | APPROVALS* |
| | B | INMETRO (BRAZIL) |
| | S | SIL |
| | T | SIL/FM/CSA/ATEX/IECEX |
| | TYPE | CLASSIFICATION |
| | 2 | Division/Zone Ex d |

*Type Approvals can use one or more letters to designate the approvals of the product.

FlexSonic AC100 Acoustic Sensor

| Model | Part Number | Threads | Ex d | SIL/FM/CSA/ ATEX/IECEX | SIL/ INMETRO | SIL/ RUSSIA |
|-------------------------------------|-------------|----------|------|---------------------------|-----------------|----------------|
| AC100SNT2 | 010567-003 | 3/4" NPT | X | X | | |
| AC100SMT2 | 010567-004 | M25 | X | X | | |
| AC100SNSB2 | 010567-603 | 3/4" NPT | X | | X | |
| AC100SMSB2 | 010567-604 | M25 | X | | X | |
| AC100MSR2 | 010567-904 | M25 | X | | | X |
| Ship Weight: 6.2 lb (2.8 kg) | | | | | | |

NOTE: Above part numbers do not include foam insert.

AC100 Spare Parts

| Part Number | Description | Ship Weight |
|-------------|-------------|-----------------|
| 011355-001 | Foam Insert | <1lb (<0.45 kg) |

AC100 Accessories

| Part Number | Description | Ship Weight |
|-------------|------------------------------------|------------------|
| 104218-001 | 35mm Socket for use with M25 model | 1.8 lb (<0.8 kg) |
| 226365-601 | STB7A5YW, AL, M25 | 2.2 lb (1.0 kg) |
| 226365-602 | STB7A5NW, AL, 3/4 NPT | 2.2 lb (1.0 kg) |
| 226365-603 | STB7S5YW, SS, M25 | 3.0 lb (1.4 kg) |
| 226365-604 | STB7S5NW, SS, 3/4 NPT | 3.0 lb (1.4 kg) |
| 226365-606 | STB7A5NB ,AL, 3/4, INMETRO | 2.2 lb (1.0 kg) |
| 226365-607 | STB7S5NB, SS, 3/4, INMETRO | 3.0 lb (1.4 kg) |
| 226365-963 | STB7S5YR,SS,M25,RUSSIA | 3.0 lb (1.4 kg) |

ACOUSTIC

FlexSonic ATX10 Model Matrix

| MODEL | DESCRIPTION |
|-------|-------------------------|
| ATX10 | AC100 Transmitter |
| | TYPE |
| | S |
| | MATERIAL |
| | Stainless Steel |
| | TYPE |
| | 5 |
| | # OF OPEN PORTS |
| | 5 Port |
| | TYPE |
| | N |
| | THREAD TYPE |
| | 3/4" NPT |
| | M |
| | M25 |
| | TYPE |
| | 26 |
| | OUTPUT |
| | 4-20 mA w/HART Protocol |
| | TYPE |
| | B |
| | APPROVALS* |
| | INMETRO (BRAZIL) |
| | S |
| | SIL |
| | T |
| | SIL/FM/CSA/ATEX/IECEX |

*Type Approvals can use one or more letters to designate the approvals of the product.

FlexSonic ATX10 Transmitter for AC100

| Model | Part Number | Threads | 4-20 RS485 HART | Ex d | SIL/FM/CSA/ATEX/IECEX | SIL/INMETRO | SIL/RUSSIA |
|--------------------------------------|-------------|---------|-----------------|------|-----------------------|-------------|------------|
| ATX10S5N26T | 011942-001 | 3/4 NPT | X | X | X | | |
| ATX10S5M26T | 011942-002 | M25 | X | X | X | | |
| ATX10S5N26SB | 011942-601 | 3/4 NPT | X | X | | X | |
| ATX10S5M26SB | 011942-602 | M25 | X | X | | X | |
| ATX10S5M26SR | 011942-902 | M25 | X | X | | | X |
| Ship Weight: 11.5 lb (5.2 kg) | | | | | | | |

ATX10 Spare Parts

| Part Number | Description | Ship Weight |
|-------------|-----------------------------------------------------|----------------|
| 010969-001 | ATX10 Replacement Module | 1 lb (0.45 kg) |
| 011365-102 | ATX10 Memory Module Assembly (SD Card not included) | 1 lb (0.45 kg) |
| 104155-001 | Micro SDHC Card, 4G, Industrial Temperature Rating | <1lb (<0.45kg) |
| 103028-027 | Plug, 5mm, 4 Position - P1 | <1lb (<0.45kg) |
| 103028-028 | Plug, 5mm, 5 Position - J3 | <1lb (<0.45kg) |

ATX10 Accessories

| Part Number | Description | Ship Weight |
|-------------|----------------------------------------------------------------|------------------|
| 012400-001 | Acoustic Inspector Package | <1lb (<0.45kg) |
| 012401-001 | Acoustic Configurator Package | <1lb (<0.45kg) |
| 012402-001 | W6300G1004 Acoustic Software Connector (software not included) | 1 lb (0.45 kg) |
| 009700-001 | Magnetic Tool | <1lb (<0.45kg) |
| 104218-001 | 35mm Socket for use with M25 model | 1.8 lb (<0.8 kg) |

Stop Plugs

| Part Number | Description | Ship Weight |
|-------------|--------------------------|------------------|
| 101197-004* | Stop Plug, 3/4" NPT, SS | <1 lb (<0.45 kg) |
| 101197-003 | Stop Plug, M25, SS, IP66 | <1 lb (<0.45 kg) |

*Type 4X/IP66 rating requires Teflon tape.

INFRARED

PointWatch Eclipse® PIRECL Infrared Hydrocarbon Gas Detector



The **PointWatch Eclipse PIRECL Hydrocarbon Detector** (Spec Sheet: 90-1138) is our most rugged stainless steel, point infrared gas detector providing detection of methane, propane, butane and ethylene, among other flammable hydrocarbon gases in the LFL range. Standard signal outputs include isolated 4-20 mA, HART communication protocol, and RS-485 serial communication supporting Modbus. An Eagle Quantum Premier (EQP) version, and optional 2-alarm plus 1-fault relay package are also available. A tri-color LED provides visual display of operating status. The weather baffle provides excellent optics protection with an easy twist-lock removal. Additional features include:

- Compliance to ANSI/ISA-12.13-.1:2013 performance standard
- Performance certified to ATEX EN60079-29-1, FM 6320, and CSA 22.2 #152
- Eagle Quantum Premier model
- **Models available with SIL 2 certification**
- Internal wiring compartment saves money and time spent on installation
- Heated optics
- Non-intrusive calibration
- Immune to poisoning
- Handheld communicator capability
- FDT/DTM capable
- Ex d, e, ib protection designs
- FM, CSA, ATEX, and IECEx hazardous location certifications
- DNV Type Approval and MED offshore certifications
- Conforms to global life safety requirements for combustible gas when connected through:
Internal relays, EQP Controller, FlexVu UD10, UD10-DCU,
EQ3710 Analog Input Module (AIM)
- Remote calibration capability using UD10 or model PIRTB junction box
- **Sample draw and duct mount accessories available**
- LON configurations are certified as NFPA 72 Class X devices
- Fast response output options available

#1 SELLING DET-TRONICS PRODUCT!

PIRECL Model Matrix

| MODEL | DESCRIPTION | |
|--------|------------------------------------------------------------------------------------|-------------|
| PIRECL | PointWatch Eclipse Point Infrared Gas Detector | |
| | TYPE | THREAD TYPE |
| | A | 3/4" NPT |
| | B | Metric M25 |
| TYPE | OUTPUT AND MEASUREMENT OPTIONS | |
| 11* | 4-20 mA with HART Protocol and RS-485: 0-100% LFL Full Scale Range, FAST RESPONSE | |
| 14* | Eagle Quantum Premier Compatible Only: 0-100% LFL Full Scale Range, FAST RESPONSE | |
| TYPE | OPTIONAL OUTPUTS | |
| A | HART Communication Port | |
| B | HART Communication Port and Relay Board (not compatible with EQP) Ex d only | |
| D | No Optional Outputs | |
| E | Relay Board (not compatible with EQP) Ex d only | |
| TYPE | WEATHER PROTECTION | |
| 1 | Weather Baffle with Hydrophobic filter | |
| 2 | Weather Baffle without Hydrophobic filter | |
| 3 | Weather Baffle with Hydrophobic filter and 1/16" threaded calibration port | |
| 5 | No Weather Protection installed | |
| TYPE | APPROVALS† | |
| B | INMETRO (BRAZIL) | |
| BT | SIL/INMETRO (BRAZIL) | |
| S | SIL | |
| T | SIL/FM/CSA/ATEX/IECEX | |
| Y | CCCF (CHINA) | |
| TYPE | CLASSIFICATION | |
| 1 | Division/Zone Ex d e | |
| 2 | Division/Zone Ex d | |

*FAST RESPONSE Outputs only available with "T" Approval

†Type Approvals can use one or more letters to designate the approvals of the product.

Typical PIRECL Customer Proposal

| Qty | Model | Part Number | Description |
|-----|---------------|-------------|-----------------------------------------------------------------------------------|
| 1 | PIRECLA11B1T2 | 014046-205 | 3/4 NPT, 4-20 mA, w/relays, w/hydrophobic filter, SIL/FM/CSA/ATEX/IECEX approvals |

Spare Parts

| Qty | Model | Part Number | Description |
|-----|-------|-------------|------------------------------------------------------------------|
| 1 | N/A | 007165-002 | **Weather baffle with standard inlet nozzle w/hydrophobic filter |
| 1 | NA | 009862-001 | PIRECL Module, 4-20 mA, Standard Response |
| 1 | NA | 009862-001P | PIRECL Module, 4-20 mA, Standard Response, Propane Calibration |
| 1 | NA | 009862-002 | PIRECL Module, LON, Standard Response |
| 1 | NA | 009862-003 | PIRECL Module, 4-20 mA, SIL, Standard Response |
| 1 | NA | 009862-004 | PIRECL Module, LON, SIL, Standard Response |
| 1 | NA | 009862-005 | PIRECL Module, 4-20 mA, SIL, Fast Response |
| 1 | NA | 009862-006 | PIRECL Module, LON, SIL, Fast Response |

*For PIRECL Module installation instructions, refer to document 95-8707.

**The standard inlet nozzle can be removed to allow installation of 1/16" NPT fittings.



PIRECL Weather Baffle
007165-002



PIRECL Module

PIRECL & UD10 - HART Compatibility

| | UD10 - HART 5 | UD10 - HART 7 |
|-----------------|---------------|---------------|
| PIRECL - HART 5 | YES | YES |
| PIRECL - HART 7 | LIMITED* | YES |

*Reference Technical Bulletin 76-1059 for details

INFRARED

PIRECL PointWatch Eclipse Models - SIL/FM/CSA/ATEX/IECEX

| Model | Part Number* | Threads | Output | HART Port | Relays | Weather Protection† | Div/Zone Ex d e | Div/Zone Ex d | Color/ Calibration |
|---------------|---------------|---------|---------|-----------|--------|---------------------|-----------------|---------------|--------------------|
| PIRECLA11A1T1 | 014046-201 | 3/4 NPT | 4-20 mA | X | No | w/ hydrophobic | X | | |
| PIRECLA11A1T2 | 014046-241 | 3/4 NPT | 4-20 mA | X | No | w/ hydrophobic | | X | |
| PIRECLA11B1T2 | 014046-205 | 3/4 NPT | 4-20 mA | X | Yes | w/ hydrophobic | | X | |
| PIRECLA11A3T1 | 014046-210 | 3/4 NPT | 4-20 mA | X | No | 1/16 NPT w/hydro | X | | |
| PIRECLA11A3T2 | 014046-242 | 3/4 NPT | 4-20 mA | X | No | 1/16 NPT w/hydro | | X | |
| PIRECLA14A1T1 | 014046-212 | 3/4 NPT | EQP | X | No | w/ hydrophobic | X | | |
| PIRECLA14A1T2 | 014046-243 | 3/4 NPT | EQP | X | No | w/ hydrophobic | | X | |
| PIRECLA14A3T1 | 014046-216 | 3/4 NPT | EQP | X | No | 1/16 NPT w/hydro | X | | |
| PIRECLA14A3T2 | 014046-244 | 3/4 NPT | EQP | X | No | 1/16 NPT w/hydro | | X | |
| PIRECLB11A1T1 | 014046-202 | M25 | 4-20 mA | X | No | w/ hydrophobic | X | | |
| PIRECLB11A1T2 | 014046-245 | M25 | 4-20 mA | X | No | w/ hydrophobic | | X | |
| PIRECLB11B1T2 | 014046-206 | M25 | 4-20 mA | X | Yes | w/ hydrophobic | | X | |
| PIRECLB11A3T1 | 014046-240 | M25 | 4-20 mA | X | No | 1/16 NPT w/hydro | X | | |
| PIRECLB11A3T2 | 014046-246 | M25 | 4-20 mA | X | No | 1/16 NPT w/hydro | | X | |
| PIRECLB14A1T1 | 014046-213 | M25 | EQP | X | No | w/ hydrophobic | X | | |
| PIRECLB14A1T2 | 014046-247 | M25 | EQP | X | No | w/ hydrophobic | | X | |
| PIRECLB14A3T1 | 014046-217 | M25 | EQP | X | No | 1/16 NPT w/hydro | X | | |
| PIRECLB14A3T2 | 014046-248 | M25 | EQP | X | No | 1/16 NPT w/hydro | | X | |
| PIRECLA11D1T1 | 014048-201 | 3/4 NPT | 4-20 mA | | No | w/ hydrophobic | X | | |
| PIRECLA11D1T2 | 014048-241 | 3/4 NPT | 4-20 mA | | No | w/ hydrophobic | | X | |
| PIRECLA11D1T2 | 014048-241E | 3/4 NPT | 4-20 mA | | No | w/ hydrophobic | | X | Ethylene |
| PIRECLA11E1T2 | 014048-205 | 3/4 NPT | 4-20 mA | | Yes | w/ hydrophobic | | X | |
| PIRECLA11D3T1 | 014048-210 | 3/4 NPT | 4-20 mA | | No | 1/16 NPT w/hydro | X | | |
| PIRECLA11D3T2 | 014048-242 | 3/4 NPT | 4-20 mA | | No | 1/16 NPT w/hydro | | X | |
| PIRECLA14D1T1 | 014048-212 | 3/4 NPT | EQP | | No | w/ hydrophobic | X | | |
| PIRECLA14D1T2 | 014048-243 | 3/4 NPT | EQP | | No | w/ hydrophobic | | X | |
| PIRECLA14D3T1 | 014048-216 | 3/4 NPT | EQP | | No | 1/16 NPT w/hydro | X | | |
| PIRECLA14D3T2 | 014048-244 | 3/4 NPT | EQP | | No | 1/16 NPT w/hydro | | X | |
| PIRECLB11D1T1 | 014048-202 | M25 | 4-20 mA | | No | w/ hydrophobic | X | | |
| PIRECLB11D1T2 | 014048-245 | M25 | 4-20 mA | | No | w/ hydrophobic | | X | |
| PIRECLB11E1T2 | 014048-206 | M25 | 4-20 mA | | Yes | w/ hydrophobic | | X | |
| PIRECLB11D1T2 | 014048-245-LG | M25 | 4-20 mA | | No | w/ hydrophobic | | x | Light Gray |
| PIRECLB11D3T1 | 014048-240 | M25 | 4-20 mA | | No | 1/16 NPT w/hydro | X | | |
| PIRECLB11D3T2 | 014048-246 | M25 | 4-20 mA | | No | 1/16 NPT w/hydro | | X | |
| PIRECLB14D1T1 | 014048-213 | M25 | EQP | | No | w/ hydrophobic | X | | |
| PIRECLB14D1T2 | 014048-247 | M25 | EQP | | No | w/ hydrophobic | | X | |
| PIRECLB14D3T1 | 014048-217 | M25 | EQP | | No | 1/16 NPT w/hydro | X | | |
| PIRECLB14D3T2 | 014048-248 | M25 | EQP | | No | 1/16 NPT w/hydro | | X | |

Ship Weight: 11.5lb (5.2kg)

*Part numbers listed are factory calibrated to methane. Add a "P" to the end of the part number for propane (example: 014046-201P). Add "E" for ethylene or "B" for butane.

†Units with 1/16 NPT are 007529-XXX Duct Kit compatible

PIRECL PointWatch Eclipse Models - INMETRO (Brazil)

| Model | Part Number* | Threads | Output | Hart Port | Relays | Weather Protection | Ex d | SIL |
|--------------------------------------|--------------|---------|---------|-----------|--------|--------------------|------|-----|
| PIRECLA11B1BT2 | 014046-605 | 3/4 NPT | 4-20 mA | X | X | w/ hydrophobic | X | X |
| PIRECLA11A1BT2 | 014046-641 | 3/4 NPT | 4-20 mA | X | | w/ hydrophobic | X | X |
| PIRECLA11D1BT2 | 014048-641 | 3/4 NPT | 4-20 mA | | | w/ hydrophobic | X | X |
| PIRECLA14A1BT2 | 014046-643 | 3/4 NPT | EQP | X | | w/ hydrophobic | X | X |
| PIRECLA14A3BT2 | 014046-644 | 3/4 NPT | EQP | X | | w/ hydrophobic | X | X |
| PIRECLA14D1BT2 | 014048-643 | 3/4 NPT | EQP | | | w/ hydrophobic | X | X |
| Ship Weight: 11.5 lb (5.2 kg) | | | | | | | | |

*Part numbers listed are factory calibrated to Methane. Add a "P" to the end of the part number for propane (example: 014046-605P).

Add "E" for ethylene or "B" for butane.

PIRECL PointWatch Eclipse Models - CCCF/NEPSI (China)

China approval of the PIRECL Fast Response is in process. Contact the factory for options on future orders.

PIRECL Accessories and Sample Draw



The **AMS TREX Device Communicator** is available from Det-Tronics. The intrinsically safe AMS TREX Communicator enable connection to the PIRECL via the onboard optional HART port connection. Features include a 5.7 inch (14.5 cm) resistive touchscreen display, loop power to power a device, and loop diagnostics.



The **Remote HART Port Kit and Remote HART cable kit** (Manual: 95-8553) are used with the Model PIRECL PointWatch Eclipse IR gas detector to provide access to the Eclipse's optional onboard, intrinsically-safe HART port for a distance up to 20 meters. Cable set is 20 meter long, 2-core, shielded 20 AWG conductors with overall PVC-jacket, and is IEC332 approved.



The standard factory-installed **Weather Baffle** (Spec Sheet: 90-1155) for the PIRECL Eclipse comes with a 3/16" (4.8 mm) barb fitted inlet tube. A special replacement weather baffle is available with a 1/16" FNPT, internally-threaded calibration gas opening. It enables users to install a threaded compression fitting (not supplied) into the baffle for use with plastic or metal tubing, and is 007529-XXX Direct Duct compatible.



The **Q300A Sample Draw Cup** (Manual: 95-8706) enables the Model PIRECL Eclipse to function within a gas sampling system. It consists of an outer cup assembly with stainless-steel, inlet/outlet compression fittings for 0.25 inch diameter tubing, a special inner baffle assembly with external-threaded extension, and silicon gaskets to ensure proper cup assembly seal is provided.

INFRARED

AMS TREX Device Communicator

| Part Number | Description | Ship Weight |
|-------------|------------------------------|-----------------|
| 103922-003* | AMS TREX Device Communicator | 7.5 lb (3.4 kg) |

*Discount does not apply.

Remote HART Replicator Kits for use with PIRECL

| Part Number | Description | Ship Weight |
|-------------|-----------------------------------------------------------|-----------------|
| 000118-010 | Remote HART Port Kit, includes 20 meter prefab cable set | 7.5 lb (3.4 kg) |
| 000118-020* | Remote HART Cable Kit, includes 20 meter prefab cable set | 7.5 lb (3.4 kg) |

*Kit requires the use of a Communicator-to-Cable Connector (p/n 000118-021) for connection to the HART field communicator.

Spare Parts for HART Port Replicator Kit

| Part Number | Description | Ship Weight |
|-------------|--------------------------------------------------------------------|------------------|
| 000118-011 | Cordset, 20 meters intrinsically safe cable with prefab connectors | 6 lb (2.7 kg) |
| 000118-012 | Stainless steel adapter for PIRECL HART connector | <1 lb (<0.45 kg) |
| 000118-013 | HART port connector box, IP67 rated, w/stainless connectors | <1 lb (<0.45 kg) |
| 000118-016 | SS Cap, Male | <1 lb (<0.45 kg) |
| 000118-021* | Extension cordset, TREX Communicator to 000118-011 | 1 lb (0.45 kg) |

*Qty 1 required per each TREX Communicator.

PIRECL Weather Baffles

| Part Number | Description | Ship Weight |
|-------------|----------------------------------------------------------------------|------------------|
| 007165-002* | Weatherbaffle with std inlet nozzle, w/hydrophobic filter (standard) | <1 lb (<0.45 kg) |
| 007165-005 | Weatherbaffle w/ 7/16-20 ext threads | <1 lb (<0.45 kg) |

*Inlet nozzle is removeable to provide a 1/16" FNPT inlet.

PIRECL Sample Draw Cup

| Part Number | Description | Ship Weight |
|-------------|---------------------------------------------------------------|----------------|
| 012200-001 | Q300A Sample Draw Cup for PIRECL (not included), 1/4" fitting | 8 oz (0.23 kg) |

PIRECL Miscellaneous Parts

| Part Number | Description | Ship Weight |
|-------------|---------------------------------------------|------------------|
| 006682-002 | PIRECL windshield calibration bag | <1 lb (<0.45 kg) |
| 009192-001 | Cover, calibration nozzle, tethered, clear* | <1 lb (<0.45 kg) |
| 102740-002 | Calibration magnet† | <1 lb (<0.45 kg) |
| 007145-101 | Relay Board | <1 lb (<0.45 kg) |
| 107427-040 | O-ring, 3.75" I.D., j-box cover | <1 lb (<0.45 kg) |
| 107427-052 | O-ring, 2.43" I.D., weathershield | <1 lb (<0.45 kg) |
| 107427-053 | O-ring, 3.25" I.D., front flange (internal) | <1 lb (<0.45 kg) |

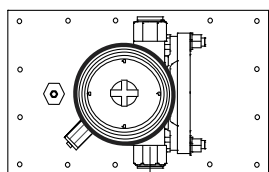
*Replaces discontinued calibration cap p/n's 102823-001 and 103035-001

†Calibration magnet is provided on the order with a PIRECL

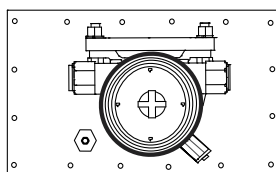
Duct-Mounting Kits for PointWatch Eclipse Model PIRECL



The **Direct Duct Mount Assembly** (p/n 007525-XXX series) (Spec Sheet: 90-1151) is FM approved for use with PointWatch Eclipse model PIRECL to be installed directly within air handling ductwork. The assembly is mounted on the duct wall, with the PIRECL sensing chamber exposed directly to duct airflow, ensuring fast response to Methane. A built-in calibration gas nozzle with an external, self-sealing fitting enables testing and calibration without removal of the detector from the duct. Not recommended for applications where duct air temperatures can exceed 167 °F (75 °C). Price includes all necessary hardware for proper operation, but does not include the PointWatch Eclipse PIRECL gas detector. A factory pre-assembled Direct Duct Mount Kit is available (p/n 007529-XXX series) that provides a PIRECL detector prefit into the Direct Duct Mount kit assembly. Pricing for the 007529-XXX assembly includes the PIRECL gas detector. The Direct Duct Mount Assembly complies to the ANSI/ISA-12.13.01-2000 performance standards.



Vertical Mount



Horizontal Mount

Direct Duct Mount Kits (PIRECL not included)

| Part Number | Mount | Material | Ship Weight |
|-------------|------------|----------|-----------------|
| 007525-003 | Vertical | 316 SS | 3.5 lb (1.6 kg) |
| 007525-004 | Vertical | Aluminum | 1 lb (0.46 kg) |
| 007525-005 | Horizontal | 316 SS | 3.5 lb (1.6 kg) |
| 007525-006 | Horizontal | Aluminum | 1 lb (0.46 kg) |

*Use PIRECL with standard baffle.

Direct Duct Mount Assemblies

| Part Number | Mount | PIRECL Model | PIRECL Output | Hart Port | Material |
|-----------------------------------|----------|---------------|---------------|-----------|----------|
| 014101-410 | Vertical | PIRECLA11D3T1 | 4-20 mA | X | 316 SS |
| 014101-440 | Vertical | PIRECLB11D3T1 | 4-20 mA | X | 316 SS |
| 014101-416 | Vertical | PIRECLA14D3T1 | EQP | X | 316 SS |
| 014101-417 | Vertical | PIRECLB14D3T1 | EQP | X | 316 SS |
| Ship Weight 15 lb (6.8 kg) | | | | | |

INFRARED



The **Model Q900 Duct Mount Kit** (Spec Sheet: 90-1152) is FM approved for use with PointWatch Eclipse model PIRECL to detect combustible hydrocarbon gases within air handling ductwork. The Q900 is mounted to the exterior (top or side) of the duct wall and utilizes a duct inlet / outlet tube arrangement that provides cross-duct air sampling without the need for vacuum pumps or aspirators. The Duct Mount Kit is ideal for high temperature applications, and high temperature flexible teflon tubes are provided to enable easy access to optics for inspection purposes. Price includes all necessary hardware for proper operation, but does not include the PIRECL gas detector. One duct air inlet tube and one outlet tube are furnished with each Q900 kit. The Q900 Duct Mount Kit complies to the ANSI/ISA-12.13.01-2000 performance standards.

NOTE: The Direct Duct Mount and Q900 Duct Mount Accessories are third-party performance approved by FM.

Model Q900 Duct Mount Kit (PIRECL not included)

| Part Number | Description | Inlet tube Length | Ship Weight lb (kg) | |
|-------------|-----------------------------|--------------------------|---------------------|-------|
| 007355-002 | Q900A1001-1 DUCT MT KIT | 1FT INLET TUBE INCLUDED | 7.5 | (3.4) |
| 007355-003 | Q900A1001-3 DUCT MT KIT | 3FT INLET TUBE INCLUDED | 8 | (3.6) |
| 007355-004 | Q900A1001-6 DUCT MT KIT | 6FT INLET TUBE INCLUDED | 10 | (4.5) |
| 007355-005 | Q900A1001-10 DUCT MT KIT | 10FT INLET TUBE INCLUDED | 13 | (5.9) |
| 007355-006 | Q900A1001-13 DUCT MT KIT | 13FT INLET TUBE INCLUDED | 16 | (7.3) |
| 007355-902 | *Q900A1001-R-1 DUCT MT KIT | 1FT INLET TUBE INCLUDED | 7.5 | (3.4) |
| 007355-903 | *Q900A1001-R-3 DUCT MT KIT | 3FT INLET TUBE INCLUDED | 8 | (3.6) |
| 007355-904 | *Q900A1001-R-6 DUCT MT KIT | 6FT INLET TUBE INCLUDED | 10 | (4.5) |
| 007355-905 | *Q900A1001-R-10 DUCT MT KIT | 10FT INLET TUBE INCLUDED | 13 | (5.9) |
| 007355-906 | *Q900A1001-R-13 DUCT MT KIT | 13FT INLET TUBE INCLUDED | 16 | (7.3) |

*Russian model

Model Q900 Duct Mount Kit for Marine Applications-Stainless Steel (PIRECL not included)

| Part Number | Description | Inlet tube Length | Ship Weight lb (kg) | |
|-------------|------------------------------|--------------------------|---------------------|--------|
| 009931-002 | Q900C1001-1 DUCT MNT KIT | 1FT INLET TUBE INCLUDED | 27.5 | (12.5) |
| 009931-003 | Q900C1001-3 DUCT MNT KIT | 3FT INLET TUBE INCLUDED | 28 | (12.7) |
| 009931-004 | Q900C1001-6 DUCT MNT KIT | 6FT INLET TUBE INCLUDED | 30 | (13.6) |
| 009931-005 | Q900C1001-10 DUCT MNT KIT | 10FT INLET TUBE INCLUDED | 33 | (15.0) |
| 009931-006 | Q900C1001-13 DUCT MNT KIT | 13FT INLET TUBE INCLUDED | 36 | (16.3) |
| 009931-902 | *Q900C1001-R-1 DUCT MNT KIT | 1FT INLET TUBE INCLUDED | 27.5 | (12.5) |
| 009931-903 | *Q900C1001-R-3 DUCT MNT KIT | 3FT INLET TUBE INCLUDED | 28 | (12.7) |
| 009931-904 | *Q900C1001-R-6 DUCT MNT KIT | 6FT INLET TUBE INCLUDED | 30 | (13.6) |
| 009931-905 | *Q900C1001-R-10 DUCT MNT KIT | 10FT INLET TUBE INCLUDED | 33 | (15.0) |
| 009931-906 | *Q900C1001-R-13 DUCT MNT KIT | 13FT INLET TUBE INCLUDED | 36 | (16.3) |

*Russian model

Model Q900 Spare Parts

| Part Number | Description | Length | Material | Ship Weight |
|-------------|--------------|---------------|----------|-------------------|
| 000214-281 | Inlet Tube | 1 ft (0.3 m) | 316 SS | 8 oz (0.23 kg) |
| 000214-282 | Inlet Tube | 3 ft (0.9 m) | 316 SS | 1 lb (0.45 kg) |
| 000214-283 | Inlet Tube | 6 ft (1.8 m) | 316 SS | 3 lb (1.35 kg) |
| 000214-284 | Inlet Tube | 10 ft (3.1 m) | 316 SS | 6 lb (2.4 kg) |
| 000214-285 | Inlet Tube | 13 ft (4 m) | 316 SS | 9 lb (4.0 kg) |
| 000214-419 | Inlet Tube | 15 ft (4.6 m) | 316 SS | 11 lb (5.0 kg) |
| 000214-280 | Outlet Tube | 1 ft (0.3 m) | 316 SS | 8 oz (0.23 kg) |
| 102359-001 | Stopper Plug | N/A | Rubber | < 1 lb (<0.45 kg) |
| 010283-001 | Sample Cup | N/A | N/A | 1lb (0.46kg) |

INFRARED

FlexVu® UD10 Universal Display (for Infrared)



FlexVu UD10 Universal Display (Spec Sheet: 90-1200) is recommended for applications where a gas detector with digital read-out of detected gas levels are required. The FlexVu UD10 Universal Display Unit is designed for use with various Det-Tronics infrared gas sensor/transmitters such as PIRECL or LS2000. The display unit is designed and approved as a stand-alone controller when connected to a certified gas detector and performs all the functions of a gas controller.

- Compliance to ANSI/ISA-12.13.01-2013 performance standard
- Performance certified to FM 6320, CSA 22.2 #152, ATEX EN60079-29-1
- Division Approval Ratings: FM and CSA
- Zone Approval Ratings: FM, CSA, ATEX, and IECEx
- Eagle Quantum Premier model
- **Universal design supports a variety of Det-Tronics sensors/detectors**
- Non-intrusive menu allows device configuration and calibration without de-classifying the hazardous area
- **Continuously displays gas level, gas type, and units measured**
- Data logger for event time and date stamping
- Heated and backlit display
- Relay, modbus, and linear isolated/non-isolated 4-20 mA output with HART, **configurable 4-20 mA output loop monitoring**
- FDT/DTM capable
- IP66 rated

FlexVu UD10 Model Matrix

| MODEL | DESCRIPTION |
|-------|----------------------------|
| UD10 | Universal Display Unit |
| TYPE | MATERIAL |
| A | Aluminum |
| S | Stainless Steel (316) |
| TYPE | THREAD TYPE |
| 5M | 5 Port, Metric M25 |
| 5N | 5 Port, 3/4" NPT |
| TYPE | OUTPUTS |
| 25 | Relay, 4-20mA, RS485, HART |
| 28 | EQP / DCU Emulator |
| TYPE | APPROVALS |
| B | INMETRO (BRAZIL) |
| S | SIL |
| T | SIL/FM/CSA/ATEX/IECEX |
| W | FM/CSA/ATEX/IECEX |
| TYPE | CLASSIFICATION (Div/Zone) |
| 2 | Ex d (Flameproof) |

Type Approvals can use one or more letters to designate the approvals of the product.

FlexVu UD10 Universal Display - Infrared - FM/CSA/ATEX/IECEX

| Model | Part Number | Material | Threads | Relay 4-20 RS485 HART | EQP- DCU Emulator | SIL 2 |
|-------------------------------------------------------------------------------|-------------|----------|---------|--------------------------------|-------------------------|-------|
| UD10A5M25T2 | 010765-001 | AL | M25 | X | | X |
| UD10A5N25T2 | 010765-002 | AL | 3/4 NPT | X | | X |
| UD10S5M25T2 | 010765-003 | 316 SS | M25 | X | | X |
| UD10S5N25T2 | 010765-004 | 316 SS | 3/4 NPT | X | | X |
| UD10A5M28W2 | 010765-005 | AL | M25 | | X | |
| UD10A5N28W2 | 010765-006 | AL | 3/4 NPT | | X | |
| UD10S5M28W2 | 010765-007 | 316 SS | M25 | | X | |
| UD10S5N28W2 | 010765-008 | 316 SS | 3/4 NPT | | X | |
| Ship Weight: Aluminum = 4.2lb (1.9kg) Stainless Steel = 10.5lb (4.8kg) | | | | | | |

FlexVu UD10 Universal Display - Infrared - INMETRO (Brazil)

| Model | Part Number | Material | Threads | Relay 4-20 RS485 HART | EQP- DCU Emulator | SIL 2 |
|-------------------------------------------------------------------------------|-------------|----------|---------|--------------------------------|-------------------------|-------|
| UD10A5M25SB2 | 010765-081 | AL | M25 | X | | X |
| UD10A5N25SB2 | 010765-082 | AL | 3/4 NPT | X | | X |
| UD10S5M25SB2 | 010765-083 | 316 SS | M25 | X | | X |
| UD10S5N25SB2 | 010765-084 | 316 SS | 3/4 NPT | X | | X |
| UD10A5M28B2 | 010765-085 | AL | M25 | | X | |
| UD10A5N28B2 | 010765-086 | AL | 3/4 NPT | | X | |
| UD10S5M28B2 | 010765-087 | 316 SS | M25 | | X | |
| UD10S5N28B2 | 010765-088 | 316 SS | 3/4 NPT | | X | |
| Ship Weight: Aluminum = 4.2lb (1.9kg) Stainless Steel = 10.5lb (4.8kg) | | | | | | |

INFRARED

FlexVu UD10 Spare Modules

| Part Number | Description | Output | Ship Weight |
|-------------|---------------------|--------------|----------------|
| 010569-001 | UD10 Display Module | Relay/4-20mA | 1 lb (0.45 kg) |
| 010535-001 | UD10 Display Module | EQP-DCU | 1 lb (0.45 kg) |

FlexVu UD10 Miscellaneous Spare Parts

| Part Number | Description | Ship Weight |
|-------------|--------------------------------------|------------------|
| 010973-001 | UD10/CGS REPLACEMENT BOARD | <1 lb (<0.45 kg) |
| 011919-001 | UD10/NTMOS REPLACEMENT BOARD | <1 lb (<0.45 kg) |
| 107427-040 | 3.75" O-RING, UD10 COVER, FKM, BROWN | <1lb (<0.45 kg) |
| 107427-079 | 3.75" O-RING, UD10 COVER, FVMQ, BLUE | <1lb (<0.45 kg) |

FlexVu UD10 Accessories

| Part Number | Description | Ship Weight |
|-------------|--------------------------------------------------------|-----------------|
| 009700-001 | Magnetic Tool | <1 lb (0.45 kg) |
| 014019-001 | Gas Inspector 11 CD | <1 lb (0.45 kg) |
| 014020-001 | W6300G1006 Gas Inspector 11 Kit (includes CD) | 1 lb (0.45 kg) |
| 102988-002 | Plug, 5.0mm, 6 Position - P2 | <1 lb (0.45 kg) |
| 102988-026 | Plug, 5.0mm, 3 Position - P1 (J10, CGS) | <1 lb (0.45 kg) |
| 102988-028 | Plug, 5.0mm, 5 Position - (J3, CGS) | <1 lb (0.45 kg) |
| 103726-002 | Plug, 3.5mm, 3 Position - J2 | <1 lb (0.45 kg) |
| 103726-004 | Plug, 3.5mm, 5 Position - J3 | <1 lb (0.45 kg) |
| 103726-011 | Plug, 3.5mm, 12 Position - J4 | <1 lb (0.45 kg) |
| 000609-033 | 2" Pipe Mt U Bolt Kit,SS - UD10/20 & J Box, Incl. Hdw. | <1 lb (0.45 kg) |
| 000609-034 | 4" Pipe Mt U Bolt Kit,SS - UD10/20 & J Box, Incl. Hdw. | 2.5 lb (1.3 kg) |

Stop Plugs and Reducers

| ITEM NUMBER | STYLE | MATERIAL | OVERALL LENGTH (mm) | THREAD TYPE | HEX SIZE |
|-------------|---------------------|-----------------|---------------------|-------------|----------|
| 101197-001 | TYPE A STOP PLUG | ALUMINUM | 14.8 | 3/4 NPT | 12 |
| 101197-002 | TYPE A STOP PLUG | ALUMINUM | 14.5 | 1/2 NPT | 10 |
| 101197-003 | DOME HEAD STOP PLUG | STAINLESS STEEL | 21.5 | M25 | 12 |
| 101197-004 | TYPE A STOP PLUG | STAINLESS STEEL | 14.8 | 3/4 NPT | 12 |
| 101197-005 | DOME HEAD STOP PLUG | ALUMINUM | 21.5 | M25 | 12 |
| 101197-006 | DOME HEAD STOP PLUG | ALUMINUM | 21.5 | M20 | 10 |
| 101197-007 | DOME HEAD STOP PLUG | STAINLESS STEEL | 21.5 | M20 | 10 |
| 101197-008 | DOME HEAD STOP PLUG | NICKEL BRASS | 21.5 | M20 | 10 |
| 101197-009 | DOME HEAD STOP PLUG | NICKEL BRASS | 21.5 | M25 | 12 |
| 101197-010 | TYPE A STOP PLUG | NICKEL BRASS | 14.8 | 3/4 NPT | 12 |
| 101197-011 | TYPE A STOP PLUG | NICKEL BRASS | 14.5 | 1/2 NPT | 10 |
| 101197-012 | TYPE A STOP PLUG | STAINLESS STEEL | 14.5 | 1/2 NPT | 10 |
| 101197-501 | IP WASHER | NYLON | - | M20 | - |
| 101197-502 | IP WASHER | NYLON | - | M25 | - |
| 101197-503 | IP WASHER | TEFLON PTFE | - | M20 | - |
| 101197-504 | IP WASHER | TEFLON PTFE | - | M25 | - |
| 102804-001 | REDUCER | ALUMINUM | - | M25 to M20 | - |
| 102804-003 | REDUCER | STAINLESS STEEL | - | M25 to M20 | - |

Ship Weight: 1/2 NPT = 0.07lb (0.030kg), 3/4 NPT = 0.11lb (0.05kg), M20 = 0.14lb (0.062kg), M25 = 0.28lb (0.125 kg)
Available Stop Plug Approvals: ATEX, IECEx, CEC, NEC, EAC, INMETRO, SAC, UKRAINE, CCoE, ABS, LLOYD'S, RMRS



Dome Head Stop Plug - Nickel Brass



Type A Stop Plug - Nickel Brass

*TYPE 4 and IP66 rating requires addition of Teflon tape

**Metric threaded stop plugs are fitted with silicone O-Rings

***For silicone sensitive applications the silicone O-Ring can be removed from Metric stop plugs and fitted with an IP washer

FlexVu UD10 Universal Display Repair / Upgrade Kit



FlexVu® UD10 Universal Display Repair / Upgrade Kit

For information on all products related to UD10 Repair/Upgrade Kits, refer to **Gas E.5**.

INFRARED

Model PIRTB PointWatch Termination Box



- Use with PIRECL Eclipse when remote calibration initiation is required
- Magnetic reed switch calibration and LED gives calibration feedback
- Tall cover boxes with window enable one person, non-intrusive calibration
- Short cover boxes without window require two people to accomplish non-intrusive calibration

PIRTB Junction Box Model Matrix (for use with PIRECL)

| MODEL | DESCRIPTION | |
|-------|----------------------------|------------------------------------|
| PIRTB | PointWatch Termination Box | |
| | TYPE | MATERIAL |
| | A | Aluminum |
| | S | Stainless Steel |
| | TYPE | # OF OPEN PORTS |
| | 2 | 2 Port |
| | 5 | 5 Port |
| | TYPE | THREAD TYPE |
| | L | Metric M25 |
| | N | 3/4" NPT |
| | M | Metric M20/M25 |
| | TYPE | APPROVALS |
| | W | FM/CSA/ATEX/IECEX |
| | TYPE | COVER TYPE |
| | 1 | Short without window |
| | 3 | Tall with window |
| | TYPE | CABLE ENTRIES |
| | I | Ports 2 and 6 open (aluminum only) |
| | L | Ports 2 and 4 open |
| | V | Ports 2 thru 6 open |

Model PIRTB PointWatch Termination Boxes - short cover

| Model | Part Number | Material | Threads | FM/CSA/ATEX/IECEX | Ports |
|-------------------------------------------------------------------------------|-------------|----------|---------|-------------------|-------|
| PIRTBA2NW1L | 006414-001 | AL | 3/4 NPT | X | 2 |
| PIRTBA2MW1L | 006414-002 | AL | M20/25 | X | 2 |
| PIRTBS2NW1L | 006414-007 | SS | 3/4 NPT | X | 2 |
| PIRTBA2NW1I | 006414-009 | AL | 3/4 NPT | X | 2 |
| PIRTBA5NW1V | 006414-016 | AL | 3/4 NPT | X | 5 |
| PIRTBS5NW1V | 006414-017 | SS | 3/4 NPT | X | 5 |
| PIRTBA5LW1V | 006414-018 | AL | M25 | X | 5 |
| PIRTBS5LW1V | 006414-019 | SS | M25 | X | 5 |
| Ship Weight: Aluminum = 2 lb (0.95 kg) Stainless Steel = 9 lb (4.1 kg) | | | | | |

Model PIRTB PointWatch Termination Boxes - tall cover

| Model | Part Number | Material | Threads | FM/CSA/ATEX/IECEX | Ports |
|-------------------------------------------------------------------------------|-------------|----------|---------|-------------------|-------|
| PIRTBA2NW3L | 006414-003 | AL | 3/4 NPT | X | 2 |
| PIRTBA2MW3L | 006414-004 | AL | M20/25 | X | 2 |
| PIRTBS2NW3L | 006414-014 | SS | 3/4 NPT | X | 2 |
| PIRTBA5NW3V | 006414-020 | AL | 3/4 NPT | X | 5 |
| PIRTBS5NW3V | 006414-021 | SS | 3/4 NPT | X | 5 |
| PIRTBA5LW3V | 006414-022 | AL | M25 | X | 5 |
| PIRTBS5LW3V | 006414-023 | SS | M25 | X | 5 |
| Ship Weight: Aluminum = 2.2 lb (1kg) Stainless Steel = 9.5 lb (4.3 kg) | | | | | |

INFRARED

Stop Plugs and Reducers

| ITEM NUMBER | STYLE | MATERIAL | OVERALL LENGTH (mm) | THREAD TYPE | HEX SIZE |
|-------------|---------------------|-----------------|---------------------|-------------|----------|
| 101197-001 | TYPE A STOP PLUG | ALUMINUM | 14.8 | 3/4 NPT | 12 |
| 101197-002 | TYPE A STOP PLUG | ALUMINUM | 14.5 | 1/2 NPT | 10 |
| 101197-003 | DOME HEAD STOP PLUG | STAINLESS STEEL | 21.5 | M25 | 12 |
| 101197-004 | TYPE A STOP PLUG | STAINLESS STEEL | 14.8 | 3/4 NPT | 12 |
| 101197-005 | DOME HEAD STOP PLUG | ALUMINUM | 21.5 | M25 | 12 |
| 101197-006 | DOME HEAD STOP PLUG | ALUMINUM | 21.5 | M20 | 10 |
| 101197-007 | DOME HEAD STOP PLUG | STAINLESS STEEL | 21.5 | M20 | 10 |
| 101197-008 | DOME HEAD STOP PLUG | NICKEL BRASS | 21.5 | M20 | 10 |
| 101197-009 | DOME HEAD STOP PLUG | NICKEL BRASS | 21.5 | M25 | 12 |
| 101197-010 | TYPE A STOP PLUG | NICKEL BRASS | 14.8 | 3/4 NPT | 12 |
| 101197-011 | TYPE A STOP PLUG | NICKEL BRASS | 14.5 | 1/2 NPT | 10 |
| 101197-012 | TYPE A STOP PLUG | STAINLESS STEEL | 14.5 | 1/2 NPT | 10 |
| 101197-501 | IP WASHER | NYLON | - | M20 | - |
| 101197-502 | IP WASHER | NYLON | - | M25 | - |
| 101197-503 | IP WASHER | TEFLON PTFE | - | M20 | - |
| 101197-504 | IP WASHER | TEFLON PTFE | - | M25 | - |
| 102804-001 | REDUCER | ALUMINUM | - | M25 to M20 | - |
| 102804-003 | REDUCER | STAINLESS STEEL | - | M25 to M20 | - |

Ship Weight: 1/2 NPT = 0.07lb (0.030kg), 3/4 NPT = 0.11lb (0.05kg), M20 = 0.14lb (0.062kg), M25 = 0.28lb (0.125 kg)
Available Stop Plug Approvals: ATEX, IECEx, CEC, NEC, EAC, INMETRO, SAC, UKRAINE, CCoE, ABS, LLOYD'S, RMRS



Dome Head Stop Plug - Nickel Brass



Type A Stop Plug - Nickel Brass

*TYPE 4 and IP66 rating requires addition of Teflon tape

**Metric threaded stop plugs are fitted with silicone O-Rings

***For silicone sensitive applications the silicone O-Ring can be removed from Metric stop plugs and fitted with an IP washer

PIRECL Certified Calibration Kits



PIRECL Certified Calibration Kits (Spec Sheet: 90-1214) are high accuracy compressed gas calibration kits provided for field calibration of all PointWatch IR detectors. Each kit includes:

- Two 3.6 ft³ (103 liters) cylinders of Class 2.2 non-flammable, non-toxic compressed gas
- A 2.5 liter/minute regulator and pressure indicator
- 3-foot tube
- Sturdy plastic carrying case



The Windshield Calibration Bag enables calibration to be performed in abnormally high wind conditions. The bag is slipped over the gas detector and secured with a Velcro sealing strap. Gas is applied to the detector through the calibration nozzle on the end of the detector.

PIR Calibration Bags

| Part Number | Description | Ship Weight |
|-------------|-----------------------------------|----------------|
| 006682-002 | PIRECL Windshield calibration bag | 8 oz (0.23 kg) |

PIRECL Calibration Kits

| Part Number | Gas | %LFL | % Vol | Standard | Balance | Ship Weight |
|-------------|------------------------|------|-------|----------|---------|-------------------|
| 006468-006 | Butane | 50% | 0.95 | NFPA | Air | 11.5 lb (5.23 kg) |
| 006468-022 | Butane | 50% | 0.7 | IEC | Air | 11.5 lb (5.23 kg) |
| 006468-002 | Ethane | 50% | 1.5 | NFPA | Air | 11.5 lb (5.23 kg) |
| 006468-021 | Ethane | 50% | 1.2 | IEC | Air | 11.5 lb (5.23 kg) |
| 006468-003 | Ethylene | 50% | 1.35 | NFPA | Air | 11.5 lb (5.23 kg) |
| 006468-020 | Ethylene | 50% | 1.15 | IEC | Air | 11.5 lb (5.23 kg) |
| 006468-014 | Methane | 50% | 2.2 | IEC | Air | 11.5 lb (5.23 kg) |
| 006468-001 | Methane | 50% | 2.5 | NFPA | Air | 11.5 lb (5.23 kg) |
| 006468-015 | Propane | 50% | 0.85 | IEC | Air | 11.5 lb (5.23 kg) |
| 006468-004 | Propane | 50% | 1.1 | NFPA | Air | 11.5 lb (5.23 kg) |
| 006468-005 | Propylene | 50% | 1 | NFPA | Air | 11.5 lb (5.23 kg) |
| 006468-019 | Propylene | 50% | 1 | IEC | Air | 11.5 lb (5.23 kg) |
| 006468-016 | Empty kit - no cal gas | | | | | 8.5 lb (3.9 kg) |

NOTE: Average lead time is 2-3 weeks.

INFRARED

Replacement Gas Cylinders for Combustible Gas Calibration Kits

| Part Number | Gas | %LFL | % Vol | Standard | Balance | Ship Weight |
|-------------|-----------|------|-------------|----------|----------|-----------------|
| 226166-006 | Zero Air | N/A | 20.9 Oxygen | N/A | Nitrogen | 1.5 lb (0.7 kg) |
| 226166-011 | Butane | 50% | 0.95 | NFPA | Air | 1.5 lb (0.7 kg) |
| 226166-022 | Butane | 50% | 0.7 | IEC | Air | 1.5 lb (0.7 kg) |
| 226166-002 | Ethane | 50% | 1.5 | NFPA | Air | 1.5 lb (0.7 kg) |
| 226166-021 | Ethane | 50% | 1.2 | IEC | Air | 1.5 lb (0.7 kg) |
| 226166-003 | Ethylene | 50% | 1.35 | NFPA | Air | 1.5 lb (0.7 kg) |
| 226166-020 | Ethylene | 50% | 1.15 | IEC | Air | 1.5 lb (0.7 kg) |
| 226166-005 | Hydrogen | 50% | 2.0 | NFPA | Air | 1.5 lb (0.7 kg) |
| 226166-007 | Methane | 20% | 1.0 | NFPA | Air | 1.5 lb (0.7 kg) |
| 226166-008 | Methane | 25% | 1.25 | NFPA | Air | 1.5 lb (0.7 kg) |
| 226166-009 | Methane | 35% | 1.75 | NFPA | Air | 1.5 lb (0.7 kg) |
| 226166-014 | Methane | 50% | 2.2 | IEC | Air | 1.5 lb (0.7 kg) |
| 226166-001 | Methane | 50% | 2.5 | NFPA | Air | 1.5 lb (0.7 kg) |
| 226166-015 | Propane | 50% | 0.85 | IEC | Air | 1.5 lb (0.7 kg) |
| 226166-004 | Propane | 50% | 1.1 | NFPA | Air | 1.5 lb (0.7 kg) |
| 226166-010 | Propylene | 50% | 1 | NFPA | Air | 1.5 lb (0.7 kg) |
| 226166-019 | Propylene | 50% | 1 | IEC | Air | 1.5 lb (0.7 kg) |

Cylinders have an accuracy of +/- 2% with a cylinder size of 6D

NOTE: Average lead time is 2-3 weeks

PIR Calibration Kit Replacement Parts

| Part Number | Description | Ship Weight |
|-------------|---------------------------|----------------|
| 162552-002 | Regulator, 2.5 LPM | 8 oz (0.23 kg) |
| 162553-001 | Replacement carrying case | 8 oz (0.23 kg) |
| 101678-007 | Tubing, 3 ft. | 8 oz (0.23 kg) |
| 101678-013 | Tubing, 100 ft. spool | 8 oz (0.23 kg) |

FlexSight™ LS2000 Line-of-Sight Infrared Gas Detector



The **FlexSight LS2000 Line-of-Sight Infrared Gas Detection System** (Spec Sheet: 90-1215) is a stainless steel, IR beam-type hydrocarbon gas detection system. The system consists of two modules (transmitter and receiver) offering:

- Eagle Quantum Premier model
- **Industry Leading Misalignment Tolerance: ± 0.8 degrees ($\sim \pm 56\text{cm}$ @ 40m; $\sim \pm 168\text{cm}$ @ 120m). Patented design.**
- Compliance to ISA-12.13.04 performance standard
- Third party certified for Methane (default). Factory calibrated to Methane, Propane, and Butane
- Performance certified to EN60079-29-4
- -55°C to $+75^{\circ}\text{C}$ certified temperature range
- Compliance to FM6325 and ISA-12.13.04 performance standards
- **Certified SIL 2 capable**
- Module separation distance range from 5-120 meters
- IR source: High performance, long lasting xenon flashlamp - **10 year warranty on IR source**
- **5 year detector warranty**
- Standard 4-20 mA output (configurable), HART communications (on receiver), RS485 Modbus
- Optional alarm relays (Ex d only)
- **Easy Install / Alignment**
 - Mounting / alignment hardware included with both modules
 - Built-in locking adjusters deliver fine control of alignment angles
 - Telescope alignment tool for accurate alignment
 - **No HART or Software Interrogation tool required**
- Use of **'Smart'** monitoring and control: maintains device temperature, heater obscuration triggers, drift / beam block tolerance, power supply and 4-20 mA monitoring, event logging, power consumption management
- Non-intrusive zero calibration options: on-board magnetic switch, HART communication, external switch, or MODBUS communication
- DNV Maritime approval
- Globally certified including SIL, FM, CSA, ATEX, IECEx, CE, DNV, INMETRO, and KIM approvals
- Optional communication link provides: dynamic lamp power adjustments, synchronized LEDs, remote configuration read and calibration initiation from the transmitter

INFRARED

LS2000 Model Matrix

| MODEL | DESCRIPTION | | | | | | | | | | | | |
|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|---------------------------|----|-----------------------------------------------|----|-------------------------------------------------|----|---------------------------------------------|----|----------------------------------------------------------------------|----|-----------------------------------|
| LS2000 | Line-of-Sight Infrared Gas Detector | | | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>MATERIAL</th> </tr> </thead> <tbody> <tr> <td>S</td> <td>Stainless Steel</td> </tr> </tbody> </table> | TYPE | MATERIAL | S | Stainless Steel | | | | | | | | |
| TYPE | MATERIAL | | | | | | | | | | | | |
| S | Stainless Steel | | | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>CONDUIT ENTRY THREAD TYPE</th> </tr> </thead> <tbody> <tr> <td>N</td> <td>3/4" NPT, 4 Port Receiver, 2 Port Transmitter</td> </tr> <tr> <td>M</td> <td>Metric M25, 4 Port Receiver, 2 Port Transmitter</td> </tr> </tbody> </table> | TYPE | CONDUIT ENTRY THREAD TYPE | N | 3/4" NPT, 4 Port Receiver, 2 Port Transmitter | M | Metric M25, 4 Port Receiver, 2 Port Transmitter | | | | | | |
| TYPE | CONDUIT ENTRY THREAD TYPE | | | | | | | | | | | | |
| N | 3/4" NPT, 4 Port Receiver, 2 Port Transmitter | | | | | | | | | | | | |
| M | Metric M25, 4 Port Receiver, 2 Port Transmitter | | | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>OUTPUT</th> </tr> </thead> <tbody> <tr> <td>00</td> <td>None (Transmitter only)</td> </tr> <tr> <td>14</td> <td>Eagle Quantum Premier (EQP) (Receiver or Kit)</td> </tr> <tr> <td>18</td> <td>4-20 mA, RS485, HART (Receiver or Kit)</td> </tr> <tr> <td>25</td> <td>4-20 mA, RS485, HART w/Optional Relays (Receiver or Kit) – Ex d only</td> </tr> </tbody> </table> | TYPE | OUTPUT | 00 | None (Transmitter only) | 14 | Eagle Quantum Premier (EQP) (Receiver or Kit) | 18 | 4-20 mA, RS485, HART (Receiver or Kit) | 25 | 4-20 mA, RS485, HART w/Optional Relays (Receiver or Kit) – Ex d only | | |
| TYPE | OUTPUT | | | | | | | | | | | | |
| 00 | None (Transmitter only) | | | | | | | | | | | | |
| 14 | Eagle Quantum Premier (EQP) (Receiver or Kit) | | | | | | | | | | | | |
| 18 | 4-20 mA, RS485, HART (Receiver or Kit) | | | | | | | | | | | | |
| 25 | 4-20 mA, RS485, HART w/Optional Relays (Receiver or Kit) – Ex d only | | | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>RANGE</th> </tr> </thead> <tbody> <tr> <td>N</td> <td>None (Transmitter only)</td> </tr> <tr> <td>S</td> <td>Short Range, 5-60 Meters (Receiver or Kit)</td> </tr> <tr> <td>L</td> <td>Long Range, 30-120 Meters (Receiver or Kit)</td> </tr> </tbody> </table> | TYPE | RANGE | N | None (Transmitter only) | S | Short Range, 5-60 Meters (Receiver or Kit) | L | Long Range, 30-120 Meters (Receiver or Kit) | | | | |
| TYPE | RANGE | | | | | | | | | | | | |
| N | None (Transmitter only) | | | | | | | | | | | | |
| S | Short Range, 5-60 Meters (Receiver or Kit) | | | | | | | | | | | | |
| L | Long Range, 30-120 Meters (Receiver or Kit) | | | | | | | | | | | | |
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| TYPE | FACTORY SET TARGET GAS* | | | | | | | | | | | | |
| N | None (Transmitter only) | | | | | | | | | | | | |
| M | Methane (Receiver or Kit) | | | | | | | | | | | | |
| P | Propane (Receiver or Kit) | | | | | | | | | | | | |
| B | Butane (Receiver or Kit) | | | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>APPROVALS†</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>FM/CSA</td> </tr> <tr> <td>B</td> <td>INMETRO</td> </tr> <tr> <td>C</td> <td>CSA</td> </tr> <tr> <td>E</td> <td>ATEX/IECEX</td> </tr> <tr> <td>S</td> <td>SIL</td> </tr> </tbody> </table> | TYPE | APPROVALS† | A | FM/CSA | B | INMETRO | C | CSA | E | ATEX/IECEX | S | SIL |
| TYPE | APPROVALS† | | | | | | | | | | | | |
| A | FM/CSA | | | | | | | | | | | | |
| B | INMETRO | | | | | | | | | | | | |
| C | CSA | | | | | | | | | | | | |
| E | ATEX/IECEX | | | | | | | | | | | | |
| S | SIL | | | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>CLASSIFICATION</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Division and/or Ex d e</td> </tr> <tr> <td>2</td> <td>Division and/or Ex d</td> </tr> </tbody> </table> | TYPE | CLASSIFICATION | 1 | Division and/or Ex d e | 2 | Division and/or Ex d | | | | | | |
| TYPE | CLASSIFICATION | | | | | | | | | | | | |
| 1 | Division and/or Ex d e | | | | | | | | | | | | |
| 2 | Division and/or Ex d | | | | | | | | | | | | |
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| TYPE | CONFIGURATION | | | | | | | | | | | | |
| S | Transmitter/Receiver/Mounting Hardware | | | | | | | | | | | | |
| T | Transmitter Only | | | | | | | | | | | | |
| R | Receiver Only | | | | | | | | | | | | |
| TM | Spare Transmitter Electronics Module | | | | | | | | | | | | |
| RM | Spare Receiver Electronics Module | | | | | | | | | | | | |

*The LS2000 is factory-calibrated to these gas types: methane, propane, and butane. This selection indicates which gas type the device was configured to detect when it left the factory. This selection can be changed in the field via HART or MODBUS.

†Type Approvals can use one or more letters to designate the approvals of the product.

Typical LS2000 Customer Proposal

| Qty | Model | Part Number | Description |
|-----|------------------|-------------|------------------------------------------------------------------------------------------------------------|
| 1 | LS2000SM18SMSE1S | 012731-503 | Consists of LS2000SM00NNSE1T Transmitter, LS2000SM18SMSE1R Receiver, and two Mounting & Alignment Brackets |

LS2000 - Complete Gas Detector Systems - SIL/FM/CSA

| Model | Part Number | Target Gas | Range | Threads | Relay Output | EQP Output | DNV | Ex d e | Ex d |
|-------------------------------------|-------------|------------|-------|---------|--------------|------------|-----|--------|------|
| LS2000SN18SMSA1S | 012731-401 | Methane | Short | 3/4 NPT | | | X | X | |
| LS2000SM18SMSA1S | 012731-403 | | | M25 | | | X | X | |
| LS2000SN25SMSA2S | 012731-426 | | | 3/4 NPT | X | | X | | X |
| LS2000SM25SMSA2S | 012731-427 | | | M25 | X | | X | | X |
| LS2000SN18SMSA2S | 012731-402 | | | 3/4 NPT | | | X | | X |
| LS2000SN18LMSA1S | 012731-451 | | Long | 3/4 NPT | | | X | X | |
| LS2000SM18LMSA1S | 012731-453 | | | M25 | | | X | X | |
| LS2000SN25LMSA2S | 012731-476 | | | 3/4 NPT | X | | X | | X |
| LS2000SM25LMSA2S | 012731-477 | | | M25 | X | | X | | X |
| LS2000SN18LMSA2S | 012731-452 | | | 3/4 NPT | | | X | | X |
| LS2000SN14SMSA1S | 011760-401 | Methane | Short | 3/4 NPT | | X | X | X | |
| LS2000SM14SMSA1S | 011760-403 | | | M25 | | X | X | X | |
| LS2000SN14SMSA2S | 011760-426 | | | 3/4 NPT | | X | X | | X |
| LS2000SM14SMSA2S | 011760-427 | | | M25 | | X | X | | X |
| LS2000SN14LMSA1S | 011760-451 | | Long | 3/4 NPT | | X | X | X | |
| LS2000SM14LMSA1S | 011760-453 | | | M25 | | X | X | X | |
| LS2000SN14LMSA2S | 011760-476 | | | 3/4 NPT | | X | X | | X |
| LS2000SM14LMSA2S | 011760-477 | | | M25 | | X | X | | X |
| LS2000SN18SPSA1S | 012731-401P | Propane | Short | 3/4 NPT | | | X | X | |
| LS2000SN25SPSA2S | 012731-426P | | | 3/4 NPT | X | | X | | X |
| LS2000SN18LPSA1S | 012731-451P | | Long | 3/4 NPT | | | X | X | |
| LS2000SN25LPSA2S | 012731-476P | | | 3/4 NPT | X | | X | | X |
| LS2000SN14SPSA1S | 011760-401P | Propane | Short | 3/4 NPT | | X | X | X | |
| LS2000SN14SPSA2S | 011760-426P | | | 3/4 NPT | | X | X | | X |
| LS2000SN14LPSA1S | 011760-451P | | Long | 3/4 NPT | | X | X | X | |
| LS2000SN14LPSA2S | 011760-476P | | | 3/4 NPT | | X | X | | X |
| LS2000SN18SBSA1S | 012731-401B | Butane | Short | 3/4 NPT | | | X | X | |
| LS2000SN25SBSA2S | 012731-426B | | | 3/4 NPT | X | | X | | X |
| LS2000SN18LBSA1S | 012731-451B | | Long | 3/4 NPT | | | X | X | |
| LS2000SN25LBSA2S | 012731-476B | | | 3/4 NPT | X | | X | | X |
| LS2000SN14SBSA1S | 011760-401B | Butane | Short | 3/4 NPT | | X | X | X | |
| LS2000SN14SBSA2S | 011760-426B | | | 3/4 NPT | | X | X | | X |
| LS2000SN14LBSA1S | 011760-451B | | Long | 3/4 NPT | | X | X | X | |
| LS2000SN14LBSA2S | 011760-476B | | | 3/4 NPT | | X | X | | X |
| Ship Weight = 85 lbs (38 kg) | | | | | | | | | |

NOTE: All complete systems have a long range (L) of 30-120 meters or a short range (S) of 5-60 meters (apertures may be needed for shortest 15m of each range).
The complete system includes a transmitter, receiver, aperture, and mounting hardware.

INFRARED

LS2000 - Complete Gas Detector Systems - SIL/ATEX/IECEX

| Model | Part Number | Target Gas | Range | Threads | Relay Output | EQP Output | DNV | Ex d e | Ex d | | |
|------------------|-------------|------------|-------|---------|--------------|------------|-----|--------|------|---|---|
| LS2000SN18SMSE1S | 012731-501 | Methane | Short | 3/4 NPT | | | X | X | | | |
| LS2000SN18SMSE2S | 012731-502 | | | 3/4 NPT | | | X | | X | | |
| LS2000SM18SMSE1S | 012731-503 | | | M25 | | | X | X | | | |
| LS2000SM18SMSE2S | 012731-504 | | | M25 | | | X | | X | | |
| LS2000SN25SMSE2S | 012731-526 | | | 3/4 NPT | X | | X | | X | | |
| LS2000SM25SMSE2S | 012731-527 | | | M25 | X | | X | | X | | |
| LS2000SN18LMSE1S | 012731-551 | | Long | 3/4 NPT | | | X | X | | | |
| LS2000SN18LMSE2S | 012731-552 | | | | | | X | | X | | |
| LS2000SM18LMSE1S | 012731-553 | | | | M25 | | X | X | | | |
| LS2000SM18LMSE2S | 012731-554 | | | | M25 | | X | | X | | |
| LS2000SN25LMSE2S | 012731-576 | | | | 3/4 NPT | X | | X | | X | |
| LS2000SM25LMSE2S | 012731-577 | | | | M25 | X | | X | | X | |
| LS2000SN14SMSE1S | 011760-501 | Methane | Short | 3/4 NPT | | X | X | X | | | |
| LS2000SM14SMSE1S | 011760-503 | | | M25 | | X | X | X | | | |
| LS2000SN14SMSE2S | 011760-526 | | | 3/4 NPT | | X | X | | X | | |
| LS2000SM14SMSE2S | 011760-527 | | | M25 | | X | X | | X | | |
| LS2000SN14LMSE1S | 011760-551 | | Long | 3/4 NPT | | | X | X | X | | |
| LS2000SM14LMSE1S | 011760-553 | | | | M25 | | X | X | X | | |
| LS2000SN14LMSE2S | 011760-576 | | | | 3/4 NPT | | X | X | | X | |
| LS2000SM14LMSE2S | 011760-577 | | | | M25 | | X | X | | X | |
| LS2000SM18SPSE1S | 012731-503P | Propane | Short | M25 | | | X | X | | | |
| LS2000SM18SPSE2S | 012731-504P | | | M25 | | | X | | X | | |
| LS2000SM25SPSE2S | 012731-527P | | | M25 | X | | X | | X | | |
| LS2000SM18LPSE1S | 012731-553P | | Long | M25 | | | X | X | | | |
| LS2000SM18LPSE2S | 012731-554P | | | | | | X | | X | | |
| LS2000SN25LPSE2S | 012731-576P | | | | 3/4 NPT | X | | X | | X | |
| LS2000SM25LPSE2S | 012731-577P | M25 | X | | X | | X | | | | |
| LS2000SM14SPSE1S | 011760-503P | Propane | Short | M25 | | X | X | X | | | |
| LS2000SM14SPSE2S | 011760-527P | | | M25 | | X | X | | X | | |
| LS2000SM14LPSE1S | 011760-553P | | Long | M25 | | | X | X | X | | |
| LS2000SM14LPSE2S | 011760-577P | | | | | | X | X | | X | |
| LS2000SN18SBSE1S | 012731-501B | Butane | Short | 3/4 NPT | | | X | X | | | |
| LS2000SM18SBSE1S | 012731-503B | | | M25 | | | X | X | | | |
| LS2000SM18SBSE2S | 012731-504B | | | M25 | | | X | | X | | |
| LS2000SM25SBSE2S | 012731-527B | | | M25 | X | | X | | X | | |
| LS2000SN18LBSE1S | 012731-551B | | | 3/4 NPT | | | X | X | | | |
| LS2000SM18LBSE1S | 012731-553B | | Long | M25 | | | X | X | | | |
| LS2000SM18LBSE2S | 012731-554B | | | | | | X | | X | | |
| LS2000SM25LBSE2S | 012731-577B | | | | | X | | X | | X | |
| LS2000SM14SBSE1S | 011760-503B | | | | Butane | Short | M25 | | X | X | X |
| LS2000SM14SBSE2S | 011760-527B | | | | | | M25 | | X | X | |
| LS2000SM14LBSE1S | 011760-553B | Long | M25 | | | | X | X | X | | |
| LS2000SM14LBSE2S | 011760-577B | | | | | | X | X | | X | |

Ship Weight = 85 lbs (38 kg)

NOTE: All complete systems have a long range (L) of 30-120 meters or a short range (S) of 5-60 meters (apertures may be needed for shortest 15m of each range).

The complete system includes a transmitter, receiver, aperture, and mounting hardware.

LS2000 - Complete Gas Detector Systems - SIL/INMETRO

| Model | Part Number | Target Gas | Range | Threads | Relay Output | EQP Output | DNV | Ex d e | Ex d |
|-------------------------------------|-------------|------------|-------|---------|--------------|------------|-----|--------|------|
| LS2000SN14SMSB2S | 011760-626 | Methane | Short | 3/4 NPT | | X | X | | X |
| LS2000SN18SMSB1S | 012731-201 | | | 3/4 NPT | | | X | X | |
| LS2000SN18SMSB2S | 012731-202 | | | 3/4 NPT | | | X | | X |
| LS2000SN25SMSB2S | 012731-226 | | | 3/4 NPT | X | | X | | X |
| LS2000SN14LMSB2S | 011760-676 | | Long | 3/4 NPT | | X | X | | X |
| LS2000SN18LMSB1S | 012731-251 | | | 3/4 NPT | | | X | X | |
| LS2000SN18LMSB2S | 012731-252 | | | 3/4 NPT | | | X | | X |
| LS2000SN25LMSB2S | 012731-276 | | | 3/4 NPT | X | | X | | X |
| LS2000SN18SPSB1S | 012731-201P | Propane | Short | 3/4 NPT | | | X | X | |
| LS2000SN18SPSB2S | 012731-202P | | | 3/4 NPT | | | X | | X |
| LS2000SN25SPSB2S | 012731-226P | | | 3/4 NPT | X | | X | | X |
| LS2000SN18LPSB1S | 012731-251P | | Long | 3/4 NPT | | | X | X | |
| LS2000SN18LPSB2S | 012731-252P | | | 3/4 NPT | | | X | | X |
| LS2000SN25LPSB2S | 012731-276P | | | 3/4 NPT | X | | X | | X |
| LS2000SN18SBSB1S | 012731-201B | Butane | Short | 3/4 NPT | | | X | X | |
| LS2000SN18SBSB2S | 012731-202B | | | 3/4 NPT | | | X | | X |
| LS2000SN25SBSB2S | 012731-226B | | | 3/4 NPT | X | | X | | X |
| LS2000SN18LBSB1S | 012731-251B | | Long | 3/4 NPT | | | X | X | |
| LS2000SN18LBSB2S | 012731-252B | | | 3/4 NPT | | | X | | X |
| LS2000SN25LBSB2S | 012731-276B | | | 3/4 NPT | X | | X | | X |
| Ship Weight = 85 lbs (38 kg) | | | | | | | | | |

NOTE: All complete systems have a long range (L) of 30-120 meters or a short range (S) of 5-60 meters (apertures may be needed for shortest 15m of each range).
The complete system includes a transmitter, receiver, aperture, and mounting hardware.

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LS2000 Transmitter Replacement - SIL/FM/CSA

| Model | Part Number | Threads | DNV | Ex d e | Ex d |
|---------------------------------------|-------------|---------|-----|--------|------|
| LS2000SN00NNSA1T | 012020-401 | 3/4 NPT | X | X | |
| LS2000SN00NNSA2T | 012020-402 | 3/4 NPT | X | | X |
| LS2000SM00NNSA1T | 012020-403 | M25 | X | X | |
| LS2000SM00NNSA2T | 012020-404 | M25 | X | | X |
| Ship Weight = 23 lbs (10.4 kg) | | | | | |

NOTE: Spare transmitters do not include mounting hardware

LS2000 Transmitter Replacement - SIL/ATEX/IECEX

| Model | Part Number | Threads | DNV | Ex d e | Ex d |
|---------------------------------------|-------------|---------|-----|--------|------|
| LS2000SN00NNSE1T | 012020-501 | 3/4 NPT | X | X | |
| LS2000SN00NNSE2T | 012020-502 | 3/4 NPT | X | | X |
| LS2000SM00NNSE1T | 012020-503 | M25 | X | X | |
| LS2000SM00NNSE2T | 012020-504 | M25 | X | | X |
| Ship Weight = 23 lbs (10.4 kg) | | | | | |

NOTE: Spare transmitters do not include mounting hardware

LS2000 Transmitter Replacement - SIL/INMETRO

| Model | Part Number | Threads | DNV | Ex d e | Ex d |
|---------------------------------------|-------------|---------|-----|--------|------|
| LS2000SN00NNSB1T | 012020-201 | 3/4 NPT | X | X | |
| LS2000SN00NNSB2T | 012020-202 | 3/4 NPT | X | | X |
| Ship Weight = 23 lbs (10.4 kg) | | | | | |

NOTE: Spare transmitters do not include mounting hardware

LS2000 - Receiver Replacement - SIL/FM/CSA

| Model | Part Number | Target Gas | Range | Threads | Relay Output | EQP Output | DNV | Ex d e | Ex d | |
|------------------|-------------|------------|-------|---------|--------------|------------|-----|--------|------|---|
| LS2000SN18SMSA1R | 012097-401 | Methane | Short | 3/4 NPT | | | X | X | | |
| LS2000SN18SMSA2R | 012097-402 | | | 3/4 NPT | | | X | | X | |
| LS2000SM18SMSA1R | 012097-403 | | | M25 | | | X | X | | |
| LS2000SN25SMSA2R | 012097-426 | | | 3/4 NPT | X | | X | | X | |
| LS2000SM25SMSA2R | 012097-427 | | | M25 | X | | X | | X | |
| LS2000SN18LMSA1R | 012097-451 | | Long | 3/4 NPT | | | X | X | | |
| LS2000SN18LMSA2R | 012097-452 | | | 3/4 NPT | | | X | | X | |
| LS2000SM18LMSA1R | 012097-453 | | | M25 | | | X | X | | |
| LS2000SN25LMSA2R | 012097-476 | | | 3/4 NPT | X | | X | | X | |
| LS2000SM25LMSA2R | 012097-477 | | | M25 | X | | X | | X | |
| LS2000SN14SMSA1R | 011758-401 | Methane | Short | 3/4 NPT | | X | X | X | | |
| LS2000SM14SMSA1R | 011758-403 | | | M25 | | | X | X | X | |
| LS2000SN14SMSA2R | 011758-426 | | | 3/4 NPT | | | X | X | | X |
| LS2000SM14SMSA2R | 011758-427 | | | M25 | | | X | X | | X |
| LS2000SN14LMSA1R | 011758-451 | | Long | 3/4 NPT | | X | X | X | | |
| LS2000SM14LMSA1R | 011758-453 | | | M25 | | | X | X | X | |
| LS2000SN14LMSA2R | 011758-476 | | | 3/4 NPT | | | X | X | | X |
| LS2000SM14LMSA2R | 011758-477 | | | M25 | | | X | X | | X |
| LS2000SN18SPSA1R | 012097-401P | Propane | Short | 3/4 NPT | | | X | X | | |
| LS2000SN25SPSA2R | 012097-426P | | | 3/4 NPT | X | | X | | X | |
| LS2000SN18LPSA1R | 012097-451P | | Long | 3/4 NPT | | | X | X | | |
| LS2000SN25LPSA2R | 012097-476P | | | 3/4 NPT | X | | X | | X | |
| LS2000SN14SPSA1R | 011758-401P | Propane | Short | 3/4 NPT | | X | X | X | | |
| LS2000SN14SPSA2R | 011758-426P | | | 3/4 NPT | | | X | X | | X |
| LS2000SN14LPSA1R | 011758-451P | | Long | 3/4 NPT | | | X | X | X | |
| LS2000SN14LPSA2R | 011758-476P | | | 3/4 NPT | | | X | X | | X |
| LS2000SN18SBSA1R | 012097-401B | Butane | Short | 3/4 NPT | | | X | X | | |
| LS2000SN25SBSA2R | 012097-426B | | | 3/4 NPT | X | | X | | X | |
| LS2000SN18LBSA1R | 012097-451B | | Long | 3/4 NPT | | | X | X | | |
| LS2000SN25LBSA2R | 012097-476B | | | 3/4 NPT | X | | X | | X | |
| LS2000SN14SBSA1R | 011758-401B | Butane | Short | 3/4 NPT | | X | X | X | | |
| LS2000SN14SBSA2R | 011758-426B | | | 3/4 NPT | | | X | X | | X |
| LS2000SN14LBSA1R | 011758-451B | | Long | 3/4 NPT | | | X | X | X | |
| LS2000SN14LBSA2R | 011758-476B | | | 3/4 NPT | | | X | X | | X |

Ship Weight = 20 lbs (9 kg)

NOTE: Spare receivers do not include mounting hardware

INFRARED

LS2000 - Receiver Replacement - SIL/ATEX/IECEx

| Model | Part Number | Target Gas | Range | Threads | Relay Output | EQP Output | DNV | Ex d e | Ex d | |
|------------------|-------------|------------|---------|---------|--------------|------------|-----|--------|------|---|
| LS2000SN18SMSE1R | 012097-501 | Methane | Short | 3/4 NPT | | | X | X | | |
| LS2000SN18SMSE2R | 012097-502 | | | 3/4 NPT | | | X | | X | |
| LS2000SM18SMSE1R | 012097-503 | | | M25 | | | X | X | | |
| LS2000SM18SMSE2R | 012097-504 | | | M25 | | | X | | X | |
| LS2000SN25SMSE2R | 012097-526 | | | 3/4 NPT | X | | X | | X | |
| LS2000SM25SMSE2R | 012097-527 | | | M25 | X | | X | | X | |
| LS2000SN18LMSE1R | 012097-551 | | Long | 3/4 NPT | | | X | X | | |
| LS2000SN18LMSE2R | 012097-552 | | | 3/4 NPT | | | X | | X | |
| LS2000SM18LMSE1R | 012097-553 | | | M25 | | | X | X | | |
| LS2000SM18LMSE2R | 012097-554 | | | M25 | | | X | | X | |
| LS2000SN25LMSE2R | 012097-576 | | | 3/4 NPT | X | | X | | X | |
| LS2000SM25LMSE2R | 012097-577 | | | M25 | X | | X | | X | |
| LS2000SN14SMSE1R | 011758-501 | | | Methane | Short | 3/4 NPT | | X | X | X |
| LS2000SM14SMSE1R | 011758-503 | | | | | M25 | | X | X | X |
| LS2000SN14SMSE2R | 011758-526 | 3/4 NPT | | | | X | X | | X | |
| LS2000SM14SMSE2R | 011758-527 | M25 | | | | X | X | | X | |
| LS2000SN14LMSE1R | 011758-551 | Long | 3/4 NPT | | | X | X | X | | |
| LS2000SM14LMSE1R | 011758-553 | | M25 | | | X | X | X | | |
| LS2000SN14LMSE2R | 011758-576 | | 3/4 NPT | | | X | X | | X | |
| LS2000SM14LMSE2R | 011758-577 | | M25 | | | X | X | | X | |
| LS2000SM18SPSE1R | 012097-503P | Propane | Short | M25 | | | X | X | | |
| LS2000SM18SPSE2R | 012097-504P | | | M25 | | | X | | X | |
| LS2000SM25SPSE2R | 012097-527P | | | M25 | X | | X | | X | |
| LS2000SM18LPSE1R | 012097-553P | | Long | M25 | | | X | X | | |
| LS2000SM18LPSE2R | 012097-554P | | | M25 | | | X | | X | |
| LS2000SN25LPSE2R | 012097-576P | | | 3/4 NPT | X | | X | | X | |
| LS2000SM25LPSE2R | 012097-577P | M25 | X | | X | | X | | | |
| LS2000SM14SPSE1R | 011758-503P | Propane | Short | M25 | | X | X | X | | |
| LS2000SM14SPSE2R | 011758-527P | | | M25 | | X | X | | X | |
| LS2000SM14LPSE1R | 011758-553P | | Long | M25 | | X | X | X | | |
| LS2000SM14LPSE2R | 011758-577P | | | M25 | | X | X | | X | |
| LS2000SM18SBSE1R | 012097-503B | Butane | Short | M25 | | | X | X | | |
| LS2000SM18SBSE2R | 012097-504B | | | M25 | | | X | | X | |
| LS2000SM25SBSE2R | 012097-527B | | | M25 | X | | X | | X | |
| LS2000SM18LBSE1R | 012097-553B | | Long | M25 | | | X | X | | |
| LS2000SM18LBSE2R | 012097-554B | | | M25 | | | X | | X | |
| LS2000SM25LBSE2R | 012097-577B | | | M25 | X | | X | | X | |
| LS2000SM14SBSE1R | 011758-503B | Butane | Short | M25 | | X | X | X | | |
| LS2000SM14SBSE2R | 011758-527B | | | M25 | | X | X | | X | |
| LS2000SM14LBSE1R | 011758-553B | | Long | M25 | | X | X | X | | |
| LS2000SM14LBSE2R | 011758-577B | | | M25 | | X | X | | X | |

Ship Weight = 20 lbs (9 kg)

NOTE: Spare receivers do not include mounting hardware

LS2000 - Receiver Replacement - SIL/INMETRO

| Model | Part Number | Target Gas | Range | Threads | Relay Output | EQP Output | DNV | Ex d e | Ex d |
|------------------------------------|-------------|------------|-------|---------|--------------|------------|-----|--------|------|
| LS2000SN14SMSB2R | 011758-626 | Methane | Short | 3/4 NPT | | X | X | | X |
| LS2000SN18SMSB1R | 012097-201 | | | 3/4 NPT | | | X | X | |
| LS2000SN18SMSB2R | 012097-202 | | | 3/4 NPT | | | | | X |
| LS2000SN25SMSB2R | 012097-226 | | | 3/4 NPT | X | | X | | X |
| LS2000SN14LMSB2R | 011758-676 | | Long | 3/4 NPT | | X | X | | X |
| LS2000SN18LMSB1R | 012097-251 | | | 3/4 NPT | | | X | X | |
| LS2000SN18LMSB2R | 012097-252 | | | 3/4 NPT | | | | | X |
| LS2000SN25LMSB2R | 012097-276 | | | 3/4 NPT | X | | X | | X |
| LS2000SN18SPSB1R | 012097-201P | Propane | Short | 3/4 NPT | | | X | X | |
| LS2000SN18SPSB2R | 012097-202P | | | 3/4 NPT | | | | | X |
| LS2000SN25SPSB2R | 012097-226P | | | 3/4 NPT | X | | X | | X |
| LS2000SN18LPSB1R | 012097-251P | | Long | 3/4 NPT | | | X | X | |
| LS2000SN18LPSB2R | 012097-252P | | | 3/4 NPT | | | | | X |
| LS2000SN25LPSB2R | 012097-276P | | | 3/4 NPT | X | | X | | X |
| LS2000SN18SBSB1R | 012097-201B | Butane | Short | 3/4 NPT | | | X | X | |
| LS2000SN18SBSB2R | 012097-202B | | | 3/4 NPT | | | | | X |
| LS2000SN25SBSB2R | 012097-226B | | | 3/4 NPT | X | | X | | X |
| LS2000SN18LBSB1R | 012097-251B | | Long | 3/4 NPT | | | X | X | |
| LS2000SN18LBSB2R | 012097-252B | | | 3/4 NPT | | | | | X |
| LS2000SN25LBSB2R | 012097-276B | | | 3/4 NPT | X | | X | | X |
| Ship Weight = 20 lbs (9 kg) | | | | | | | | | |

NOTE: Spare receivers do not include mounting hardware

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LS2000 Spare Transmitter Module - SIL/FM/CSA

| Model | Part Number | Threads | DNV | Ex d e | Ex d |
|----------------------------------------|-------------|---------|-----|--------|------|
| LS2000SN00NNSA1TM | 012713-401 | 3/4 NPT | X | X | |
| LS2000SN00NNSA2TM | 012713-402 | 3/4 NPT | X | | X |
| LS2000SM00NNSA1TM | 012713-403 | M25 | X | X | |
| LS2000SM00NNSA2TM | 012713-404 | M25 | X | | X |
| Ship Weight = 10.4 lbs (4.7 kg) | | | | | |

NOTE: Includes front electronics module only

LS2000 Spare Transmitter Module - SIL/ATEX/IECEX

| Model | Part Number | Threads | DNV | Ex d e | Ex d |
|----------------------------------------|-------------|---------|-----|--------|------|
| LS2000SN00NNSE1TM | 012713-501 | 3/4 NPT | X | X | |
| LS2000SN00NNSE2TM | 012713-502 | 3/4 NPT | X | | X |
| LS2000SM00NNSE1TM | 012713-503 | M25 | X | X | |
| LS2000SM00NNSE2TM | 012713-504 | M25 | X | | X |
| Ship Weight = 10.4 lbs (4.7 kg) | | | | | |

NOTE: Includes front electronics module only

LS2000 Spare Transmitter Module - SIL/INMETRO

| Model | Part Number | Threads | DNV | Ex d e | Ex d |
|----------------------------------------|-------------|---------|-----|--------|------|
| LS2000SN00NNSB1TM | 012713-201 | 3/4 NPT | X | X | |
| LS2000SN00NNSB2TM | 012713-202 | 3/4 NPT | X | | X |
| Ship Weight = 10.4 lbs (4.7 kg) | | | | | |

NOTE: Includes front electronics module only

LS2000 Spare Receiver Modules - SIL/FM/CSA

| Model | Part Number | Target Gas | Range | Threads | Relay Output | EQP Output | DNV | Ex d e | Ex d | |
|---------------------------------------|-------------|------------|---------|---------|--------------|------------|-----|--------|------|---|
| LS2000SN18SMSA1RM | 012714-401 | Methane | Short | 3/4 NPT | | | X | X | | |
| LS2000SM18SMSA1RM | 012714-403 | | | M25 | | | X | X | | |
| LS2000SN25SMSA2RM | 012714-426 | | | 3/4 NPT | X | | X | | X | |
| LS2000SM25SMSA2RM | 012714-427 | | | M25 | X | | X | | X | |
| LS2000SN14SMSA1RM | 011759-401 | | | 3/4 NPT | | X | X | X | | |
| LS2000SM14SMSA1RM | 011759-403 | | | M25 | | X | X | X | | |
| LS2000SN14SMSA2RM | 011759-426 | | | 3/4 NPT | | X | X | | X | |
| LS2000SM14SMSA2RM | 011759-427 | | | M25 | | X | X | | X | |
| LS2000SN18LMSA1RM | 012714-451 | | Long | Long | 3/4 NPT | | | X | X | |
| LS2000SM18LMSA1RM | 012714-453 | | | | M25 | | | X | X | |
| LS2000SN25LMSA2RM | 012714-476 | | | | 3/4 NPT | X | | X | | X |
| LS2000SM25LMSA2RM | 012714-477 | | | | M25 | X | | X | | X |
| LS2000SN14LMSA1RM | 011759-451 | | | | 3/4 NPT | | X | X | X | |
| LS2000SM14LMSA1RM | 011759-453 | | | | M25 | | X | X | X | |
| LS2000SN14LMSA2RM | 011759-476 | | | | 3/4 NPT | | X | X | | X |
| LS2000SM14LMSA2RM | 011759-477 | | | | M25 | | X | X | | X |
| LS2000SN18SPSA1RM | 012714-401P | | Propane | Short | 3/4 NPT | | | X | X | |
| LS2000SN25SPSA2RM | 012714-426P | | | | 3/4 NPT | X | | X | | X |
| LS2000SN14SPSA1RM | 011759-401P | | | | 3/4 NPT | | X | X | X | |
| LS2000SN14SPSA2RM | 011759-426P | | | | 3/4 NPT | | X | X | | X |
| LS2000SN18LPSA1RM | 012714-451P | Long | | Long | 3/4 NPT | | | X | X | |
| LS2000SN25LPSA2RM | 012714-476P | | | | 3/4 NPT | X | | X | | X |
| LS2000SN14LPSA1RM | 011759-451P | | | | 3/4 NPT | | X | X | X | |
| LS2000SN14LPSA2RM | 011759-476P | | | | 3/4 NPT | | X | X | | X |
| LS2000SN18SBSA1RM | 012714-401B | Butane | Short | 3/4 NPT | | | X | X | | |
| LS2000SN25SBSA2RM | 012714-426B | | | 3/4 NPT | X | | X | | X | |
| LS2000SN14SBSA1RM | 011759-401B | | | 3/4 NPT | | X | X | X | | |
| LS2000SN14SBSA2RM | 011759-426B | | | 3/4 NPT | | X | X | | X | |
| LS2000SN18LBSA1RM | 012714-451B | | Long | Long | 3/4 NPT | | | X | X | |
| LS2000SN25LBSA2RM | 012714-476B | | | | 3/4 NPT | X | | X | | X |
| LS2000SN14LBSA1RM | 011759-451B | | | | 3/4 NPT | | X | X | X | |
| LS2000SN14LBSA2RM | 011759-476B | | | | 3/4 NPT | | X | X | | X |
| Ship Weight = 7.8 lbs (3.6 kg) | | | | | | | | | | |

NOTE: Includes front electronics module only

INFRARED

LS2000 Spare Receiver Modules - SIL/ATEX/IECEX

| Model | Part Number | Target Gas | Range | Threads | Relay Output | EQP Output | DNV | Ex d e | Ex d |
|-------------------|-------------|------------|---------|---------|--------------|------------|-----|--------|------|
| LS2000SN18SMSE1RM | 012714-501 | Methane | Short | 3/4 NPT | | | X | X | |
| LS2000SN18SMSE2RM | 012714-502 | | | 3/4 NPT | | | X | | X |
| LS2000SM18SMSE1RM | 012714-503 | | | M25 | | | X | X | |
| LS2000SM18SMSE2RM | 012714-504 | | | M25 | | | X | | X |
| LS2000SN25SMSE2RM | 012714-526 | | | 3/4 NPT | X | | X | | X |
| LS2000SM25SMSE2RM | 012714-527 | | | M25 | X | | X | | X |
| LS2000SN14SMSE1RM | 011759-501 | | | 3/4 NPT | | X | X | X | |
| LS2000SM14SMSE1RM | 011759-503 | | | M25 | | X | X | X | |
| LS2000SN14SMSE2RM | 011759-526 | | | 3/4 NPT | | X | X | | X |
| LS2000SM14SMSE2RM | 011759-527 | | | M25 | | X | X | | X |
| LS2000SN18LMSE1RM | 012714-551 | | 3/4 NPT | | | | X | X | |
| LS2000SN18LMSE2RM | 012714-552 | | 3/4 NPT | | | | X | | X |
| LS2000SM18LMSE1RM | 012714-553 | | M25 | | | | X | X | |
| LS2000SM18LMSE2RM | 012714-554 | | M25 | | | | X | | X |
| LS2000SN25LMSE2RM | 012714-576 | | 3/4 NPT | X | | | X | | X |
| LS2000SM25LMSE2RM | 012714-577 | | M25 | X | | | X | | X |
| LS2000SN14LMSE1RM | 011759-551 | | 3/4 NPT | | X | X | X | | |
| LS2000SM14LMSE1RM | 011759-553 | | M25 | | X | X | X | | |
| LS2000SN14LMSE2RM | 011759-576 | | 3/4 NPT | | X | X | | | X |
| LS2000SM14LMSE2RM | 011759-577 | | M25 | | X | X | | | X |
| LS2000SM18SPSE1RM | 012714-503P | Propane | Short | M25 | | | X | X | |
| LS2000SM18SPSE2RM | 012714-504P | | | M25 | | | X | | X |
| LS2000SM25SPSE2RM | 012714-527P | | | M25 | X | | X | | X |
| LS2000SM14SPSE1RM | 011759-503P | | | M25 | | X | X | X | |
| LS2000SM14SPSE2RM | 011759-527P | | | M25 | | X | X | | X |
| LS2000SM18LPSE1RM | 012714-553P | | Long | M25 | | | X | X | |
| LS2000SM18LPSE2RM | 012714-554P | | | M25 | | | X | | X |
| LS2000SM25LPSE2RM | 012714-577P | | | M25 | X | | X | | X |
| LS2000SM14LPSE1RM | 011759-553P | | | M25 | | X | X | X | |
| LS2000SM14LPSE2RM | 011759-577P | | | M25 | | X | X | | X |
| LS2000SM18SBSE1RM | 012714-503B | Butane | Short | M25 | | | X | X | |
| LS2000SM18SBSE2RM | 012714-504B | | | M25 | | | X | | X |
| LS2000SM25SBSE2RM | 012714-527B | | | M25 | X | | X | | X |
| LS2000SM14SBSE1RM | 011759-503B | | | M25 | | X | X | X | |
| LS2000SM14SBSE2RM | 011759-527B | | | M25 | | X | X | | X |
| LS2000SM14SBSE1RM | 011759-503B | | M25 | | X | X | X | | |
| LS2000SM14SBSE2RM | 011759-527B | | M25 | | X | X | | X | |
| LS2000SM18LBSE1RM | 012714-553B | | Long | M25 | | | X | X | |
| LS2000SM18LBSE2RM | 012714-554B | | | M25 | | | X | | X |
| LS2000SM25LBSE2RM | 012714-577B | | | M25 | X | | X | | X |
| LS2000SM14LBSE1RM | 011759-553B | M25 | | | X | X | X | | |
| LS2000SM14LBSE2RM | 011759-577B | M25 | | | X | X | | X | |

Ship Weight = 7.8 lbs (3.6 kg)

NOTE: Includes front electronics module only

LS2000 Spare Receiver Modules - SIL/INMETRO

| Model | Part Number | Target Gas | Range | Threads | Relay Output | DNV | Ex d e | Ex d |
|---------------------------------------|-------------|------------|-------|---------|--------------|-----|--------|------|
| LS2000SN18SMSB1RM | 012714-201 | Methane | Short | 3/4 NPT | | X | X | |
| LS2000SN18SMSB2RM | 012714-202 | | | 3/4 NPT | | X | | X |
| LS2000SN25SMSB2RM | 012714-226 | | | 3/4 NPT | X | X | | X |
| LS2000SN18LMSB1RM | 012714-251 | | Long | 3/4 NPT | | X | X | |
| LS2000SN18LMSB2RM | 012714-252 | | | 3/4 NPT | | X | | X |
| LS2000SN25LMSB2RM | 012714-276 | | | 3/4 NPT | X | X | | X |
| LS2000SN18SPSB1RM | 012714-201P | Propane | Short | 3/4 NPT | | X | X | |
| LS2000SN18SPSB2RM | 012714-202P | | | 3/4 NPT | | X | | X |
| LS2000SN25SPSB2RM | 012714-226P | | | 3/4 NPT | X | X | | X |
| LS2000SN18LPSB1RM | 012714-251P | | Long | 3/4 NPT | | X | X | |
| LS2000SN18LPSB2RM | 012714-252P | | | 3/4 NPT | | X | | X |
| LS2000SN25LPSB2RM | 012714-276P | | | 3/4 NPT | X | X | | X |
| LS2000SN18SBSB1RM | 012714-201B | Butane | Short | 3/4 NPT | | X | X | |
| LS2000SN18SBSB2RM | 012714-202B | | | 3/4 NPT | | X | | X |
| LS2000SN25SBSB2RM | 012714-226B | | | 3/4 NPT | X | X | | X |
| LS2000SN18LBSB1RM | 012714-251B | | Long | 3/4 NPT | | X | X | |
| LS2000SN18LBSB2RM | 012714-252B | | | 3/4 NPT | | X | | X |
| LS2000SN25LBSB2RM | 012714-276B | | | 3/4 NPT | X | X | | X |
| Ship Weight = 7.8 lbs (3.6 kg) | | | | | | | | |

NOTE: Includes front electronics module only

INFRARED

LS2000 Accessories

| Part Number | Description |
|-------------|-----------------------------------------------------------------------------------|
| 012287-002 | LS2000 Alignment Tool |
| 012673-001 | Test Films, LS2000, Methane, Propane, Butane |
| 012673-002 | Test Films, LS2000, Transmitter, Methane, Propane, Butane |
| 103922-003 | AMS Trex Device Communicator |
| 014020-001 | W6300G1006 Gas Inspector II Kit (PC software and connection hardware included) |
| 014331-001 | LS2000E, Ethylene Test Film |
| 009246-003 | Gas Test Cell, LS2000 Methane NFPA |
| 009246-004 | Gas Test Cell, LS2000 Methane IEC |
| 009246-005 | Gas Test Cell, LS2000 Propane NFPA |
| 009246-006 | Gas Test Cell, LS2000 Propane IEC |
| 009246-007 | Gas Test Cell, LS2000 Butane NFPA |
| 009246-008 | Gas Test Cell, LS2000 Butane IEC |
| 012840-001 | Gas Cell Adapter (converts OPECL Test Cell to mount on LS2000 Rx) |
| 012718-003 | Flat Surface Adapter Plate (converts OPECL flat surface mounting to LS2000) |
| 012790-001 | Thermal Shield for Right Module* |
| 012791-001 | Thermal Shield for Left Module* |
| 014296-001 | LS2000 Laser Aligner Kit |

* Two Thermal Shields required per complete LS2000 system (one right and one left)



**System Test Film
012673-001**

LS2000 Spare Parts

| Part Number | Description |
|-------------|----------------------------------------------------------|
| 102740-002 | Calibration Magnet* |
| 011773-001 | Short Range Aperture† |
| 012300-001 | Spare Brow, Rx |
| 012312-001 | Spare Brow, Tx |
| 400525-023 | Spare M8 Flange Bolt for Tx Module |
| 012660-001 | Spare Mounting & Alignment Bracket (for one module only) |
| 103578-001 | Anti-seize Lubricant Packet |
| 006680-001 | Grease Kit, Silicone |
| 104346-154 | O-Ring, 3.75" i.d., for wiring compartment cover |
| 104346-046 | O-Ring, 4.25", for front flange Transmitter |
| 014253-001 | Laser Holder Attachment for LS2000 |
| 014254-001 | Laser Aligner Target for LS2000 |
| 014255-001 | LS2000 Laser Aligner Assembly |
| 014256-001 | LS2000 Laser Aligner Target |

*1 magnet ships with each individual order of an LS2000 Kit or Receiver free of charge.

†Qty 1 aperture is provided with each LS2000 Transmitter

CATALYTIC

CGS Combustible Gas Sensor



CGS Combustible Gas Sensor (Spec Sheet: 90-1041). Stainless steel catalytic sensor that provides an accurate measurement of combustible gas concentration in the % LFL range. Requires FlexVu UD10, Model 505, U9500A or FlexVu UD30 transmitter.

- Compliance to ANSI/ISA-12.13.01-2000 performance standard
- Performance certified to FM 6320, CSA 22.2 #152, and EN60079-29-1
- Performance certified to IEC60079-29-1 when connected to the FlexVu UD10, UD10-DCU
- **Detects hydrogen and hydrocarbon gases**
- Constant current or constant voltage options available
- Poison resistant construction
- 3/4" NPT or 20 mm thread option
- Wire lead options of 6" or 30"
- Sensor Separation Termination Box (STB) option available
- Variety of special accessories available
- FlexVu UD10 universal display provides full digital readout, calibration and user interface
- **Performance approved from -40°C to 75°C for life safety applications**
- Hazardous Location approved from -55°C to 125°C for process control applications
- SIL 2 certified when used with FlexVu UD10 and UD30 Universal Displays

Combustible Gas Sensor for Models 505, 500, and K-Series Transmitters

| Model | Part Number | Replaces old catalytic sensor p/n | Threads | Lead Length | FM/CSA/ATEX/IECEX |
|------------------------------------------|-------------|------------------------------------------------------------------------------------------------------------|---------|-------------|-------------------|
| CGSS1A6V2R1X | 006824-002 | 225006-002, 225957-001, 226530-001, 226531-001, 226931-001, 226931-002, 226999-002, 226999-004, 223106-002 | 3/4 NPT | 6 in | X |
| CGSS1A3V2R1X | 006824-006 | 225006-005, 226530-004, 226531-002, 226931-003, 226931-004 | 3/4 NPT | 30 in | X |
| CGSS1C3V2R1X | 006824-008 | | M20 | 30 in | X |
| CGSS1C6V2R1X | 006824-004 | 226999-010, 226999-013, 226999-018, 226999-019 | M20 | 6 in | X |
| Shipping Weight = 1 lb. (0.45 kg) | | | | | |

NOTES: CGS sensors always require a transmitter (sold separately).

Constant voltage

Combustible Gas Sensor for UD10, UD30, CTX10, DCUEX, U9500A, U8700, 400, 405, 810, 820, and 880 Transmitters

| Model | Part Number | Replaces old catalytic sensor p/n | Threads | Lead Length | FM/CSA/ATEX/IECEX | Brazil |
|------------------------------------------|-------------|------------------------------------------------------------------------------------------------|---------|-------------|-------------------|--------|
| CGSS1A6C2R1X | 006824-001 | 225006-004, 225957-002, 226530-003, 226531-003, 226931-005, 226931-006, 226999-011, 226999-012 | 3/4 NPT | 6 in | X | |
| CGSS1A6C2R1B | 006824-101 | | 3/4 NPT | 6 in | | X |
| CGSS1A3C2R1X | 006824-005 | 225006-003, 226530-005, 226531-004, 226931-007, 226931-008 | 3/4 NPT | 30 in | X | |
| CGSS1C3C2R1X | 006824-007 | 225006-003, 226530-005, 226531-004, 226931-007, 226931-008 | M20 | 30 in | X | |
| CGSS1C6C2R1X | 006824-003 | 226999-008, 226999-020, 226999-014, 226999-021 | M20 | 6 in | X | |
| Shipping Weight = 1 lb. (0.45 kg) | | | | | | |

NOTES: CGS sensors always require a transmitter (sold separately).

Constant current

Combustible Gas Transmitter

The Model CTX10 Transmitter (90-1234-Specifications) is used with one constant current catalytic gas sensor to provide a linear 4 to 20 mA output signal corresponding to a 0 to 100% LFL gas concentration. Non-intrusive calibration and sensor sensitivity checks are performed using a magnetic switch. The CTX10 is third-party performance approved for methane and propane gases.

Features:

- Onboard magnetic calibration/reset switch for non-intrusive calibration capability
- Compatible with constant current Det-Tronics catalytic sensors
- Direct field replacement for Det-Tronics Model 505 Transmitters
- Current level indicates fault condition and calibrate mode
- Sensor sensitivity check
- Suitable for use in a wide variety of combustible gas detection applications
- Available in 316 stainless steel and black epoxy aluminum (shown)
- Explosion-proof junction box available in aluminum or stainless steel



CTX10 Model Matrix

| MODEL | DESCRIPTION | | | | | | | | |
|-------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|---------------------------------|----|-------------------------|----|-----------------|---|-----------------------|
| CTX10 | Catalytic Combustible Gas Transmitter | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>ENCLOSURE MATERIAL</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>Aluminum</td> </tr> <tr> <td>S</td> <td>Stainless Steel</td> </tr> </tbody> </table> | TYPE | ENCLOSURE MATERIAL | A | Aluminum | S | Stainless Steel | | |
| TYPE | ENCLOSURE MATERIAL | | | | | | | | |
| A | Aluminum | | | | | | | | |
| S | Stainless Steel | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>CONDUIT ENTRIES AND ORIENTATION</th> </tr> </thead> <tbody> <tr> <td>3</td> <td>3-port, T-configuration</td> </tr> </tbody> </table> | TYPE | CONDUIT ENTRIES AND ORIENTATION | 3 | 3-port, T-configuration | | | | |
| TYPE | CONDUIT ENTRIES AND ORIENTATION | | | | | | | | |
| 3 | 3-port, T-configuration | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>THREAD TYPE</th> </tr> </thead> <tbody> <tr> <td>F</td> <td>Metric M20</td> </tr> <tr> <td>N</td> <td>3/4" NPT</td> </tr> </tbody> </table> | TYPE | THREAD TYPE | F | Metric M20 | N | 3/4" NPT | | |
| TYPE | THREAD TYPE | | | | | | | | |
| F | Metric M20 | | | | | | | | |
| N | 3/4" NPT | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>OUTPUT</th> </tr> </thead> <tbody> <tr> <td>2</td> <td>4-20 mA</td> </tr> </tbody> </table> | TYPE | OUTPUT | 2 | 4-20 mA | | | | |
| TYPE | OUTPUT | | | | | | | | |
| 2 | 4-20 mA | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>APPROVALS</th> </tr> </thead> <tbody> <tr> <td>SA</td> <td>SIL/FM/CSA</td> </tr> <tr> <td>SE</td> <td>SIL/ATEX/IECEX</td> </tr> <tr> <td>T</td> <td>SIL/FM/CSA/ATEX/IECEX</td> </tr> </tbody> </table> | TYPE | APPROVALS | SA | SIL/FM/CSA | SE | SIL/ATEX/IECEX | T | SIL/FM/CSA/ATEX/IECEX |
| TYPE | APPROVALS | | | | | | | | |
| SA | SIL/FM/CSA | | | | | | | | |
| SE | SIL/ATEX/IECEX | | | | | | | | |
| T | SIL/FM/CSA/ATEX/IECEX | | | | | | | | |

DISPLAYS AND CONTROLLERS

CTX10 Combustible Gas Transmitter - 3 Port

| Model | Part Number | Material | Threads | 0-20mA | FM/CSA/ ATEX/IECEX/SIL |
|------------------------------------------------------------------------------|-------------|-----------------|------------|--------|---------------------------|
| CTX10A3N2T | 014394-001 | Aluminum | 3/4" NPT | X | X |
| CTX10A3F2T | 014394-002 | Aluminum | Metric M20 | X | X |
| CTX10S3N2T | 014395-001 | Stainless Steel | 3/4" NPT | X | X |
| CTX10S3F2T | 014395-002 | Stainless Steel | Metric M20 | X | X |
| Ship Weight: Aluminum = 3.8lb (1.7kg) Stainless Steel = 8.7lb (4.0kg) | | | | | |

CTX10 Combustible Gas Transmitter - INMETRO - 3 port

| Model | Part Number | Material | Threads | 0-20mA | INMETRO |
|------------------------------------------------------------------------------|-------------|-----------------|----------|--------|---------|
| CTX10A3N2SB | 014394-201 | Aluminum | 3/4" NPT | X | X |
| CTX10S3N2SB | 014395-201 | Stainless Steel | 3/4" NPT | X | X |
| Ship Weight: Aluminum = 3.8lb (1.7kg) Stainless Steel = 8.7lb (4.0kg) | | | | | |

Model CTX10 Transmitter Spare Terminal Plugs

| Part Number | Description | For Use With | Ship Weight |
|-------------|-----------------------------------|---------------------------|------------------|
| 102988-028 | PLUG, VERT., W/CLIP, 5.0MM, 5 POS | CTX / UD30 CGS Board - J1 | <1 lb (<0.45 kg) |
| 102988-026 | PLUG, VERT., W/CLIP, 5.0MM, 3 POS | CTX / UD30 CGS Board - J3 | <1 lb (<0.45 kg) |
| 103725-002 | HEADER VERT., 3.5MM, 3-PIN | CTX / UD30 CGS Board - J2 | <1 lb (<0.45 kg) |

Model CTX10 Transmitter Spare Modules

| Part Number | Description | For Use With | Ship Weight |
|-------------|--------------------------|--------------|------------------|
| 013993-001 | SPARE CTX10 ELEC. MODULE | CTX10 | <1 lb (<0.45 kg) |

Stop Plugs and Reducers

| ITEM NUMBER | STYLE | MATERIAL | OVERALL LENGTH (mm) | THREAD TYPE | HEX SIZE |
|-------------|---------------------|-----------------|---------------------|-------------|----------|
| 101197-001 | TYPE A STOP PLUG | ALUMINUM | 14.8 | 3/4 NPT | 12 |
| 101197-002 | TYPE A STOP PLUG | ALUMINUM | 14.5 | 1/2 NPT | 10 |
| 101197-003 | DOME HEAD STOP PLUG | STAINLESS STEEL | 21.5 | M25 | 12 |
| 101197-004 | TYPE A STOP PLUG | STAINLESS STEEL | 14.8 | 3/4 NPT | 12 |
| 101197-005 | DOME HEAD STOP PLUG | ALUMINUM | 21.5 | M25 | 12 |
| 101197-006 | DOME HEAD STOP PLUG | ALUMINUM | 21.5 | M20 | 10 |
| 101197-007 | DOME HEAD STOP PLUG | STAINLESS STEEL | 21.5 | M20 | 10 |
| 101197-008 | DOME HEAD STOP PLUG | NICKEL BRASS | 21.5 | M20 | 10 |
| 101197-009 | DOME HEAD STOP PLUG | NICKEL BRASS | 21.5 | M25 | 12 |
| 101197-010 | TYPE A STOP PLUG | NICKEL BRASS | 14.8 | 3/4 NPT | 12 |
| 101197-011 | TYPE A STOP PLUG | NICKEL BRASS | 14.5 | 1/2 NPT | 10 |
| 101197-012 | TYPE A STOP PLUG | STAINLESS STEEL | 14.5 | 1/2 NPT | 10 |
| 101197-501 | IP WASHER | NYLON | - | M20 | - |
| 101197-502 | IP WASHER | NYLON | - | M25 | - |
| 101197-503 | IP WASHER | TEFLON PTFE | - | M20 | - |
| 101197-504 | IP WASHER | TEFLON PTFE | - | M25 | - |
| 102804-001 | REDUCER | ALUMINUM | - | M25 to M20 | - |
| 102804-003 | REDUCER | STAINLESS STEEL | - | M25 to M20 | - |

Ship Weight: 1/2 NPT = 0.07lb (0.030kg), 3/4 NPT = 0.11lb (0.05kg), M20 = 0.14lb (0.062kg), M25 = 0.28lb (0.125 kg)
 Available Stop Plug Approvals: ATEX, IECEx, CEC, NEC, EAC, INMETRO, SAC, UKRAINE, CCoE, ABS, LLOYD’S, RMRS

*TYPE 4 and IP66 rating requires addition of Teflon tape

**Metric threaded stop plugs are fitted with silicone O-Rings

***For silicone sensitive applications the silicone O-Ring can be removed from Metric stop plugs and fitted with an IP washer



Dome Head Stop Plug - Nickel Brass



Type A Stop Plug - Nickel Brass

CATALYTIC

FlexVuUD10 Universal Display (for Catalytic)



FlexVu UD10 Universal Display (Spec Sheet: 90-1200) is recommended for applications where a gas detector with digital read-out of detected gas levels are required. The FlexVu UD10 Universal Display Unit is designed for use with various Det-Tronics catalytic gas sensor/transmitters such as Model 505 or CGS. The display unit is designed and approved as a stand-alone device and performs all the functions of a gas controller.

- Compliance to ANSI/ISA-12.13.01-2000 performance standard
- Performance certified to FM 6320, CSA 22.2 #152, EN60079-29-1, and IEC60079-29-1
- **Certified as a stand-alone combustible gas controller/detector when used with the CGS sensor**
- Division Approval Ratings: FM and CSA
- Zone Approval Ratings: FM, CSA, ATEX, and IECEx
- Eagle Quantum Premier model
- Non-intrusive menu allows device configuration and calibration without de-classifying the hazardous area
- Continuously displays gas level, gas type, and units measured
- Data logger for event time and date stamping
- Heated and backlit LCD display
- Relay, modbus, and linear isolated/non-isolated 4-20 mA output with HART, **configurable 4-20 mA output loop monitoring**
- IP66 rated
- SIL 2 certified when used with CGS combustible gas sensor

FlexVu UD10 Model Matrix - CGS

| MODEL | DESCRIPTION |
|------------------------------------------------|--------------------------------------|
| UD10 | Universal Display Unit |
| | TYPE MATERIAL |
| | A Aluminum |
| | S Stainless Steel (316) |
| | TYPE THREAD TYPE |
| | 5M 5 Port, Metric M25 |
| | 5N 5 Port, 3/4" NPT |
| | TYPE OUTPUTS |
| | 25 Relay, 4-20mA, RS485, HART |
| | 28 EQP / DCU Emulator |
| | TYPE APPROVALS |
| | B INMETRO (BRAZIL) |
| | S SIL |
| | T SIL/FM/CSA/ATEX/IECEX |
| | W FM/CSA/ATEX/IECEX |
| TYPE CLASSIFICATION (Div/Zone) | |
| 2 Ex d (Flameproof) | |
| TYPE OPTIONAL CONDITIONING BOARD | |
| C CGS | |

Typical UD10/CGS Customer Proposal

| Qty | Part Number | Description |
|-----|-------------|-------------------------------------------------|
| 1 | 006824-003 | Catalytic Combustible Gas Sensor (CGS), M20, CC |
| 1 | 010254-001 | UD10A5M25W2C Universal Display, AL, M25 |
| 2 | 101197-005 | Stop plug, M25, AL |
| 1 | 102804-001 | Reducer, M25 to M20, AL |

Option

| Qty | Part Number | Description |
|-----|-------------|--------------------------------------------|
| 1 | 226365-119 | STB1A2MW Sensor Separation Termination Box |

Accessories

| Qty | Part Number | Description |
|-----|-------------|----------------------------------------------|
| 1 | 225130-001 | Methane Gas Calibration Kit, 50% LFL methane |
| 1 | 226166-001 | Spare 103 L gas cylinder, 50% LFL methane |

CATALYTIC

FlexVu UD10 Universal Display - CGS - SIL/FM/CSA/ATEX/IECEX

| Model | Part Number | Material | Threads | Relay 4-20 RS485 HART | EQP-DCU Emulator | Cond. Board | SIL/FM/CSA/ ATEX/IECEX | FM/CSA/ ATEX/IECEX |
|-------------------------------------------------------------------------------|-------------|----------|---------|--------------------------|---------------------|----------------|---------------------------|-----------------------|
| UD10A5M25W2C | 010254-001 | AL | M25 | X | | CGS | | X |
| UD10A5N25W2C | 010254-002 | AL | 3/4 NPT | X | | CGS | | X |
| UD10S5M25W2C | 010254-003 | 316 SS | M25 | X | | CGS | | X |
| UD10S5N25W2C | 010254-004 | 316 SS | 3/4 NPT | X | | CGS | | X |
| UD10A5M25T2C | 010254-021 | AL | M25 | X | | CGS | X | |
| UD10A5N25T2C | 010254-022 | AL | 3/4 NPT | X | | CGS | X | |
| UD10S5M25T2C | 010254-023 | 316 SS | M25 | X | | CGS | X | |
| UD10S5N25T2C | 010254-024 | 316 SS | 3/4 NPT | X | | CGS | X | |
| UD10A5M28W2C | 010254-005 | AL | M25 | | X | CGS | | X |
| UD10A5N28W2C | 010254-006 | AL | 3/4 NPT | | X | CGS | | X |
| UD10S5M28W2C | 010254-007 | 316 SS | M25 | | X | CGS | | X |
| UD10S5N28W2C | 010254-008 | 316 SS | 3/4 NPT | | X | CGS | | X |
| Ship Weight: Aluminum = 4.2lb (1.9kg) Stainless Steel = 10.5lb (4.8kg) | | | | | | | | |

FlexVu UD10 Universal Display - CGS - SIL/Brazil

| Model | Part Number | Material | Threads | Relay 4-20 RS485 HART | EQP- DCU Emulator | Cond. Board | INMETRO |
|-------------------------------------------------------------------------------|-------------|----------|---------|--------------------------------|-------------------------|----------------|---------|
| UD10A5M25B2C | 010254-081 | AL | M25 | X | | CGS | X |
| UD10A5N25B2C | 010254-082 | AL | 3/4 NPT | X | | CGS | X |
| UD10S5M25B2C | 010254-083 | 316 SS | M25 | X | | CGS | X |
| UD10S5N25B2C | 010254-084 | 316 SS | 3/4 NPT | X | | CGS | X |
| UD10A5N28B2C | 010254-086 | AL | 3/4 NPT | | X | CGS | X |
| UD10S5M28B2C | 010254-087 | 316 SS | M25 | | X | CGS | X |
| UD10S5N28B2C | 010254-088 | 316 SS | 3/4 NPT | | X | CGS | X |
| UD10S5M25SB2C | 010254-093 | 316SS | M25 | X | | CGS | X |
| UD10S5N25SB2C | 010254-094 | 316SS | 3/4 NPT | X | | CGS | X |
| UD10A5M25SB2C | 010254-095 | AL | M25 | X | | CGS | X |
| UD10A5N25SB2C | 010254-096 | AL | 3/4 NPT | X | | CGS | X |
| Ship Weight: Aluminum = 4.2lb (1.9kg) Stainless Steel = 10.5lb (4.8kg) | | | | | | | |

FlexVu UD10 Spare Modules

| Part Number | Description | Output | Ship Weight |
|-------------|---------------------|--------------|----------------|
| 010569-001 | UD10 Display Module | Relay/4-20mA | 1 lb (0.45 kg) |
| 010535-001 | UD10 Display Module | EQP-DCU | 1 lb (0.45 kg) |

FlexVu UD10 Spare Parts

| Part Number | Description | Ship Weight |
|-------------|----------------------------|------------------|
| 010973-001 | UD10/CGS REPLACEMENT BOARD | <1 lb (<0.45 kg) |

CATALYTIC

FlexVu UD10 Accessories

| Part Number | Description | Ship Weight |
|-------------|--------------------------------------------------------|-----------------|
| 009700-001 | Magnetic Tool | <1 lb (0.45 kg) |
| 014019-001 | Gas Inspector 11 CD | <1 lb (0.45 kg) |
| 014020-001 | W6300G1006 Gas Inspector 11 Kit (includes CD) | 1 lb (0.45 kg) |
| 102988-002 | Plug, 5.0mm, 6 Position - P2 | <1 lb (0.45 kg) |
| 102988-026 | Plug, 5.0mm, 3 Position - P1 (J10, CGS) | <1 lb (0.45 kg) |
| 102988-028 | Plug, 5.0mm, 5 Position - (J3, CGS) | <1 lb (0.45 kg) |
| 103726-002 | Plug, 3.5mm, 3 Position - J2 | <1 lb (0.45 kg) |
| 103726-004 | Plug, 3.5mm, 5 Position - J3 | <1 lb (0.45 kg) |
| 103726-011 | Plug, 3.5mm, 12 Position - J4 | <1 lb (0.45 kg) |
| 000609-033 | 2" Pipe Mt U Bolt Kit,SS - UD10/20 & J Box, Incl. Hdw. | <1 lb (0.45 kg) |
| 000609-034 | 4" Pipe Mt U Bolt Kit,SS - UD10/20 & J Box, Incl. Hdw. | 2.5 lb (1.3 kg) |

Stop Plugs and Reducers

| ITEM NUMBER | STYLE | MATERIAL | OVERALL LENGTH (mm) | THREAD TYPE | HEX SIZE |
|-------------|---------------------|-----------------|---------------------|-------------|----------|
| 101197-001 | TYPE A STOP PLUG | ALUMINUM | 14.8 | 3/4 NPT | 12 |
| 101197-002 | TYPE A STOP PLUG | ALUMINUM | 14.5 | 1/2 NPT | 10 |
| 101197-003 | DOME HEAD STOP PLUG | STAINLESS STEEL | 21.5 | M25 | 12 |
| 101197-004 | TYPE A STOP PLUG | STAINLESS STEEL | 14.8 | 3/4 NPT | 12 |
| 101197-005 | DOME HEAD STOP PLUG | ALUMINUM | 21.5 | M25 | 12 |
| 101197-006 | DOME HEAD STOP PLUG | ALUMINUM | 21.5 | M20 | 10 |
| 101197-007 | DOME HEAD STOP PLUG | STAINLESS STEEL | 21.5 | M20 | 10 |
| 101197-008 | DOME HEAD STOP PLUG | NICKEL BRASS | 21.5 | M20 | 10 |
| 101197-009 | DOME HEAD STOP PLUG | NICKEL BRASS | 21.5 | M25 | 12 |
| 101197-010 | TYPE A STOP PLUG | NICKEL BRASS | 14.8 | 3/4 NPT | 12 |
| 101197-011 | TYPE A STOP PLUG | NICKEL BRASS | 14.5 | 1/2 NPT | 10 |
| 101197-012 | TYPE A STOP PLUG | STAINLESS STEEL | 14.5 | 1/2 NPT | 10 |
| 101197-501 | IP WASHER | NYLON | - | M20 | - |
| 101197-502 | IP WASHER | NYLON | - | M25 | - |
| 101197-503 | IP WASHER | TEFLON PTFE | - | M20 | - |
| 101197-504 | IP WASHER | TEFLON PTFE | - | M25 | - |
| 102804-001 | REDUCER | ALUMINUM | - | M25 to M20 | - |
| 102804-003 | REDUCER | STAINLESS STEEL | - | M25 to M20 | - |

Ship Weight: 1/2 NPT = 0.07lb (0.030kg), 3/4 NPT = 0.11lb (0.05kg), M20 = 0.14lb (0.062kg), M25 = 0.28lb (0.125 kg)
Available Stop Plug Approvals: ATEX, IECEx, CEC, NEC, EAC, INMETRO, SAC, UKRAINE, CCoE, ABS, LLOYD'S, RMRS

*TYPE 4 and IP66 rating requires addition of Teflon tape

**Metric threaded stop plugs are fitted with silicone O-Rings

***For silicone sensitive applications the silicone O-Ring can be removed from Metric stop plugs and fitted with an IP washer



Dome Head Stop Plug - Nickel Brass



Type A Stop Plug - Nickel Brass

FlexVu UD10 Universal Display Repair / Upgrade Kit



FlexVu® UD10 Universal Display Repair / Upgrade Kit

For information on all products related to UD10 Repair/Upgrade Kits, refer to **Gas E.5**.

CGS Combustible Gas Certified Calibration Kits



Combustible Gas Certified Calibration Kits (Spec Sheet: 90-1059) for combustible gas sensors. Kits include sturdy plastic carrying case containing:

- Two 3.6 ft³ (103 liters) cylinders of Class 2.2 non-flammable, non-toxic compressed gas
- Regulator/shutoff valve with gauge, 3-foot tubing and stainless steel CGS calibration cup
- Regulator provides fixed flow rate of 1 liter per minute designed for CGS sensors
- 3-foot tube
- Sturdy plastic carrying case

Calibration Kits for CGS Catalytic Sensor

| Part Number | Gas | LFL | % Vol | Standard | Balance | Ship Weight |
|-------------|----------------------|-----|-------|----------|---------|-------------------|
| 225130-002 | Ethane | 50% | 1.5 | NFPA | Air | 11.5 lb (5.23 kg) |
| 225130-902* | Ethane | 50% | 1.5 | NFPA | Air | 11.5 lb (5.23 kg) |
| 225130-003 | Ethylene | 50% | 1.35 | NFPA | Air | 11.5 lb (5.23 kg) |
| 225130-005 | Hydrogen | 50% | 2.0 | NFPA | Air | 11.5 lb (5.23 kg) |
| 225130-905* | Hydrogen | 50% | 2.0 | NFPA | Air | 11.5 lb (5.23 kg) |
| 225130-006 | Methane | 20% | 1.0 | NFPA | Air | 11.5 lb (5.23 kg) |
| 225130-007 | Methane | 25% | 1.25 | NFPA | Air | 11.5 lb (5.23 kg) |
| 225130-008 | Methane | 35% | 1.75 | NFPA | Air | 11.5 lb (5.23 kg) |
| 225130-014 | Methane | 50% | 2.2 | IEC | Air | 11.5 lb (5.23 kg) |
| 225130-914* | Methane | 50% | 2.2 | IEC | Air | 11.5 lb (5.23 kg) |
| 225130-001 | Methane | 50% | 2.5 | NFPA | Air | 11.5 lb (5.23 kg) |
| 225130-901* | Methane | 50% | 2.5 | NFPA | Air | 11.5 lb (5.23 kg) |
| 225130-015 | Propane | 50% | 0.85 | IEC | Air | 11.5 lb (5.23 kg) |
| 225130-915* | Propane | 50% | 0.85 | IEC | Air | 11.5 lb (5.23 kg) |
| 225130-004 | Propane | 50% | 1.1 | NFPA | Air | 11.5 lb (5.23 kg) |
| 225130-009 | Empty kit—no cal gas | | | | | 10 lb (4.6 kg) |

*These items are certified for Russian projects.

NOTE: Average lead time is 2-3 weeks

CATALYTIC

Replacement Gas Cylinders for Combustible Gas Calibration Kits

| Part Number | Gas | %LFL | % Vol | Standard | Balance | Ship Weight |
|-------------|-----------|------|-------|----------|----------|-----------------|
| 226166-006 | Zero Air | N/A | 20.9 | N/A | Nitrogen | 1.5 lb (0.7 kg) |
| 226166-002 | Ethane | 50% | 1.5 | NFPA | Air | 1.5 lb (0.7 kg) |
| 226166-902* | Ethane | 50% | 1.5 | NFPA | Air | 1.5 lb (0.7 kg) |
| 226166-003 | Ethylene | 50% | 1.35 | NFPA | Air | 1.5 lb (0.7 kg) |
| 226166-005 | Hydrogen | 50% | 2.0 | NFPA | Air | 1.5 lb (0.7 kg) |
| 226166-905* | Hydrogen | 50% | 2.0 | NFPA | Air | 1.5 lb (0.7 kg) |
| 226166-007 | Methane | 20% | 1.0 | NFPA | Air | 1.5 lb (0.7 kg) |
| 226166-008 | Methane | 25% | 1.25 | NFPA | Air | 1.5 lb (0.7 kg) |
| 226166-009 | Methane | 35% | 1.75 | NFPA | Air | 1.5 lb (0.7 kg) |
| 226166-014 | Methane | 50% | 2.2 | IEC | Air | 1.5 lb (0.7 kg) |
| 226166-914* | Methane | 50% | 2.2 | IEC | Air | 1.5 lb (0.7 kg) |
| 226166-001 | Methane | 50% | 2.5 | NFPA | Air | 1.5 lb (0.7 kg) |
| 226166-901* | Methane | 50% | 2.5 | NFPA | Air | 1.5 lb (0.7 kg) |
| 226166-015 | Propane | 50% | 0.85 | IEC | Air | 1.5 lb (0.7 kg) |
| 226166-915* | Propane | 50% | 0.85 | IEC | Air | 1.5 lb (0.7 kg) |
| 226166-004 | Propane | 50% | 1.1 | NFPA | Air | 1.5 lb (0.7 kg) |
| 226166-010 | Propylene | 50% | 1.2 | NFPA | Air | 1.5 lb (0.7 kg) |

*These items are certified for Russian projects.

NOTE: Average lead time is 2-3 weeks

Replacement Kit Replacement Parts

| Part Number | Description | Ship Weight |
|-------------|---------------------------------|----------------|
| 004976-001 | Standard calibration cup, SS | 8 oz (0.23 kg) |
| 101678-007 | Tubing, 3 ft. | 8 oz (0.23 kg) |
| 101678-013 | Tubing, 100 ft. spool | 8 oz (0.23 kg) |
| 162552-001 | 1 LPM Regulator for CGS sensors | 8 oz (0.23 kg) |
| 162553-001 | Carrying Case | 8 oz (0.23 kg) |

CATALYTIC

Duct Mount and Sample Draw Assemblies for CGS



Direct Duct Mount Assembly (Spec Sheet: 90-1046). For mounting combustible sensors to air handling duct work. The Direct Duct Mount CGS assembly enables combustible gas detection in air handling, heating, ventilating, and air conditioning ducts. Designed for flat surface mounting only.

- Seal gaskets provided to prevent leakage
- Circular duct wall cutout required
- Positive pressure ducts only
- Calibration gas inlet enables in-situ calibration
- Flexible conduit/cabling recommended to enable sensor removal from assembly



Model Q811 Duct Mount Enclosure (Manual: 95-8459) The Q811 provides combustible gas detection in air handling, heating, ventilating, and air conditioning ducts.

- Designed for flat surface mounting only
- Stainless steel Type 4X enclosure
- 316 Stainless steel enclosure and sample inlet tube spans the duct's cross section
- 1 foot outlet tube returns the sample
- Requires a 600–4000 fpm velocity



Sample Draw Cup Assembly for CGS. The Sample Draw cup assembly for CGS provides a sealed enclosure with compression fittings to enable the CGS to be used as part of an extractive gas sampling system.

- Aluminum enclosure with seals provides airtight flow chamber
- Brass compression fittings accept 1/4" OD tubing
- Threaded cover enables sensor removal
- Sampling system hardware required for proper operation

Direct Duct Mount Assemblies for CGS

| Part Number | Material | Ship Weight |
|-------------|----------|----------------|
| 226846-001 | AL | 6 oz (0.17 kg) |
| 226846-008 | SS | 1 lb (0.46 kg) |

Model Q811 CGS Duct Mount Enclosure

| Part Number | Material | Ship Weight | Thread |
|-------------|----------|----------------|--------|
| 000811-106 | SS | 10 lb (4.5 kg) | M20 |
| 000811-105 | SS | 10 lb (4.5 kg) | 3/4" |

NOTE: 1 inlet and 1 outlet tube included at no extra cost.
Specify length of inlet tube at time of order (1, 3, 6, 10 or 13 ft).

Q811 Spare Parts

| Part Number | Description | Length | Material | Ship Weight |
|-------------|--------------|---------------|----------|------------------|
| 000214-281 | Inlet Tube | 1 ft (0.3 m) | 316 SS | 8 oz (0.23 kg) |
| 000214-282 | Inlet Tube | 3 ft (0.9 m) | 316 SS | 1 lb (0.45 kg) |
| 000214-283 | Inlet Tube | 6 ft (1.8 m) | 316 SS | 3 lb (1.35 kg) |
| 000214-284 | Inlet Tube | 10 ft (3.1 m) | 316 SS | 6 lb (2.4 kg) |
| 000214-285 | Inlet Tube | 13 ft (4 m) | 316 SS | 9 lb (4.0 kg) |
| 000214-419 | Inlet Tube | 15 ft (4.6 m) | 316 SS | 11 lb (5.0 kg) |
| 000214-280 | Outlet Tube | 1 ft (0.3 m) | 316 SS | 8 oz (0.23 kg) |
| 102359-001 | Stopper Plug | N/A | Rubber | <1 lb (<0.45 kg) |

Sample Draw Cup Assembly for CGS

| Part Number | Material | Ship Weight |
|-------------|----------|----------------|
| 009171-001 | AL | 1 lb (0.45 kg) |

CGS Accessories: Rain Shields, Splash Guards, Dust Covers, Remote Calibration Cups



Rain Shields (Spec Sheet: 90-1046) protect combustible sensors from rain and snow.



Splash Guards (Spec Sheet: 90-1046) protect combustible sensors from ingress due to rain or splashing water.



Dust Covers (Spec Sheet: 90-1046) are recommended to protect sensors in windy, dusty, and oily environments. Porex and stainless steel filters available.



Remote Calibration cups provide the means to apply calibration to a CGS gas sensor from a remote location. Tubing not included. Options include barbed fitting or 1/4" compression fitting.

NOTE: Only one accessory recommended to be fitted per catalytic sensor.

Rain Shields

| Part Number | Material | Ship Weight |
|-------------|----------|----------------|
| 226349-001 | AL | 6 oz (0.17 kg) |

Splash Guard

| Part Number | Material | Ship Weight |
|-------------|----------|----------------|
| 006491-001 | AL | 2 lb (0.95 kg) |

Dust Covers

| Part Number | Material | Ship Weight |
|-------------|----------|----------------|
| 225312-001 | SS | 2 oz (0.06 kg) |
| 226190-001 | Porex* | 2 oz (0.06 kg) |

*Porex not recommended for outdoors or temperatures above 75°C.

Remote Calibration Cups

| Part Number | Use | Filter Material | Tube Fitting Type | Ship Weight |
|-------------|---------|-----------------|-------------------|------------------|
| 225777-001 | Indoor | Porex* | Barbed | 0.5 lb (0.14 kg) |
| 004996-001 | Indoor | Porex* | Compression | 0.5 lb (0.14 kg) |
| 006618-001 | Outdoor | SS Screen | Barbed | 0.5 lb (0.14 kg) |
| 006618-002 | Outdoor | SS Screen | Compression | 0.5 lb (0.14 kg) |

*Porex not recommended for outdoors or temperatures above 75°C.

TOXICS

GTS Toxic Gas Sensor Module (GT3000 Series)



GTS Toxic Gas Sensor Module Housings are incorporated into the GTX toxic gas transmitter. The electrochemical cell is embedded in the module. Refer to Instruction Manual 95-8616 for sensor comparisons and cross-sensitivities.

- Performance approved models
- **Plus (+) series sensors with dual reservoir technology and extended temperature range**
- Sensor modules are available in a variety of gas types and concentration ranges
- Hot-swappable capabilities with the GTX transmitter
- Easy install and removal with the GTX transmitter
- Intrinsically safe (IS) design
- **SIL models available for Hydrogen Sulfide and Oxygen sensors**
- Suitable for outdoor applications requiring IP66 rating
- Electrochemical sensor cell for increased accuracy, stability, and reliability
- Highly specific response reduces the chance of false alarms resulting from the presence of other gases
- Temperature compensated to ensure consistent performance over entire operating temperature range
- Hydrophobic filter easily replaced without opening the device or use of tools
- EMI/RFI hardened
- Event and calibration logs are stored in non-volatile memory and are accessible using a UD10/UD20, HART device, or AMS software.
- FDT/DTM capable
- Real-time clock with battery back-up

GTS Model Matrix

| MODEL | DESCRIPTION | |
|-------|-------------------------|-----------------------------------------------|
| GTS | Toxic Gas Sensor Module | |
| | TYPE | GAS / RANGE |
| | H2S+ | Hydrogen Sulfide (certified SIL 2 capable) |
| | 20P | 0 - 20 PPM |
| | 50P | 0 - 50 PPM |
| | 100P | 0 - 100 PPM |
| | CL2 | Chlorine |
| | 10P | 0 - 10 PPM |
| | NH3 | Ammonia |
| | 100P | 0 - 100 PPM |
| | 500P | 0 - 500 PPM |
| | H2 | Hydrogen |
| | 1000P | 0 - 1000 PPM |
| | O2 | Oxygen (certified SIL 2 capable) |
| | 25V | 0 - 25 % by Vol |
| | CO | Carbon Monoxide |
| | 100P | 0 - 100 PPM |
| | 500P | 0 - 500 PPM |
| | SO2+ | Sulfur Dioxide |
| | 20P | 0 - 20 PPM |
| | 100P | 0 - 100 PPM |
| | NO2 | Nitrogen Dioxide |
| | 20P | 0 - 20 PPM |
| | TYPE | SAFETY INTEGRITY LEVEL |
| | S | SIL 2 |
| | N | NON-SIL |
| | TYPE | LABEL |
| | C | CHINESE |
| | E | ENGLISH |
| | K | KAZAKH |
| | P | PORTUGUESE (Brazil) |
| | TYPE | HOUSING |
| | S | STANDARD |
| | E | ENHANCED SHIELDING |

GTS Toxic Gas Sensor Module - ENGLISH

| Model Number | Part Number | Toxic Gas | ppm Range | % by Volume |
|-----------------------------|-------------------------|-----------|-----------|-------------|
| GTSH2S+20PSEE ¹ | 009471-341 ¹ | H2S | 0-20 | |
| GTSH2S+50PSEE ¹ | 009471-342 ¹ | H2S | 0-50 | |
| GTSH2S+100PSES ¹ | 009471-343 ¹ | H2S | 0-100 | |
| GTSH2S+100PSEE ¹ | 009471-344 ¹ | H2S | 0-100 | |
| GTSCl210PNES ³ | 009471-304 ³ | Cl2 | 0-10 | |
| GTSNH3100PNES ¹ | 009471-305 ¹ | NH3 | 0-100 | |
| GTSNH3500PNES ³ | 009471-306 ³ | NH3 | 0-500 | |
| GTSH21000PNES ³ | 009471-308 ³ | H2 | 0-1000 | |
| GTSO225VSES ³ | 009471-309 ³ | O2 | | 0-25% |
| GTSCO100PNES ¹ | 009471-310 ¹ | CO | 0-100 | |
| GTSCO500PNES ¹ | 009471-311 ¹ | CO | 0-500 | |
| GTSSO2+20PNES ³ | 009471-313 ³ | SO2 | 0-20 | |
| GTSSO2+100PNES ³ | 009471-314 ³ | SO2 | 0-100 | |
| GTSNO220PNES ³ | 009471-316 ³ | NO2 | 0-20 | |
| Ship Weight <1 lb (0.45kg) | | | | |

NOTE: Refer to the GT3000 Instruction Manual 95-8616 for details on performance approvals.
Ship weight <1lb (0.45kg)

| NOTES: | GTS Approval when paired with appropriate GTX approval type | GTX approval types |
|--------|-------------------------------------------------------------|--------------------|
| 1 | FM/CSA/IECEX | N |
| 3 | CSA/IECEX | N |

GTS Toxic Gas Sensor Module - PORTUGUESE (Brazil)

| Model Number | Part Number | Toxic Gas | ppm Range | % by Volume |
|----------------------------|-------------|-----------|-----------|-------------|
| GTSH2S+20PSPE | 009471-601 | H2S | 0-20 | |
| GTSH2S+50PSPE | 009471-602 | H2S | 0-50 | |
| GTSH2S+100PSPE | 009471-603 | H2S | 0-100 | |
| GTSH2S+100PSPS | 009471-604 | H2S | 0-100 | |
| GTSCl210PNPS | 009471-605 | Cl2 | 0-10 | |
| GTSNH3100PNPS | 009471-606 | NH3 | 0-100 | |
| GTSNH3500PNPS | 009471-607 | NH3 | 0-500 | |
| GTSO225VSPS | 009471-608 | O2 | | 0-25% |
| GTSCO100PNPS | 009471-609 | CO | 0-100 | |
| GTSCO500PNPS | 009471-610 | CO | 0-500 | |
| GTSH21000PNPS | 009471-611 | H2 | 0-1000 | |
| Ship Weight <1 lb (0.45kg) | | | | |

NOTE: Refer to the GT3000 Instruction Manual 95-8616 for details on performance approvals.
Ship weight <1lb (0.45kg)

TOXICS

GTS Toxic Gas Sensor Module - KAZAKH

| Model Number | Part Number | Toxic Gas | ppm Range | % by Volume |
|----------------|-------------|-----------|-----------|-------------|
| GTSH2S+20PSKE | 009471-860 | H2S | 0-20 | |
| GTSH2S+50PSKE | 009471-861 | H2S | 0-50 | |
| GTSH2S+100PSKE | 009471-862 | H2S | 0-100 | |
| GTSH2S+100PSKS | 009471-863 | H2S | 0-100 | |

NOTE: Refer to the GT3000 Instruction Manual 95-8616 for details on performance approvals.

GT3000 Spares and Accessories

| Part Number | Description |
|-------------|---------------------------------------|
| 010780-003 | GT3000 H2S Calibration Adaptor |
| 009737-001 | GTS Calibration cup |
| 009640-001 | GTS Replacement Filter |
| 010783-001 | GT3000 Remote Calibration Filter |
| 012509-001 | Q312 GT3000 Sample Draw |
| 012509-002 | Q312 GT3000 Sample Draw with Fittings |
| 009700-001 | Magnetic Tool |



**GT3000 H2S
Calibration Adaptor**



**GTS Calibration
Cup**



**GTS Replacement
Filter**



Q312 Sample Draw



Magnetic Tool

TOXICS



Model Q912 Duct Mount Enclosure

The Model Q912 Duct Mount Enclosure provides reliable detection of toxic gases within air-handling ductwork. The device mounts directly to the ductwork, and uses a cross-sectional inlet and outlet sampling tube arrangement that allows large volume air sampling. The Q912 is compatible with the entire Det-Tronics GT3000 family of gas detectors, and is suitable for hazardous industrial and commercial applications.

- Stainless steel Type 4X enclosure
- Stainless steel sample inlet tube spans the duct's cross section
- 1, 3, 6, 10 or 13 ft (0.3, 0.9, 1.8, 3.1 or 4 meter) inlet tube options
- 1 ft (0.3 m) outlet tube returns the sample
- Requires a 600–4000 fpm velocity
- Designed for flat surface mounting only

Model Q912 Toxic Duct Mount Enclosure

| Part Number | Description* | Detector Conduit | Inlet Tube Length |
|-------------|----------------------------------|------------------|-------------------|
| 012513-001 | Q912 Duct Mount M25, 1ft inlet | M25 | 1 ft (0.3m) |
| 012513-003 | Q912 Duct Mount M25, 3ft inlet | M25 | 3 ft (0.9m) |
| 012513-006 | Q912 Duct Mount M25, 6ft inlet | M25 | 6 ft (1.8m) |
| 012513-010 | Q912 Duct Mount M25, 10ft inlet | M25 | 10 ft (3.1m) |
| 012513-013 | Q912 Duct Mount M25, 13ft inlet | M25 | 13 ft (4m) |
| 012514-001 | Q912 Duct Mount 3/4", 1ft inlet | 3/4" | 1 ft (0.3m) |
| 012514-003 | Q912 Duct Mount 3/4", 3ft inlet | 3/4" | 3 ft (0.9m) |
| 012514-006 | Q912 Duct Mount 3/4", 6ft inlet | 3/4" | 6 ft (1.8m) |
| 012514-010 | Q912 Duct Mount 3/4", 10ft inlet | 3/4" | 10 ft (3.1m) |
| 012514-013 | Q912 Duct Mount 3/4", 13ft inlet | 3/4" | 13 ft (4m) |
| 012363-001 | Spare Diffuser Insert | | |

*1 ft outlet tube included with each duct mount.

Model Q912 Spare Parts

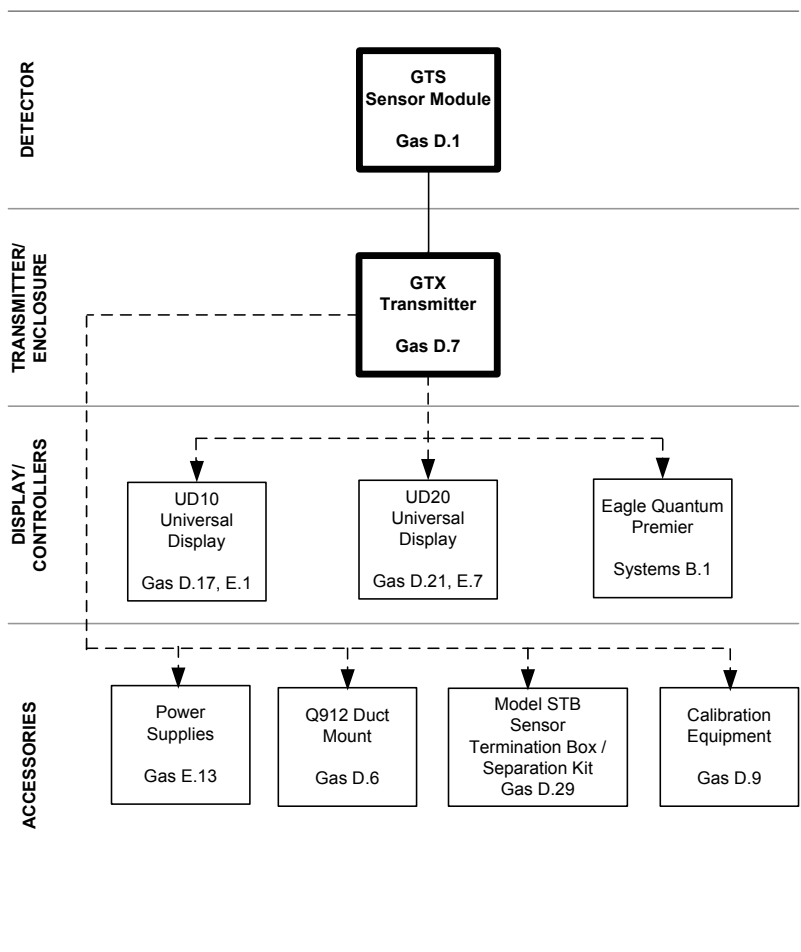
| Part Number | Description | Length | Material | Ship Weight |
|-------------|--------------|---------------|----------|------------------|
| 000214-281 | Inlet Tube | 1 ft (0.3 m) | 316 SS | 8 oz (0.23 kg) |
| 000214-282 | Inlet Tube | 3 ft (0.9 m) | 316 SS | 1 lb (0.45 kg) |
| 000214-283 | Inlet Tube | 6 ft (1.8 m) | 316 SS | 3 lb (1.35 kg) |
| 000214-284 | Inlet Tube | 10 ft (3.1 m) | 316 SS | 6 lb (2.4 kg) |
| 000214-285 | Inlet Tube | 13 ft (4 m) | 316 SS | 9 lb (4.0 kg) |
| 000214-280 | Outlet Tube | 1 ft (0.3 m) | 316 SS | 8 oz (0.23 kg) |
| 102359-001 | Stopper Plug | N/A | Rubber | <1 lb (<0.45 kg) |

GTX Toxic Gas Transmitter (GT3000 Series)



GTX Toxic Gas Transmitter (Spec Sheet: 90-1199). Stainless steel, toxic gas transmitter that provides an accurate measurement of toxic gasses.

- 316 Stainless Steel
- Approved as a stand-alone device when combined with a GTS toxic gas sensor
- 4-20 mA output with HART
- Intrinsically safe (IS) or Explosion-proof design
- IP66 rated
- Certified SIL 2 Capable sensors are Hydrogen Sulfide and Oxygen
- Performance approved and verified
- Self-contained transmitter circuitry
- Event and calibration logs are stored in non-volatile memory and are accessible using a UD10/UD20, HART device, AMS software, or Gas Inspector.
- FDT/DTM capable
- Real-time clock with battery back-up
- Magnetic switch and LEDs for user interface
- 2-wire loop powered



KEY: ————— = Required - - - - - = Option —●— = Choice Required

TOXICS

GTX Model Matrix

| MODEL | DESCRIPTION | |
|-------|-----------------------|--------------------------------|
| GTX | Toxic Gas Transmitter | |
| | TYPE | MATERIAL |
| | S | Stainless Steel (316) |
| | TYPE | THREAD TYPE |
| | N | 3/4" NPT |
| | M | Metric M25 |
| | TYPE | OUTPUTS |
| | 26 | 4-20 mA w/HART (3.5 mA fault) |
| | 29 | 4-20 mA w/HART (2.45 mA fault) |
| | TYPE | APPROVALS |
| | B | INMETRO (Brazil) |
| | K | KAZAKH |
| | N | FM/CSA/IECEX |
| | TYPE | CLASSIFICATION (Division/Zone) |
| | 4 | Intrinsically Safe |
| | 5 | Explosion-proof |

GTX Toxic Gas Transmitter (for use with FlexVu models UD10/20, and GDTB)

| Model Number | Part Number | Threads | IS | Ex Proof | Approvals |
|------------------------------------------|-------------|---------|----|----------|--------------|
| GTXSN26N4 | 009480-321 | 3/4 NPT | X | | FM/CSA/IECEX |
| GTXSM26N4 | 009480-322 | M25 | X | | FM/CSA/IECEX |
| GTXSN26N5 | 009480-323 | 3/4 NPT | | X | FM/CSA/IECEX |
| GTXSM26N5 | 009480-324 | M25 | | X | FM/CSA/IECEX |
| GTXSN26B5 | 009480-305 | 3/4 NPT | | X | INMETRO |
| GTXSM26B5 | 009480-306 | M25 | | X | INMETRO |
| GTXSM26K5 | 009480-866 | M25 | | X | KAZAKH |
| Ship Weight: <1lb (<0.45kg) | | | | | |

NOTE: Refer to the GT3000 Instruction Manual 95-8616 for details on performance approvals.

GT3000 Certified Calibration Kits

GT3000 Certified Calibration Kits (Manual: 95-8643) consists of a sturdy carrying case containing:



Configuration 1

Configuration 1

GT3000 calibration kit with two cylinders of calibration gas

- Two cylinders of Class 2.2 non-flammable, non-toxic compressed gas
- A 1 liter/minute regulator and pressure indicator
- 3-foot tube
- GT3000 Calibration Cup



Configuration 2

Configuration 2

GT3000 calibration kit with one cylinder of calibration gas and one humidifier

- One cylinder of Class 2.2 non-flammable, non-toxic compressed gas
- One humidifier
- A 1 liter/minute regulator and pressure indicator
- 3-foot tube
- GT3000 Calibration Cup

TOXICS

GT3000 Calibration Gas Kits

| Part Number | Concentration | Gas | Balance | Cylinders | Humidifier | Ship Weight |
|-------------|---------------|------------------|----------|-----------|------------|-------------------|
| 010274-001 | 10 ppm | Hydrogen Sulfide | Nitrogen | 2 | | 11.5 lb (5.23 kg) |
| 010274-002 | 25 ppm | Hydrogen Sulfide | Nitrogen | 2 | | 11.5 lb (5.23 kg) |
| 010274-003* | 50 ppm | Hydrogen Sulfide | Nitrogen | 2 | | 11.5 lb (5.23 kg) |
| 010274-004 | 5 ppm | Chlorine | Nitrogen | 2 | | 11.5 lb (5.23 kg) |
| 010274-005 | 50 ppm | Ammonia | Nitrogen | 2 | | 11.5 lb (5.23 kg) |
| 010274-006 | 250 ppm | Ammonia | Nitrogen | 2 | | 11.5 lb (5.23 kg) |
| 010274-008 | 500 ppm | Hydrogen | Air | 2 | | 11.5 lb (5.23 kg) |
| 010274-009 | 20.90% | Oxygen | Nitrogen | 2 | | 11.5 lb (5.23 kg) |
| 010274-010 | 50 ppm | Carbon Monoxide | Air | 2 | | 11.5 lb (5.23 kg) |
| 010274-011 | 250 ppm | Carbon Monoxide | Air | 2 | | 11.5 lb (5.23 kg) |
| 010274-013 | 10 ppm | Sulfur Dioxide | Nitrogen | 2 | | 11.5 lb (5.23 kg) |
| 010274-014 | 50 ppm | Sulfur Dioxide | Nitrogen | 2 | | 11.5 lb (5.23 kg) |
| 010274-016 | 10 ppm | Nitrogen Dioxide | Air | 2 | | 11.5 lb (5.23 kg) |

*Do not use for NTMOS.

GT3000 Calibration Gas Kit Replacement Cylinders

| Part Number | Concentration | Gas | Balance | Ship Weight |
|-------------|---------------|------------------|----------|-----------------|
| 227117-011 | 10 ppm | Hydrogen Sulfide | Nitrogen | 1.5 lb (0.7 kg) |
| 227117-012 | 25 ppm | Hydrogen Sulfide | Nitrogen | 1.5 lb (0.7 kg) |
| 227117-001* | 50 ppm | Hydrogen Sulfide | Nitrogen | 1.5 lb (0.7 kg) |
| 227117-006 | 5 ppm | Chlorine | Nitrogen | 1.5 lb (0.7 kg) |
| 227117-013 | 50 ppm | Ammonia | Nitrogen | 1.5 lb (0.7 kg) |
| 227117-019 | 250 ppm | Ammonia | Nitrogen | 1.5 lb (0.7 kg) |
| 227117-018 | 500 ppm | Hydrogen | Air | 1.5 lb (0.7 kg) |
| 226166-006 | 20.90% | Oxygen | Nitrogen | 1.5 lb (0.7 kg) |
| 227117-003 | 50 ppm | Carbon Monoxide | Air | 1.5 lb (0.7 kg) |
| 227117-004 | 250 ppm | Carbon Monoxide | Air | 1.5 lb (0.7 kg) |
| 227117-016 | 10 ppm | Sulfur Dioxide | Nitrogen | 1.5 lb (0.7 kg) |
| 227117-008 | 50 ppm | Sulfur Dioxide | Nitrogen | 1.5 lb (0.7 kg) |
| 227117-010 | 10 ppm | Nitrogen Dioxide | Air | 1.5 lb (0.7 kg) |

*Do not use for NTMOS.

GT3000 Calibration Kit Replacement Parts

| Part Number | Description | Ship Weight |
|-------------|-----------------------------------|-----------------|
| 009700-001 | Magnetic Tool | <1 lb (0.45 kg) |
| 009737-001 | GT3000 Calibration Cup | 8 oz (0.23 kg) |
| 107427-059 | O-ring for Calibration Cup | <1 lb (0.45 kg) |
| 010780-003 | GT3000 Remote Calibration Adaptor | <1 lb (0.45 kg) |
| 101678-007 | Tubing, 3 ft. | 8 oz (0.23 kg) |
| 101678-013 | Tubing, 100 ft. spool | 8 oz (0.23 kg) |
| 162552-001 | Regulator, 1 LPM | 8 oz (0.23 kg) |
| 162553-001 | Carrying Case | 8 oz (0.23 kg) |

Model STB Sensor Termination Box / Separation Kit



Model STB Sensor Termination Box / Separation Kit includes a junction box, proper connector board required hardware.

- Enables remote installation of sensor for optimum gas detection while offering easy calibration access to transmitter
- One sensor separation kit per sensor is required
- Optional remote calibration cups must be ordered separately (see CGS Accessories)
- Transmitter Sensor separation wiring terminal block (part number 102883-001) is sold separately
- Temperature approved models from -55°C to 125°C for process control applications

STB Model Matrix

| MODEL | DESCRIPTION | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-------------------------|----|-------------------------------------------------------|----|-------------------------------------------|----|------------------------------------|----|-----------------------------------------|----|--------------------------------------|----|--------------------------------------|----|------------------|----|-------------|----|-------------|----|------------------|----|-------------|----|------------------|
| STB | Sensor Termination Box | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>COMPATIBILITY</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>CGS for FlexVu Model UD10, UD30, or CTX10 Transmitter</td> </tr> <tr> <td>5</td> <td>12 terminal</td> </tr> </tbody> </table> | TYPE | COMPATIBILITY | 1 | CGS for FlexVu Model UD10, UD30, or CTX10 Transmitter | 5 | 12 terminal | | | | | | | | | | | | | | | | | | | | |
| TYPE | COMPATIBILITY | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | CGS for FlexVu Model UD10, UD30, or CTX10 Transmitter | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | 12 terminal | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>MATERIAL</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>Aluminum</td> </tr> <tr> <td>S</td> <td>Stainless Steel (316)</td> </tr> </tbody> </table> | TYPE | MATERIAL | A | Aluminum | S | Stainless Steel (316) | | | | | | | | | | | | | | | | | | | | |
| TYPE | MATERIAL | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A | Aluminum | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S | Stainless Steel (316) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th># OF PORTS, THREAD TYPE</th> </tr> </thead> <tbody> <tr> <td>2M</td> <td>2 PORT, M20/25 at 90 degree orientation</td> </tr> <tr> <td>2N</td> <td>2 PORT, 3/4" NPT at 90 degree orientation</td> </tr> <tr> <td>2S</td> <td>2 PORT, M20 AT 180 degree vertical</td> </tr> <tr> <td>2U</td> <td>2 PORT, 3/4" NPT at 180 degree vertical</td> </tr> <tr> <td>2X</td> <td>2 PORT, M20 at 90 degree orientation</td> </tr> <tr> <td>2Y</td> <td>2 PORT, M25 at 90 degree orientation</td> </tr> <tr> <td>3n</td> <td>3 PORT, 3/4" NPT</td> </tr> <tr> <td>3Y</td> <td>3 PORT, M25</td> </tr> <tr> <td>5Y</td> <td>5 PORT, M25</td> </tr> <tr> <td>5N</td> <td>5 PORT, 3/4" NPT</td> </tr> <tr> <td>6Y</td> <td>6 PORT, M25</td> </tr> <tr> <td>6N</td> <td>6 PORT, 3/4" NPT</td> </tr> </tbody> </table> | TYPE | # OF PORTS, THREAD TYPE | 2M | 2 PORT, M20/25 at 90 degree orientation | 2N | 2 PORT, 3/4" NPT at 90 degree orientation | 2S | 2 PORT, M20 AT 180 degree vertical | 2U | 2 PORT, 3/4" NPT at 180 degree vertical | 2X | 2 PORT, M20 at 90 degree orientation | 2Y | 2 PORT, M25 at 90 degree orientation | 3n | 3 PORT, 3/4" NPT | 3Y | 3 PORT, M25 | 5Y | 5 PORT, M25 | 5N | 5 PORT, 3/4" NPT | 6Y | 6 PORT, M25 | 6N | 6 PORT, 3/4" NPT |
| TYPE | # OF PORTS, THREAD TYPE | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2M | 2 PORT, M20/25 at 90 degree orientation | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2N | 2 PORT, 3/4" NPT at 90 degree orientation | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2S | 2 PORT, M20 AT 180 degree vertical | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2U | 2 PORT, 3/4" NPT at 180 degree vertical | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2X | 2 PORT, M20 at 90 degree orientation | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2Y | 2 PORT, M25 at 90 degree orientation | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3n | 3 PORT, 3/4" NPT | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3Y | 3 PORT, M25 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5Y | 5 PORT, M25 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5N | 5 PORT, 3/4" NPT | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6Y | 6 PORT, M25 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6N | 6 PORT, 3/4" NPT | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>APPROVALS</th> </tr> </thead> <tbody> <tr> <td>W</td> <td>FM/CSA/ATEX/IECEX</td> </tr> </tbody> </table> | TYPE | APPROVALS | W | FM/CSA/ATEX/IECEX | | | | | | | | | | | | | | | | | | | | | | |
| TYPE | APPROVALS | | | | | | | | | | | | | | | | | | | | | | | | | | |
| W | FM/CSA/ATEX/IECEX | | | | | | | | | | | | | | | | | | | | | | | | | | |

TOXICS

Model STB Sensor Termination Boxes / Separation Kits

| Model | Part Number | Use With | Material | Ports* | Threads† | FM/CSA/ ATEX/IECEX |
|----------------------------------------------------------------------------|-------------|------------------------------------------------------------------|----------|--------|----------|-----------------------|
| STB1A2MW | 226365-119 | UD10/30/CTX10 | AL | 2 (L) | M20/M25 | X |
| STB1A2NW | 226365-131 | UD10/30/CTX10 | AL | 2 (L) | 3/4 NPT | X |
| STB1A2SW | 226365-123 | UD10/30/CTX10 | AL | 2 (ST) | M20 | X |
| STB1A2UW | 226365-137 | UD10/30/CTX10 | AL | 2 (ST) | 3/4 NPT | X |
| STB1S2NW | 226365-140 | UD10/30/CTX10 | SS | 2 (L) | 3/4 NPT | X |
| STB1S2XW | 226365-121 | UD10/30/CTX10 | SS | 2 (L) | M20 | X |
| N/A | 102883-001 | Spare terminal block for use with Model 505 (included with STB1) | | | | |
| STB5A2NW | 226365-520 | 12 terminal | AL | 2 (L) | 3/4/NPT | X |
| STB5A2YW | 226365-510 | 12 terminal | AL | 2 (L) | M25 | X |
| STB5A3NW | 226365-521 | 12 terminal | AL | 3 (T) | 3/4 NPT | X |
| STB5A3YW | 226365-511 | 12 terminal | AL | 3 (T) | M25 | X |
| STB5A5NW | 226365-522 | 12 terminal | AL | 5 | 3/4 NPT | X |
| STB5A5YW | 226365-512 | 12 terminal | AL | 5 | M25 | X |
| STB5A6NW | 226365-523 | 12 terminal | AL | 6 | 3/4 NPT | X |
| STB5A2YW | 226365-513 | 12 terminal | AL | 6 | M25 | X |
| STB5S2NW | 226365-540 | 12 terminal | SS | 2 (L) | 3/4 NPT | X |
| STB5S2YW | 226365-530 | 12 terminal | SS | 2 (L) | M25 | X |
| STB5S3NW | 226365-541 | 12 terminal | SS | 3 (T) | 3/4 NPT | X |
| STB5S3YW | 226365-531 | 12 terminal | SS | 3 (T) | M25 | X |
| STB5S5NW | 226365-542 | 12 terminal | SS | 5 | 3/4 NPT | X |
| STB5S5YW | 226365-532 | 12 terminal | SS | 5 | M25 | X |
| Ship Weight: Aluminum = 2.2lb (1.0kg) Stainless Steel = 3lb (1.4kg) | | | | | | |

* "L" designates 90 degree conduit entry orientation, "ST" designates straight-thru orientation, "T" designates 3-port orientation.

† If two numbers are listed, the first number is for detector entry and the second number is for field cabling.

NOTE: Compatibility Type 5 models approved from -55°C to +125°C for process control applications.

PointWatch Eclipse® PIRECL Infrared Carbon Dioxide (CO₂) Gas Detector



The **PointWatch Eclipse PIRECL Carbon Dioxide Detector** (Spec Sheet: 90-1207) is our rugged stainless steel, point infrared gas detector providing detection of carbon dioxide. Standard signal outputs include isolated 4-20 mA output, HART communication protocol, and RS-485 serial communication supporting Modbus. An optional 2-alarm and 1-fault relay package is available. A tri-color LED provides visual display of operating status. The weather baffle provides excellent optics protection with an easy twist-lock removal. Additional features include:

- Internal wiring compartment saves money and time
- Heated optics
- Non-intrusive calibration
- Handheld communicator capability
- Ex d, e, ib protection designs
- CSA, ATEX, CE, IECEx hazardous location certifications
- DNV type approval - maritime/offshore
- Remote calibration capability using PIRTB
- 0-2%/volume (0-20000) full scale range

PIRECL CO₂ Calibration Kit

| Part Number | Gas | Symbol | % Vol | PPM | Balance | Volume (liters) | Ship Weight |
|-------------|----------------|--------|-------|-------|---------|-----------------|-------------------|
| 006468-017 | Carbon Dioxide | CO2 | 1 | 10000 | N2 | 103 | 11.5 lb (5.23 kg) |
| | Nitrogen | N2 | 100 | Pure | N/A | 103 | |

PIRECL CO₂ Kit Replacement Cylinders

| Part Number | Gas | Symbol | % Vol | PPM | Balance | Volume (liters) | Ship Weight |
|-------------|----------------|--------|-------|-------|---------|-----------------|----------------|
| 227117-020 | Carbon Dioxide | CO2 | 1 | 10000 | N2 | 103 | 1 lb (0.45 kg) |
| 227117-022 | Nitrogen | N2 | 100 | Pure | N/A | 103 | 1 lb (0.45 kg) |

TOXICS

FlexVu® UD10 Universal Display (for Toxics)



FlexVu UD10 Universal Display (Spec Sheet: 90-1200) is recommended for applications where a gas detector with digital read-out of detected gas levels are required. The FlexVu UD10 Universal Display Unit is designed for use with various Det-Tronics toxic gas sensor/transmitters such as GT3000, NTMOS or C706x. The display unit is designed and approved as a stand-alone controller and performs all the functions of a gas controller.

- Compliance to ISA-92.0.01 Part 1 performance standard
- Division Approval Ratings: FM and CSA
- Zone Approval Ratings: FM, CSA, ATEX, and IECEx
- DNV type approval - maritime/offshore
- Eagle Quantum Premier model
- Universal design supports a variety of Det-Tronics sensors/detectors
- Non-intrusive menu allows device configuration and calibration without de-classifying the hazardous area
- **Continuously displays gas level, gas type, and units measured**
- Data logger for event time and date stamping
- Heated backlit display
- Relay, modbus, and linear isolated/non-isolated 4-20 mA output with HART, **configurable 4-20 mA output loop monitoring**
- IP66 rated

FlexVu UD10 Model Matrix

| MODEL | DESCRIPTION | |
|-------|------------------------|----------------------------|
| UD10 | Universal Display Unit | |
| | TYPE | MATERIAL |
| | A | Aluminum |
| | S | Stainless Steel (316) |
| | TYPE | THREAD TYPE |
| | 5M | 5 Port, Metric M25 |
| | 5N | 5 Port, 3/4" NPT |
| | TYPE | OUTPUTS |
| | 25 | Relay, 4-20mA, RS485, HART |
| | 28 | EQP / DCU Emulator |
| | TYPE | APPROVALS* |
| | B | INMETRO (BRAZIL) |
| | S | SIL |
| | T | SIL/FM/CSA/ATEX/IECEX |
| | W | FM/CSA/ATEX/IECEX |
| | TYPE | CLASSIFICATION (Div/Zone) |
| | 2 | Ex d (Flameproof) |

* Type Approvals can use one or more letters to designate the approvals of the product.

FlexVu UD10 Universal Display - Toxics

| Model | Part Number | Material | Threads | Relay 4-20 RS485 HART | EQP-DCU Emulator | Cond. Board | FM/CSA/ATEX/IECEX | SIL 2 |
|-------------------------------------------------------------------------------|-------------|----------|---------|-----------------------|------------------|-------------|-------------------|-------|
| UD10A5M25T2 | 010765-001 | AL | M25 | X | | | X | X |
| UD10A5N25T2 | 010765-002 | AL | 3/4 NPT | X | | | X | X |
| UD10S5M25T2 | 010765-003 | 316 SS | M25 | X | | | X | X |
| UD10S5N25T2 | 010765-004 | 316 SS | 3/4 NPT | X | | | X | X |
| UD10A5M28W2 | 010765-005 | AL | M25 | | X | | X | |
| UD10A5N28W2 | 010765-006 | AL | 3/4 NPT | | X | | X | |
| UD10S5M28W2 | 010765-007 | 316 SS | M25 | | X | | X | |
| UD10S5N28W2 | 010765-008 | 316 SS | 3/4 NPT | | X | | X | |
| Ship Weight: Aluminum = 4.2lb (1.9kg) Stainless Steel = 10.5lb (4.8kg) | | | | | | | | |

FlexVu UD10 Universal Display - Toxics - Brazil

| Model | Part Number | Material | Threads | Relay 4-20 RS485 HART | EQP-DCU Emulator | Cond. Board | INMETRO | SIL 2 |
|-------------------------------------------------------------------------------|-------------|----------|---------|-----------------------|------------------|-------------|---------|-------|
| UD10A5M25SB2 | 010765-081 | AL | M25 | X | | | X | X |
| UD10A5N25SB2 | 010765-082 | AL | 3/4 NPT | X | | | X | X |
| UD10S5M25SB2 | 010765-083 | 316 SS | M25 | X | | | X | X |
| UD10S5N25SB2 | 010765-084 | 316 SS | 3/4 NPT | X | | | X | X |
| UD10A5N28B2 | 010765-086 | AL | 3/4 NPT | | X | | X | |
| UD10S5M28B2 | 010765-087 | 316 SS | M25 | | X | | X | |
| UD10S5N28B2 | 010765-088 | 316 SS | 3/4 NPT | | X | | X | |
| Ship Weight: Aluminum = 4.2lb (1.9kg) Stainless Steel = 10.5lb (4.8kg) | | | | | | | | |

TOXICS

FlexVu UD10 Spare Modules

| Part Number | Description | Output | Ship Weight |
|-------------|---------------------|--------------|----------------|
| 010569-001 | UD10 Display Module | Relay/4-20mA | 1 lb (0.45 kg) |
| 010535-001 | UD10 Display Module | EQP-DCU | 1 lb (0.45 kg) |

FlexVu UD10 Accessories

| Part Number | Description | Ship Weight |
|-------------|--------------------------------------------------------|-----------------|
| 009700-001 | Magnetic Tool | <1 lb (0.45 kg) |
| 014019-001 | Gas Inspector 11 CD | <1 lb (0.45 kg) |
| 014020-001 | W6300G1006 Gas Inspector 11 Kit (includes CD) | 1 lb (0.45 kg) |
| 102988-002 | Plug, 5.0mm, 6 Position - P2 | <1 lb (0.45 kg) |
| 102988-026 | Plug, 5.0mm, 3 Position - P1 (J10, CGS) | <1 lb (0.45 kg) |
| 102988-028 | Plug, 5.0mm, 5 Position - (J3, CGS) | <1 lb (0.45 kg) |
| 103726-002 | Plug, 3.5mm, 3 Position - J2 | <1 lb (0.45 kg) |
| 103726-004 | Plug, 3.5mm, 5 Position - J3 | <1 lb (0.45 kg) |
| 103726-011 | Plug, 3.5mm, 12 Position - J4 | <1 lb (0.45 kg) |
| 000609-033 | 2" Pipe Mt U Bolt Kit,SS - UD10/20 & J Box, Incl. Hdw. | <1 lb (0.45 kg) |
| 000609-034 | 4" Pipe Mt U Bolt Kit,SS - UD10/20 & J Box, Incl. Hdw. | 2.5 lb (1.3 kg) |

Stop Plugs and Reducers

| ITEM NUMBER | STYLE | MATERIAL | OVERALL LENGTH (mm) | THREAD TYPE | HEX SIZE |
|-------------|---------------------|-----------------|---------------------|-------------|----------|
| 101197-001 | TYPE A STOP PLUG | ALUMINUM | 14.8 | 3/4 NPT | 12 |
| 101197-002 | TYPE A STOP PLUG | ALUMINUM | 14.5 | 1/2 NPT | 10 |
| 101197-003 | DOME HEAD STOP PLUG | STAINLESS STEEL | 21.5 | M25 | 12 |
| 101197-004 | TYPE A STOP PLUG | STAINLESS STEEL | 14.8 | 3/4 NPT | 12 |
| 101197-005 | DOME HEAD STOP PLUG | ALUMINUM | 21.5 | M25 | 12 |
| 101197-006 | DOME HEAD STOP PLUG | ALUMINUM | 21.5 | M20 | 10 |
| 101197-007 | DOME HEAD STOP PLUG | STAINLESS STEEL | 21.5 | M20 | 10 |
| 101197-008 | DOME HEAD STOP PLUG | NICKEL BRASS | 21.5 | M20 | 10 |
| 101197-009 | DOME HEAD STOP PLUG | NICKEL BRASS | 21.5 | M25 | 12 |
| 101197-010 | TYPE A STOP PLUG | NICKEL BRASS | 14.8 | 3/4 NPT | 12 |
| 101197-011 | TYPE A STOP PLUG | NICKEL BRASS | 14.5 | 1/2 NPT | 10 |
| 101197-012 | TYPE A STOP PLUG | STAINLESS STEEL | 14.5 | 1/2 NPT | 10 |
| 101197-501 | IP WASHER | NYLON | - | M20 | - |
| 101197-502 | IP WASHER | NYLON | - | M25 | - |
| 101197-503 | IP WASHER | TEFLON PTFE | - | M20 | - |
| 101197-504 | IP WASHER | TEFLON PTFE | - | M25 | - |
| 102804-001 | REDUCER | ALUMINUM | - | M25 to M20 | - |
| 102804-003 | REDUCER | STAINLESS STEEL | - | M25 to M20 | - |

Ship Weight: 1/2 NPT = 0.07lb (0.030kg), 3/4 NPT = 0.11lb (0.05kg), M20 = 0.14lb (0.062kg), M25 = 0.28lb (0.125 kg)
 Available Stop Plug Approvals: ATEX, IECEx, CEC, NEC, EAC, INMETRO, SAC, UKRAINE, CCoE, ABS, LLOYD'S, RMRS

*TYPE 4 and IP66 rating requires addition of Teflon tape

**Metric threaded stop plugs are fitted with silicone O-Rings

***For silicone sensitive applications the silicone O-Ring can be removed from Metric stop plugs and fitted with an IP washer



Dome Head Stop Plug - Nickel Brass



Type A Stop Plug - Nickel Brass

TOXICS

FlexVu® UD20 Universal Display



FlexVu UD20 Universal Display (Spec Sheet: 90-1201 - Explosion-proof Model, 90-1205 - Intrinsically Safe Model) supports the GT3000 Series toxic gas detectors.

- Compliance to ANSI/ISA-60079-11 and ISA-92.0.01 Part 1 performance standard
- Division Approval Ratings: FM and CSA
- Zone Approval Ratings: FM, CSA, ATEX, and IECEx
- LCD display
- Non-intrusive automatic calibration
- Non-intrusive menu system
- Pass-through 4-20 mA output, HART
- Explosion-proof design
- IP66 rated
- **2 wire loop powered**
- **Certified Non-Interfering with GT3000 SIL model**

FlexVu UD20 Model Matrix

| MODEL | DESCRIPTION | | | | | | |
|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|---------------------------|----|---------------------------|----|----------------------------|
| UD20 | Universal Display Unit | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>MATERIAL</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>Aluminum</td> </tr> <tr> <td>S</td> <td>Stainless Steel (316)</td> </tr> </tbody> </table> | TYPE | MATERIAL | A | Aluminum | S | Stainless Steel (316) |
| TYPE | MATERIAL | | | | | | |
| A | Aluminum | | | | | | |
| S | Stainless Steel (316) | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>THREAD TYPE</th> </tr> </thead> <tbody> <tr> <td>5M</td> <td>5 Port, Metric M25</td> </tr> <tr> <td>5N</td> <td>5 Port, 3/4" NPT</td> </tr> </tbody> </table> | TYPE | THREAD TYPE | 5M | 5 Port, Metric M25 | 5N | 5 Port, 3/4" NPT |
| TYPE | THREAD TYPE | | | | | | |
| 5M | 5 Port, Metric M25 | | | | | | |
| 5N | 5 Port, 3/4" NPT | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>OUTPUTS</th> </tr> </thead> <tbody> <tr> <td>26</td> <td>Pass-Through 4-20mA, HART</td> </tr> </tbody> </table> | TYPE | OUTPUTS | 26 | Pass-Through 4-20mA, HART | | |
| TYPE | OUTPUTS | | | | | | |
| 26 | Pass-Through 4-20mA, HART | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>APPROVALS</th> </tr> </thead> <tbody> <tr> <td>B</td> <td>INMETRO (BRAZIL)</td> </tr> <tr> <td>W</td> <td>FM/CSA/ATEX/IECEx</td> </tr> </tbody> </table> | TYPE | APPROVALS | B | INMETRO (BRAZIL) | W | FM/CSA/ATEX/IECEx |
| TYPE | APPROVALS | | | | | | |
| B | INMETRO (BRAZIL) | | | | | | |
| W | FM/CSA/ATEX/IECEx | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>CLASSIFICATION (Div/Zone)</th> </tr> </thead> <tbody> <tr> <td>2</td> <td>Ex d (Flameproof)</td> </tr> <tr> <td>4</td> <td>Ex ia (intrinsically safe)</td> </tr> </tbody> </table> | TYPE | CLASSIFICATION (Div/Zone) | 2 | Ex d (Flameproof) | 4 | Ex ia (intrinsically safe) |
| TYPE | CLASSIFICATION (Div/Zone) | | | | | | |
| 2 | Ex d (Flameproof) | | | | | | |
| 4 | Ex ia (intrinsically safe) | | | | | | |

FlexVu UD20 Universal Display - FM/CSA/ATEX/IECEx

| Model | Part Number | Material | Threads | Pass-Through 4-20 HART | Ex d | Ex ia | FM/CSA/ATEX/IECEx |
|-------------|-------------|----------|---------|------------------------|------|-------|-------------------|
| UD20A5M26W2 | 009791-001 | AL | M25 | X | X | | X |
| UD20A5N26W2 | 009791-002 | AL | 3/4 NPT | X | X | | X |
| UD20S5M26W2 | 009791-003 | 316 SS | M25 | X | X | | X |
| UD20S5N26W2 | 009791-004 | 316 SS | 3/4 NPT | X | X | | X |
| UD20A5M26W4 | 009791-005* | AL | M25 | X | | X | X |
| UD20A5N26W4 | 009791-006* | AL | 3/4 NPT | X | | X | X |
| UD20S5M26W4 | 009791-007* | SS | M25 | X | | X | X |
| UD20S5N26W4 | 009791-008* | SS | 3/4 NPT | X | | X | X |

Ship Weight: Aluminum = 4.2lb (1.9kg) Stainless Steel = 10.5lb (4.8kg)

* Check with the factory for product availability

FlexVu UD20 Universal Display - Brazil

| Model | Part Number | Material | Threads | Pass-Through 4-20 HART | Ex d | INMETRO |
|-------------------------------------------------------------------------------|-------------|----------|---------|---------------------------|------|---------|
| UD20A5M26B2 | 009791-081 | AL | M25 | X | X | X |
| UD20A5N26B2 | 009791-082 | AL | 3/4 NPT | X | X | X |
| UD20S5M26B2 | 009791-083 | 316 SS | M25 | X | X | X |
| UD20S5N26B2 | 009791-084 | 316 SS | 3/4 NPT | X | X | X |
| Ship Weight: Aluminum = 4.2lb (1.9kg) Stainless Steel = 10.5lb (4.8kg) | | | | | | |

FlexVu UD20 Spares

| Part Number | Description | Pass-Through 4-20 / HART | Ship Weight |
|-------------|---------------------|-----------------------------|----------------|
| 009793-002 | UD20 Display Module | X | 1 lb (0.45 kg) |

FlexVu UD20 Accessories

| Part Number | Description | Ship Weight |
|-------------|--------------------------------|-----------------|
| 009700-001 | Magnetic Tool | <1 lb (0.45 kg) |
| 010253-001 | Kit, 250Ω Terminating Resistor | <1 lb (0.45 kg) |

TOXICS

Stop Plugs and Reducers

| ITEM NUMBER | STYLE | MATERIAL | OVERALL LENGTH (mm) | THREAD TYPE | HEX SIZE |
|-------------|---------------------|-----------------|---------------------|-------------|----------|
| 101197-001 | TYPE A STOP PLUG | ALUMINUM | 14.8 | 3/4 NPT | 12 |
| 101197-002 | TYPE A STOP PLUG | ALUMINUM | 14.5 | 1/2 NPT | 10 |
| 101197-003 | DOME HEAD STOP PLUG | STAINLESS STEEL | 21.5 | M25 | 12 |
| 101197-004 | TYPE A STOP PLUG | STAINLESS STEEL | 14.8 | 3/4 NPT | 12 |
| 101197-005 | DOME HEAD STOP PLUG | ALUMINUM | 21.5 | M25 | 12 |
| 101197-006 | DOME HEAD STOP PLUG | ALUMINUM | 21.5 | M20 | 10 |
| 101197-007 | DOME HEAD STOP PLUG | STAINLESS STEEL | 21.5 | M20 | 10 |
| 101197-008 | DOME HEAD STOP PLUG | NICKEL BRASS | 21.5 | M20 | 10 |
| 101197-009 | DOME HEAD STOP PLUG | NICKEL BRASS | 21.5 | M25 | 12 |
| 101197-010 | TYPE A STOP PLUG | NICKEL BRASS | 14.8 | 3/4 NPT | 12 |
| 101197-011 | TYPE A STOP PLUG | NICKEL BRASS | 14.5 | 1/2 NPT | 10 |
| 101197-012 | TYPE A STOP PLUG | STAINLESS STEEL | 14.5 | 1/2 NPT | 10 |
| 101197-501 | IP WASHER | NYLON | - | M20 | - |
| 101197-502 | IP WASHER | NYLON | - | M25 | - |
| 101197-503 | IP WASHER | TEFLON PTFE | - | M20 | - |
| 101197-504 | IP WASHER | TEFLON PTFE | - | M25 | - |
| 102804-001 | REDUCER | ALUMINUM | - | M25 to M20 | - |
| 102804-003 | REDUCER | STAINLESS STEEL | - | M25 to M20 | - |

Ship Weight: 1/2 NPT = 0.07lb (0.030kg), 3/4 NPT = 0.11lb (0.05kg), M20 = 0.14lb (0.062kg), M25 = 0.28lb (0.125 kg)
Available Stop Plug Approvals: ATEX, IECEx, CEC, NEC, EAC, INMETRO, SAC, UKRAINE, CCoE, ABS, LLOYD'S, RMRS

*TYPE 4 and IP66 rating requires addition of Teflon tape

**Metric threaded stop plugs are fitted with silicone O-Rings

***For silicone sensitive applications the silicone O-Ring can be removed from Metric stop plugs and fitted with an IP washer



Dome Head Stop Plug - Nickel Brass



Type A Stop Plug - Nickel Brass

Model STB Sensor Termination Box and Separation Kit



Model STB Series Sensor Termination Box / Separation Kit (Manual: 95-8655) includes a junction box, proper connector board, required hardware to enable proper mounting, and wiring of models GT3000 or any 4-20 mA device.

- Enables remote installation of sensor for optimum gas detection while offering easy calibration access to FlexVu UD10
- One Sensor Termination Box per sensor is required

STB Model Matrix

| MODEL | DESCRIPTION | | | | | | | | | | |
|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-------------------------|----|-----------------------------------------|----|-------------------------------------------|----|-------------|----|------------------|
| STB | Sensor Termination Box | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>COMPATIBILITY</th> </tr> </thead> <tbody> <tr> <td>7</td> <td>6 Terminal (for use with GT3000)</td> </tr> </tbody> </table> | TYPE | COMPATIBILITY | 7 | 6 Terminal (for use with GT3000) | | | | | | |
| TYPE | COMPATIBILITY | | | | | | | | | | |
| 7 | 6 Terminal (for use with GT3000) | | | | | | | | | | |
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| TYPE | MATERIAL | | | | | | | | | | |
| A | Aluminum | | | | | | | | | | |
| S | Stainless Steel (316) | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th># OF PORTS, THREAD TYPE</th> </tr> </thead> <tbody> <tr> <td>2M</td> <td>2 PORT, M20/25 at 90 degree orientation</td> </tr> <tr> <td>2N</td> <td>2 PORT, 3/4" NPT at 90 degree orientation</td> </tr> <tr> <td>5Y</td> <td>5 PORT, M25</td> </tr> <tr> <td>5N</td> <td>5 PORT, 3/4" NPT</td> </tr> </tbody> </table> | TYPE | # OF PORTS, THREAD TYPE | 2M | 2 PORT, M20/25 at 90 degree orientation | 2N | 2 PORT, 3/4" NPT at 90 degree orientation | 5Y | 5 PORT, M25 | 5N | 5 PORT, 3/4" NPT |
| TYPE | # OF PORTS, THREAD TYPE | | | | | | | | | | |
| 2M | 2 PORT, M20/25 at 90 degree orientation | | | | | | | | | | |
| 2N | 2 PORT, 3/4" NPT at 90 degree orientation | | | | | | | | | | |
| 5Y | 5 PORT, M25 | | | | | | | | | | |
| 5N | 5 PORT, 3/4" NPT | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>APPROVALS</th> </tr> </thead> <tbody> <tr> <td>B</td> <td>INMETRO (BRAZIL)</td> </tr> <tr> <td>W</td> <td>FM/CSA/ATEX/IECEX</td> </tr> </tbody> </table> | TYPE | APPROVALS | B | INMETRO (BRAZIL) | W | FM/CSA/ATEX/IECEX | | | | |
| TYPE | APPROVALS | | | | | | | | | | |
| B | INMETRO (BRAZIL) | | | | | | | | | | |
| W | FM/CSA/ATEX/IECEX | | | | | | | | | | |

TOXICS

Model STB Sensor Termination Boxes / Separation Kits

| Model | Part Number | Use With | Material | Ports* | Threads† | FM/CSA/ ATEX/ IECEX | INMETRO |
|----------------------------------------------------------------------------|-------------|--------------|----------|--------|----------|---------------------------|---------|
| STB7A5YW | 226365-601 | GT3000/NTMOS | AL | 5 | M25 | X | |
| STB7A5NW | 226365-602 | GT3000/NTMOS | AL | 5 | 3/4 NPT | X | |
| STB7S5YW | 226365-603 | GT3000/NTMOS | SS | 5 | M25 | X | |
| STB7S5NW | 226365-604 | GT3000/NTMOS | SS | 5 | 3/4 NPT | X | |
| STB7A2NW | 226365-605 | GT3000/NTMOS | AL | 2 | 3/4 NPT | X | |
| STB7A5NB | 226365-606 | GT3000/NTMOS | AL | 5 | 3/4 NPT | | X |
| STB7S5NB | 226365-607 | GT3000/NTMOS | SS | 5 | 3/4 NPT | | X |
| Ship Weight: Aluminum = 2.2lb (1.0kg) Stainless Steel = 3lb (1.4kg) | | | | | | | |

*"L" designates 90 degree conduit entry orientation, "ST" designates straight-thru orientation, "T" designates 3-port orientation

†If two numbers are listed, the first number is for detector entry and the second number is for field cabling

DISPLAYS AND CONTROLLERS

FlexVu® UD10 Universal Display



FlexVu UD10 Universal Display (Spec Sheet: 90-1200) is recommended for applications that require a gas detector with digital read-out of detected gas levels. The FlexVu UD10 Universal Display Unit is designed for use with various Det-Tronics gas sensor/transmitters. The display unit is designed and approved as a stand-alone device and performs all the functions of a gas controller.

- Compliance to ANSI/ISA-12.13.01-2000 performance standard
- Compliance to ISA-92.0.01 Part 1 performance standard
- Performance certified to FM 6320, CSA 22.2 #152, EN60079-29-1, and IEC60079-29-1
- Approved as a stand-alone combustible gas and low concentration toxic controller, when using the relay contacts
- Division Approval Ratings: FM and CSA
- Zone Approval Ratings: FM, CSA, ATEX, and IECEx
- Eagle Quantum Premier Model/DCU
- Universal design supports a variety of Det-Tronics sensors/detectors
- Non-intrusive menu allows device configuration and calibration without de-classifying the hazardous area
- Continuously displays gas level, gas type, and units measured
- Data logger for event time and date stamping
- Heated and backlit display
- Relay, modbus, and linear isolated/non-isolated 4-20 mA output with HART, configurable 4-20 mA output loop monitoring
- IP66 rated

FlexVu UD10 Model Matrix

| MODEL | DESCRIPTION | | | | | | | | | | |
|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----------------------------|---------|----------------------------|----|-----------------------|---|-----------------------|---|-------------------|
| UD10 | Universal Display Unit | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>MATERIAL</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>Aluminum</td> </tr> <tr> <td>S</td> <td>Stainless Steel (316)</td> </tr> </tbody> </table> | TYPE | MATERIAL | A | Aluminum | S | Stainless Steel (316) | | | | |
| TYPE | MATERIAL | | | | | | | | | | |
| A | Aluminum | | | | | | | | | | |
| S | Stainless Steel (316) | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>THREAD TYPE</th> </tr> </thead> <tbody> <tr> <td>5M</td> <td>5 Port, Metric M25</td> </tr> <tr> <td>5N</td> <td>5 Port, 3/4" NPT</td> </tr> </tbody> </table> | TYPE | THREAD TYPE | 5M | 5 Port, Metric M25 | 5N | 5 Port, 3/4" NPT | | | | |
| TYPE | THREAD TYPE | | | | | | | | | | |
| 5M | 5 Port, Metric M25 | | | | | | | | | | |
| 5N | 5 Port, 3/4" NPT | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>OUTPUTS</th> </tr> </thead> <tbody> <tr> <td>25</td> <td>Relay, 4-20mA, RS485, HART</td> </tr> <tr> <td>28</td> <td>EQP / DCU Emulator</td> </tr> </tbody> </table> | TYPE | OUTPUTS | 25 | Relay, 4-20mA, RS485, HART | 28 | EQP / DCU Emulator | | | | |
| TYPE | OUTPUTS | | | | | | | | | | |
| 25 | Relay, 4-20mA, RS485, HART | | | | | | | | | | |
| 28 | EQP / DCU Emulator | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>APPROVALS*</th> </tr> </thead> <tbody> <tr> <td>B</td> <td>INMETRO (BRAZIL)</td> </tr> <tr> <td>S</td> <td>SIL</td> </tr> <tr> <td>T</td> <td>SIL/FM/CSA/ATEX/IECEX</td> </tr> <tr> <td>W</td> <td>FM/CSA/ATEX/IECEX</td> </tr> </tbody> </table> | TYPE | APPROVALS* | B | INMETRO (BRAZIL) | S | SIL | T | SIL/FM/CSA/ATEX/IECEX | W | FM/CSA/ATEX/IECEX |
| TYPE | APPROVALS* | | | | | | | | | | |
| B | INMETRO (BRAZIL) | | | | | | | | | | |
| S | SIL | | | | | | | | | | |
| T | SIL/FM/CSA/ATEX/IECEX | | | | | | | | | | |
| W | FM/CSA/ATEX/IECEX | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>CLASSIFICATION (Div/Zone)</th> </tr> </thead> <tbody> <tr> <td>2</td> <td>Ex d (Flameproof)</td> </tr> </tbody> </table> | TYPE | CLASSIFICATION (Div/Zone) | 2 | Ex d (Flameproof) | | | | | | |
| TYPE | CLASSIFICATION (Div/Zone) | | | | | | | | | | |
| 2 | Ex d (Flameproof) | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>OPTIONAL CONDITIONING BOARD</th> </tr> </thead> <tbody> <tr> <td>(Blank)</td> <td>None</td> </tr> <tr> <td>C</td> <td>CGS</td> </tr> </tbody> </table> | TYPE | OPTIONAL CONDITIONING BOARD | (Blank) | None | C | CGS | | | | |
| TYPE | OPTIONAL CONDITIONING BOARD | | | | | | | | | | |
| (Blank) | None | | | | | | | | | | |
| C | CGS | | | | | | | | | | |

* Type Approvals can use one or more letters to designate the approvals of the product.

FlexVu UD10 Universal Display - FM/CSA/ATEX/IECEX

| Model | Part Number | Material | Threads | Relay 4-20 RS485 HART | EQP/DCU Emulator | Cond. Board | FM/CSA/ ATEX/IECEX | SIL 2 |
|-------------------------------------------------------------------------------|-------------|----------|---------|--------------------------|---------------------|----------------|-----------------------|-------|
| UD10A5M25T2 | 010765-001 | AL | M25 | X | | | X | X |
| UD10A5N25T2 | 010765-002 | AL | 3/4 NPT | X | | | X | X |
| UD10S5M25T2 | 010765-003 | 316 SS | M25 | X | | | X | X |
| UD10S5N25T2 | 010765-004 | 316 SS | 3/4 NPT | X | | | X | X |
| UD10A5M28W2 | 010765-005 | AL | M25 | | X | | X | |
| UD10A5N28W2 | 010765-006 | AL | 3/4 NPT | | X | | X | |
| UD10S5M28W2 | 010765-007 | 316 SS | M25 | | X | | X | |
| UD10S5N28W2 | 010765-008 | 316 SS | 3/4 NPT | | X | | X | |
| UD10A5M25W2C | 010254-001 | AL | M25 | X | | CGS | X | |
| UD10A5N25W2C | 010254-002 | AL | 3/4 NPT | X | | CGS | X | |
| UD10S5M25W2C | 010254-003 | 316 SS | M25 | X | | CGS | X | |
| UD10S5N25W2C | 010254-004 | 316 SS | 3/4 NPT | X | | CGS | X | |
| UD10A5M28W2C | 010254-005 | AL | M25 | | X | CGS | X | |
| UD10A5N28W2C | 010254-006 | AL | 3/4 NPT | | X | CGS | X | |
| UD10S5M28W2C | 010254-007 | 316 SS | M25 | | X | CGS | X | |
| UD10S5N28W2C | 010254-008 | 316 SS | 3/4 NPT | | X | CGS | X | |
| Ship Weight: Aluminum = 4.2lb (1.9kg) Stainless Steel = 10.5lb (4.8kg) | | | | | | | | |

DISPLAYS AND CONTROLLERS

FlexVu UD10 Universal Display - Brazil

| Model | Part Number | Material | Threads | Relay 4-20 RS485 HART | EQP/DCU Emulator | Cond. Board | INMETRO | SIL 2 |
|-------------------------------------------------------------------------------|-------------|----------|---------|--------------------------|---------------------|----------------|---------|-------|
| UD10A5M25SB2 | 010765-081 | AL | M25 | X | | | X | X |
| UD10A5N25SB2 | 010765-082 | AL | 3/4 NPT | X | | | X | X |
| UD10S5M25SB2 | 010765-083 | 316 SS | M25 | X | | | X | X |
| UD10S5N25SB2 | 010765-084 | 316 SS | 3/4 NPT | X | | | X | X |
| UD10A5N28B2 | 010765-086 | AL | 3/4 NPT | | X | | X | |
| UD10S5M28B2 | 010765-087 | 316 SS | M25 | | X | | X | |
| UD10S5N28B2 | 010765-088 | 316 SS | 3/4 NPT | | X | | X | |
| UD10A5M25B2C | 010254-081 | AL | M25 | X | | CGS | X | |
| UD10A5N25B2C | 010254-082 | AL | 3/4 NPT | X | | CGS | X | |
| UD10S5M25B2C | 010254-083 | 316 SS | M25 | X | | CGS | X | |
| UD10S5N25B2C | 010254-084 | 316 SS | 3/4 NPT | X | | CGS | X | |
| UD10A5N28B2C | 010254-086 | AL | 3/4 NPT | | X | CGS | X | |
| UD10S5M28B2C | 010254-087 | 316 SS | M25 | | X | CGS | X | |
| UD10S5N28B2C | 010254-088 | 316 SS | 3/4 NPT | | X | CGS | X | |
| Ship Weight: Aluminum = 4.2lb (1.9kg) Stainless Steel = 10.5lb (4.8kg) | | | | | | | | |

DISPLAYS AND CONTROLLERS

FlexVu UD10 Spare Modules

| Part Number | Description | Output | Ship Weight |
|-------------|---------------------|--------------|----------------|
| 010569-001 | UD10 Display Module | Relay/4-20mA | 1 lb (0.45 kg) |
| 010535-001 | UD10 Display Module | EQP-DCU | 1 lb (0.45 kg) |

FlexVu UD10 Accessories

| Part Number | Description | Ship Weight |
|-------------|--------------------------------------------------------|-----------------|
| 009700-001 | Magnetic Tool | <1 lb (0.45 kg) |
| 014019-001 | Gas Inspector 11 CD | <1 lb (0.45 kg) |
| 014020-001 | W6300G1006 Gas Inspector 11 Kit (includes CD) | 1 lb (0.45 kg) |
| 102988-002 | Plug, 5.0mm, 6 Position - P2 | <1 lb (0.45 kg) |
| 102988-026 | Plug, 5.0mm, 3 Position - P1 (J10, CGS) | <1 lb (0.45 kg) |
| 102988-028 | Plug, 5.0mm, 5 Position - (J3, CGS) | <1 lb (0.45 kg) |
| 103726-002 | Plug, 3.5mm, 3 Position - J2 | <1 lb (0.45 kg) |
| 103726-004 | Plug, 3.5mm, 5 Position - J3 | <1 lb (0.45 kg) |
| 103726-011 | Plug, 3.5mm, 12 Position - J4 | <1 lb (0.45 kg) |
| 000609-033 | 2" Pipe Mt U Bolt Kit,SS - UD10/20 & J Box, Incl. Hdw. | <1 lb (0.45 kg) |
| 000609-034 | 4" Pipe Mt U Bolt Kit,SS - UD10/20 & J Box, Incl. Hdw. | 2.5 lb (1.3 kg) |

Stop Plugs and Reducers

| ITEM NUMBER | STYLE | MATERIAL | OVERALL LENGTH (mm) | THREAD TYPE | HEX SIZE |
|-------------|---------------------|-----------------|---------------------|-------------|----------|
| 101197-001 | TYPE A STOP PLUG | ALUMINUM | 14.8 | 3/4 NPT | 12 |
| 101197-002 | TYPE A STOP PLUG | ALUMINUM | 14.5 | 1/2 NPT | 10 |
| 101197-003 | DOME HEAD STOP PLUG | STAINLESS STEEL | 21.5 | M25 | 12 |
| 101197-004 | TYPE A STOP PLUG | STAINLESS STEEL | 14.8 | 3/4 NPT | 12 |
| 101197-005 | DOME HEAD STOP PLUG | ALUMINUM | 21.5 | M25 | 12 |
| 101197-006 | DOME HEAD STOP PLUG | ALUMINUM | 21.5 | M20 | 10 |
| 101197-007 | DOME HEAD STOP PLUG | STAINLESS STEEL | 21.5 | M20 | 10 |
| 101197-008 | DOME HEAD STOP PLUG | NICKEL BRASS | 21.5 | M20 | 10 |
| 101197-009 | DOME HEAD STOP PLUG | NICKEL BRASS | 21.5 | M25 | 12 |
| 101197-010 | TYPE A STOP PLUG | NICKEL BRASS | 14.8 | 3/4 NPT | 12 |
| 101197-011 | TYPE A STOP PLUG | NICKEL BRASS | 14.5 | 1/2 NPT | 10 |
| 101197-012 | TYPE A STOP PLUG | STAINLESS STEEL | 14.5 | 1/2 NPT | 10 |
| 101197-501 | IP WASHER | NYLON | - | M20 | - |
| 101197-502 | IP WASHER | NYLON | - | M25 | - |
| 101197-503 | IP WASHER | TEFLON PTFE | - | M20 | - |
| 101197-504 | IP WASHER | TEFLON PTFE | - | M25 | - |
| 102804-001 | REDUCER | ALUMINUM | - | M25 to M20 | - |
| 102804-003 | REDUCER | STAINLESS STEEL | - | M25 to M20 | - |

Ship Weight: 1/2 NPT = 0.07lb (0.030kg), 3/4 NPT = 0.11lb (0.05kg), M20 = 0.14lb (0.062kg), M25 = 0.28lb (0.125 kg)
 Available Stop Plug Approvals: ATEX, IECEx, CEC, NEC, EAC, INMETRO, SAC, UKRAINE, CCoE, ABS, LLOYD'S, RMRS

*TYPE 4 and IP66 rating requires addition of Teflon tape

**Metric threaded stop plugs are fitted with silicone O-Rings

***For silicone sensitive applications the silicone O-Ring can be removed from Metric stop plugs and fitted with an IP washer



Dome Head Stop Plug - Nickel Brass



Type A Stop Plug - Nickel Brass

DISPLAYS AND CONTROLLERS



FlexVu® UD10 Universal Display Repair / Upgrade Kit

(Technical Bulletin: 76-1046) The UD10 Repair/Upgrade Kit allows field conversion of an existing U9500 Ininiti® Transmitter, Model 505 Transmitter, or Eagle Quantum Premier® Digital Communication Unit (DCU) to a FlexVu® UD10 Universal Display. The existing junction box base, along with the existing conduit and field wiring, can be left in place and do not need to be replaced.

FlexVu UD10 Upgrade Kit

| Model | Part Number | Material | Threads | Relay 4-20 RS485 HART | EQP/ DCU Emulator | Cond. Board | FM/ CSA/ ATEX/ IECEX | SIL 2 |
|--------------------------|-------------|----------|---------|--------------------------------|-------------------------|----------------|-------------------------------|-------|
| UPGRADE KIT UD10A5M25T2 | 010970-001 | AL | M25 | X | | | X | X |
| UPGRADE KIT UD10A5N25T2 | 010970-002 | AL | 3/4 NPT | X | | | X | X |
| UPGRADE KIT UD10S5M25T2 | 010970-003 | 316 SS | M25 | X | | | X | X |
| UPGRADE KIT UD10S5N25T2 | 010970-004 | 316 SS | 3/4 NPT | X | | | X | X |
| UPGRADE KIT UD10A5M28W2 | 010970-005 | AL | M25 | | X | | X | |
| UPGRADE KIT UD10A5N28W2 | 010970-006 | AL | 3/4 NPT | | X | | X | |
| UPGRADE KIT UD10S5M28W2 | 010970-007 | 316 SS | M25 | | X | | X | |
| UPGRADE KIT UD10S5N28W2 | 010970-008 | 316 SS | 3/4 NPT | | X | | X | |
| UPGRADE KIT UD10S5N25W2C | 010971-004 | 316 SS | 3/4 NPT | X | | CGS | X | |
| UPGRADE KIT UD10A5M28W2C | 010971-005 | AL | M25 | | X | CGS | X | |
| UPGRADE KIT UD10A5N28W2C | 010971-006 | AL | 3/4 NPT | | X | CGS | X | |
| UPGRADE KIT UD10S5M28W2C | 010971-007 | 316 SS | M25 | | X | CGS | X | |
| UPGRADE KIT UD10S5N28W2C | 010971-008 | 316 SS | 3/4 NPT | | X | CGS | X | |
| UPGRADE KIT UD10A5M25T2C | 010971-011 | AL | M25 | X | | CGS | X | X |
| UPGRADE KIT UD10A5N25T2C | 010971-012 | AL | 3/4/NPT | X | | CGS | X | X |
| UPGRADE KIT UD10S5M25T2C | 010971-013 | 316 SS | M25 | X | | CGS | X | X |
| UPGRADE KIT UD10S5N25T2C | 010971-014 | 316 SS | 3/4 NPT | X | | CGS | X | X |

Ship Weight: Aluminum = 3.5 lb (1.6 kg) Stainless Steel = 8.7 lb (3.9 kg)

FlexVu® UD20 Universal Display



FlexVu UD20 Universal Display (Spec Sheet: 90-1201 - Explosion-proof Model, 90-1205 - Intrinsically Safe Model) supports the GT3000 Series toxic gas detectors, and the PIRECL series combustible gas detectors.

- Compliance to ANSI/ISA-60079-11 and ISA-92.0.01 Part 1 performance standard
- Division Approval Ratings: FM and CSA
- Zone Approval Ratings: FM, CSA, ATEX, and IECEx
- LCD display
- Non-intrusive automatic calibration
- Non-intrusive menu system
- Linear 4-20 mA output with HART
- Explosion-proof design
- IP66 rated
- **2 wire loop powered**
- **Certified Non-Interfering with GT3000 SIL model and PIRECL SIL models**

FlexVu UD20 Model Matrix

| MODEL | DESCRIPTION | | | | | | |
|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|---------------------------|----|---------------------------|----|----------------------------|
| UD20 | Universal Display Unit | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>MATERIAL</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>Aluminum</td> </tr> <tr> <td>S</td> <td>Stainless Steel (316)</td> </tr> </tbody> </table> | TYPE | MATERIAL | A | Aluminum | S | Stainless Steel (316) |
| TYPE | MATERIAL | | | | | | |
| A | Aluminum | | | | | | |
| S | Stainless Steel (316) | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>THREAD TYPE</th> </tr> </thead> <tbody> <tr> <td>5M</td> <td>5 Port, Metric M25</td> </tr> <tr> <td>5N</td> <td>5 Port, 3/4" NPT</td> </tr> </tbody> </table> | TYPE | THREAD TYPE | 5M | 5 Port, Metric M25 | 5N | 5 Port, 3/4" NPT |
| TYPE | THREAD TYPE | | | | | | |
| 5M | 5 Port, Metric M25 | | | | | | |
| 5N | 5 Port, 3/4" NPT | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>OUTPUTS</th> </tr> </thead> <tbody> <tr> <td>26</td> <td>Pass-Through 4-20mA, HART</td> </tr> </tbody> </table> | TYPE | OUTPUTS | 26 | Pass-Through 4-20mA, HART | | |
| TYPE | OUTPUTS | | | | | | |
| 26 | Pass-Through 4-20mA, HART | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>APPROVALS</th> </tr> </thead> <tbody> <tr> <td>B</td> <td>INMETRO (BRAZIL)</td> </tr> <tr> <td>W</td> <td>FM/CSA/ATEX/IECEx</td> </tr> </tbody> </table> | TYPE | APPROVALS | B | INMETRO (BRAZIL) | W | FM/CSA/ATEX/IECEx |
| TYPE | APPROVALS | | | | | | |
| B | INMETRO (BRAZIL) | | | | | | |
| W | FM/CSA/ATEX/IECEx | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>CLASSIFICATION (Div/Zone)</th> </tr> </thead> <tbody> <tr> <td>2</td> <td>Ex d (Flameproof)</td> </tr> <tr> <td>4</td> <td>Ex ia (intrinsically safe)</td> </tr> </tbody> </table> | TYPE | CLASSIFICATION (Div/Zone) | 2 | Ex d (Flameproof) | 4 | Ex ia (intrinsically safe) |
| TYPE | CLASSIFICATION (Div/Zone) | | | | | | |
| 2 | Ex d (Flameproof) | | | | | | |
| 4 | Ex ia (intrinsically safe) | | | | | | |

FlexVu UD20 Universal Display - FM/CSA/ATEX/IECEx

| Model | Part Number | Material | Threads | Pass-Through 4-20 HART | Ex d | Ex ia | FM/CSA/ATEX/IECEx |
|-------------|-------------|----------|---------|------------------------|------|-------|-------------------|
| UD20A5M26W2 | 009791-001 | AL | M25 | X | X | | X |
| UD20A5N26W2 | 009791-002 | AL | 3/4 NPT | X | X | | X |
| UD20S5M26W2 | 009791-003 | 316 SS | M25 | X | X | | X |
| UD20S5N26W2 | 009791-004 | 316 SS | 3/4 NPT | X | X | | X |
| UD20A5M26W4 | 009791-005* | AL | M25 | X | | X | X |
| UD20A5N26W4 | 009791-006* | AL | 3/4 NPT | X | | X | X |
| UD20S5M26W4 | 009791-007* | SS | M25 | X | | X | X |
| UD20S5N26W4 | 009791-008* | SS | 3/4 NPT | X | | X | X |

Ship Weight: Aluminum = 4.2lb (1.9kg) Stainless Steel = 10.5lb (4.8kg)

* Check with the factory for product availability

DISPLAYS AND CONTROLLERS

FlexVu UD20 Universal Display - Brazil

| Model | Part Number | Material | Threads | Pass-Through 4-20 HART | Ex d | INMETRO |
|-------------------------------------------------------------------------------|-------------|----------|---------|---------------------------|------|---------|
| UD20A5M26B2 | 009791-081 | AL | M25 | X | X | X |
| UD20A5N26B2 | 009791-082 | AL | 3/4 NPT | X | X | X |
| UD20S5M26B2 | 009791-083 | 316 SS | M25 | X | X | X |
| UD20S5N26B2 | 009791-084 | 316 SS | 3/4 NPT | X | X | X |
| Ship Weight: Aluminum = 4.2lb (1.9kg) Stainless Steel = 10.5lb (4.8kg) | | | | | | |

FlexVu UD20 Spares

| Part Number | Description | Pass-Through 4-20 / HART | Ship Weight |
|-------------|---------------------|-----------------------------|----------------|
| 009793-002 | UD20 Display Module | X | 1 lb (0.45 kg) |

FlexVu UD20 Accessories

| Part Number | Description | Ship Weight |
|-------------|---------------------------------------------------------|-----------------|
| 009700-001 | Magnetic Tool | <1 lb (0.45 kg) |
| 010253-001 | Kit, 250Ω Terminating Resistor | <1 lb (0.45 kg) |
| 000609-033 | 2" Pipe Mt U Bolt Kit, SS - UD10/20 & J Box, Incl. Hdw. | <1 lb (0.45 kg) |
| 000609-034 | 4" Pipe Mt U Bolt Kit, SS - UD10/20 & J Box, Incl. Hdw. | 2.5 lb (1.3 kg) |

Stop Plugs and Reducers

| ITEM NUMBER | STYLE | MATERIAL | OVERALL LENGTH (mm) | THREAD TYPE | HEX SIZE |
|-------------|---------------------|-----------------|---------------------|-------------|----------|
| 101197-001 | TYPE A STOP PLUG | ALUMINUM | 14.8 | 3/4 NPT | 12 |
| 101197-002 | TYPE A STOP PLUG | ALUMINUM | 14.5 | 1/2 NPT | 10 |
| 101197-003 | DOME HEAD STOP PLUG | STAINLESS STEEL | 21.5 | M25 | 12 |
| 101197-004 | TYPE A STOP PLUG | STAINLESS STEEL | 14.8 | 3/4 NPT | 12 |
| 101197-005 | DOME HEAD STOP PLUG | ALUMINUM | 21.5 | M25 | 12 |
| 101197-006 | DOME HEAD STOP PLUG | ALUMINUM | 21.5 | M20 | 10 |
| 101197-007 | DOME HEAD STOP PLUG | STAINLESS STEEL | 21.5 | M20 | 10 |
| 101197-008 | DOME HEAD STOP PLUG | NICKEL BRASS | 21.5 | M20 | 10 |
| 101197-009 | DOME HEAD STOP PLUG | NICKEL BRASS | 21.5 | M25 | 12 |
| 101197-010 | TYPE A STOP PLUG | NICKEL BRASS | 14.8 | 3/4 NPT | 12 |
| 101197-011 | TYPE A STOP PLUG | NICKEL BRASS | 14.5 | 1/2 NPT | 10 |
| 101197-012 | TYPE A STOP PLUG | STAINLESS STEEL | 14.5 | 1/2 NPT | 10 |
| 101197-501 | IP WASHER | NYLON | - | M20 | - |
| 101197-502 | IP WASHER | NYLON | - | M25 | - |
| 101197-503 | IP WASHER | TEFLON PTFE | - | M20 | - |
| 101197-504 | IP WASHER | TEFLON PTFE | - | M25 | - |
| 102804-001 | REDUCER | ALUMINUM | - | M25 to M20 | - |
| 102804-003 | REDUCER | STAINLESS STEEL | - | M25 to M20 | - |

Ship Weight: 1/2 NPT = 0.07lb (0.030kg), 3/4 NPT = 0.11lb (0.05kg), M20 = 0.14lb (0.062kg), M25 = 0.28lb (0.125 kg)
Available Stop Plug Approvals: ATEX, IECEx, CEC, NEC, EAC, INMETRO, SAC, UKRAINE, CCoE, ABS, LLOYD'S, RMRS

*TYPE 4 and IP66 rating requires addition of Teflon tape

**Metric threaded stop plugs are fitted with silicone O-Rings

***For silicone sensitive applications the silicone O-Ring can be removed from Metric stop plugs and fitted with an IP washer



Dome Head Stop Plug - Nickel Brass



Type A Stop Plug - Nickel Brass

DISPLAYS AND CONTROLLERS

FlexVu® UD30 Universal Display



FlexVu UD30 Model ((90-1231-Specifications) is recommended for applications that require a gas detector with digital readout of detected gas levels as well as pass-through 0–20 mA and relay outputs. The UD30 is designed for use with Det-Tronics gas detectors such as the GT3000, PIRECL, CGS, ATX10, or LS2000, as well as generic linear 4–20 mA sensors. The display unit is designed and approved as a “stand alone” device and can perform functions of a gas controller.

Gas concentration, gas type, and units of measurement (%v/v, %LFL, ppm, etc.) are indicated on the digital display. Access to the local event logs and other display capabilities, such as calibration, is accomplished through four (4) magnetic buttons around the display.

Features:

- Universal design supports multiple Det-Tronics sensors or generic linear 4–20 mA sensors
- Local digital LCD continuously indicates gas level, gas type and units measured
- Backlit and heated display
- Non-intrusive calibration
- Rugged construction approved for use in classified hazardous areas
- Available in 316 stainless steel (shown) and black epoxy aluminum
- Internal magnetic switches provide a non-intrusive user interface which allows device configuration without de-classifying hazardous areas
- SIL 2 models certified to IEC61508 by exida®
- Logs provided for analysis and management include:
 - o Event: Include fault and alarm logs with runtime hours
 - o Calibration: With runtime hours
 - o Temperature: Two sets of minimum and maximum temperature logs with runtime hours

UD30 Model Matrix

| MODEL | DESCRIPTION | | | | | | |
|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----------------------------|----|--------------------------------------------|----|---------------------------------------------------|
| UD30 | FlexVu® UD30 Universal Display | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>DETECTOR HOUSING MATERIAL</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>ALUMINUM (STANDARD)</td> </tr> <tr> <td>S</td> <td>STAINLESS STEEL</td> </tr> </tbody> </table> | TYPE | DETECTOR HOUSING MATERIAL | A | ALUMINUM (STANDARD) | S | STAINLESS STEEL |
| TYPE | DETECTOR HOUSING MATERIAL | | | | | | |
| A | ALUMINUM (STANDARD) | | | | | | |
| S | STAINLESS STEEL | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>PORT</th> </tr> </thead> <tbody> <tr> <td>3</td> <td>3 Port, T-Configuration (STANDARD)</td> </tr> </tbody> </table> | TYPE | PORT | 3 | 3 Port, T-Configuration (STANDARD) | | |
| TYPE | PORT | | | | | | |
| 3 | 3 Port, T-Configuration (STANDARD) | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>THREAD</th> </tr> </thead> <tbody> <tr> <td>F</td> <td>Metric M20</td> </tr> <tr> <td>N</td> <td>3/4" NPT</td> </tr> </tbody> </table> | TYPE | THREAD | F | Metric M20 | N | 3/4" NPT |
| TYPE | THREAD | | | | | | |
| F | Metric M20 | | | | | | |
| N | 3/4" NPT | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>OUTPUT</th> </tr> </thead> <tbody> <tr> <td>12</td> <td>4-20 mA Pass-Through* / HART Pass-Through*</td> </tr> <tr> <td>13</td> <td>Relay, 4-20 mA Pass-Through* / HART Pass-Through*</td> </tr> </tbody> </table> | TYPE | OUTPUT | 12 | 4-20 mA Pass-Through* / HART Pass-Through* | 13 | Relay, 4-20 mA Pass-Through* / HART Pass-Through* |
| TYPE | OUTPUT | | | | | | |
| 12 | 4-20 mA Pass-Through* / HART Pass-Through* | | | | | | |
| 13 | Relay, 4-20 mA Pass-Through* / HART Pass-Through* | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>APPROVALS**</th> </tr> </thead> <tbody> <tr> <td>SA</td> <td>SIL/FM/CSA</td> </tr> <tr> <td>SE</td> <td>SIL/ATEX/IECEX</td> </tr> </tbody> </table> | TYPE | APPROVALS** | SA | SIL/FM/CSA | SE | SIL/ATEX/IECEX |
| TYPE | APPROVALS** | | | | | | |
| SA | SIL/FM/CSA | | | | | | |
| SE | SIL/ATEX/IECEX | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>CLASSIFICATION</th> </tr> </thead> <tbody> <tr> <td>2</td> <td>Division/Zone Ex d</td> </tr> </tbody> </table> | TYPE | CLASSIFICATION | 2 | Division/Zone Ex d | | |
| TYPE | CLASSIFICATION | | | | | | |
| 2 | Division/Zone Ex d | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>OPTIONAL CONDITIONING BOARD</th> </tr> </thead> <tbody> <tr> <td>C</td> <td>CGS</td> </tr> </tbody> </table> | TYPE | OPTIONAL CONDITIONING BOARD | C | CGS | | |
| TYPE | OPTIONAL CONDITIONING BOARD | | | | | | |
| C | CGS | | | | | | |

* The UD30 does not communicate via HART but will pass through, without interference, any HART signals present on the 4-20mA line. *The UD30 also passes through the 4-20mA detector input to the UD30 4-20mA output terminals.

** Type Approvals can use one or more letters to designate the approvals of the product.

DISPLAYS AND CONTROLLERS

FlexVu UD30 Universal Display - 3 port

| Model | Part Number | Material | Threads | 0-20mA | Relay, 0-20mA | FM/CSA | ATEX/IECEX | SIL 2 |
|-----------------------------------------------------------------------------|-------------|----------|---------|--------|------------------|--------|------------|-------|
| UD30A3N12SA2 | 014023-011 | AL | 3/4 NPT | X | | X | | X |
| UD30A3N12SE2 | 014023-012 | AL | 3/4 NPT | X | | | X | X |
| UD30A3N13SA2 | 014023-013 | AL | 3/4 NPT | | X | X | | X |
| UD30A3N13SE2 | 014023-014 | AL | 3/4 NPT | | X | | X | X |
| UD30A3F12SA2 | 014023-015 | AL | M20 | X | | X | | X |
| UD30A3F12SE2 | 014023-016 | AL | M20 | X | | | X | X |
| UD30A3F13SA2 | 014023-017 | AL | M20 | | X | X | | X |
| UD30A3F13SE2 | 014023-018 | AL | M20 | | X | | X | X |
| UD30S3N12SA2 | 014029-011 | 316 SS | 3/4 NPT | X | | X | | X |
| UD30S3N12SE2 | 014029-012 | 316 SS | 3/4 NPT | X | | | X | X |
| UD30S3N13SA2 | 014029-013 | 316 SS | 3/4 NPT | | X | X | | X |
| UD30S3N13SE2 | 014029-014 | 316 SS | 3/4 NPT | | X | | X | X |
| UD30S3F12SA2 | 014029-015 | 316 SS | M20 | X | | X | | X |
| UD30S3F12SE2 | 014029-016 | 316 SS | M20 | X | | | X | X |
| UD30S3F13SA2 | 014029-017 | 316 SS | M20 | | X | X | | X |
| UD30S3F13SE2 | 014029-018 | 316 SS | M20 | | X | | X | X |
| Ship Weight: Aluminum = 4.2lb (1.9kg) Stainless Steel = 13lb (5.9kg) | | | | | | | | |

FlexVu UD30 Universal Display - CGS - 3 port

| Model | Part Number | Material | Threads | 0-20mA | Relay, 0-20mA | FM/CSA | ATEX/IECEX | SIL 2 |
|-----------------------------------------------------------------------------|-------------|----------|---------|--------|------------------|--------|------------|-------|
| UD30A3N12SA2C | 014191-001 | AL | 3/4 NPT | X | | X | | X |
| UD30A3N12SE2C | 014191-002 | AL | 3/4 NPT | X | | | X | X |
| UD30A3N13SA2C | 014191-003 | AL | 3/4 NPT | | X | X | | X |
| UD30A3N13SE2C | 014191-004 | AL | 3/4 NPT | | X | | X | X |
| UD30A3F12SA2C | 014191-005 | AL | M20 | X | | X | | X |
| UD30A3F12SE2C | 014191-006 | AL | M20 | X | | | X | X |
| UD30A3F13SA2C | 014191-007 | AL | M20 | | X | X | | X |
| UD30A3F13SE2C | 014191-008 | AL | M20 | | X | | X | X |
| UD30S3N12SA2C | 014192-001 | 316 SS | 3/4 NPT | X | | X | | X |
| UD30S3N12SE2C | 014192-002 | 316 SS | 3/4 NPT | X | | | X | X |
| UD30S3N13SA2C | 014192-003 | 316 SS | 3/4 NPT | | X | X | | X |
| UD30S3N13SE2C | 014192-004 | 316 SS | 3/4 NPT | | X | | X | X |
| UD30S3F12SA2C | 014192-005 | 316 SS | M20 | X | | X | | X |
| UD30S3F12SE2C | 014192-006 | 316 SS | M20 | X | | | X | X |
| UD30S3F13SA2C | 014192-007 | 316 SS | M20 | | X | X | | X |
| UD30S3F13SE2C | 014192-008 | 316 SS | M20 | | X | | X | X |
| Ship Weight: Aluminum = 4.2lb (1.9kg) Stainless Steel = 13lb (5.9kg) | | | | | | | | |

DISPLAYS AND CONTROLLERS

FlexVu UD30 Universal Display - INMETRO - 3 port

| Model | Part Number | Material | Threads | 0-20mA | Relay, 0-20mA | Cond. Board | INMETRO | SIL 2 |
|-----------------------------------------------------------------------------|-------------|-----------------|----------|--------|---------------|-------------|---------|-------|
| UD30S3N12SB2 | 014029-211 | Stainless Steel | 3/4" NPT | X | | | X | X |
| UD30A3N12SB2 | 014023-211 | Aluminum | 3/4" NPT | X | | | X | X |
| UD30S3N13SB2 | 014029-213 | Stainless Steel | 3/4" NPT | | X | | X | X |
| UD30A3N13SB2 | 014023-213 | Aluminum | 3/4" NPT | | X | | X | X |
| UD30S3N12SB2C | 014192-201 | Stainless Steel | 3/4" NPT | X | | CGS | X | X |
| UD30A3N12SB2C | 014191-201 | Aluminum | 3/4" NPT | X | | CGS | X | X |
| UD30S3N13SB2C | 014192-203 | Stainless Steel | 3/4" NPT | | X | CGS | X | X |
| UD30A3N13SB2C | 014191-203 | Aluminum | 3/4" NPT | | X | CGS | X | X |
| Ship Weight: Aluminum = 4.2lb (1.9kg) Stainless Steel = 13lb (5.9kg) | | | | | | | | |

FlexVu UD30 Spare Modules

| Part Number | Description | Output | Ship Weight |
|-------------|---------------------------------|--------------|----------------|
| 014028-001 | UD30 DISPLAY MODULE | 0-20mA | 1 lb (0.45 kg) |
| 014028-002 | UD30 DISPLAY MODULE WITH RELAYS | Relay/0-20mA | 1 lb (0.45 kg) |

FlexVu UD30 CGS Replacement Parts

| Part Number | Description | Ship Weight |
|-------------|--------------------------------|------------------|
| 014560-001 | UD30 TO UD30CGS CONVERSION KIT | <1 lb (<0.45 kg) |

FlexVu UD30 Accessories

| Part Number | Description | Ship Weight |
|-------------|--------------------------------|------------------|
| 014128-001 | U-MOUNT FOR UD30 4" POLE | 1 lb (0.45 kg) |
| 014128-002 | U-MOUNT FOR UD30 2" POLE | 0.75 lb (0.3 kg) |
| 014123-001 | SUN SHADE, UD10, UD30 | 5 lbs (2.27 kg) |
| 014064-001 | KIT, UD30 TO U9500 ADAPTER PLT | 1.75 lb (0.8 kg) |

FlexVu UD30 Spare Terminal Plugs

| Part Number | Description | For Use With | Ship Weight (kg) | |
|-------------|--------------------------------|-------------------------------|------------------|---------|
| 104486-005 | PLUG EURO 5MM RGHT ANG 5POS | UD30 Display J6 - Sensor Plug | <1 lb | (<0.45) |
| 104486-007 | PLUG EURO 5MM RGHT ANG 7POS | UD30 Display J5 - Main Plug | <1 lb | (<0.45) |
| 104486-009 | PLUG EURO 5MM RGHT ANG 9POS | UD30 Display J1 - Relay Board | <1 lb | (<0.45) |
| 102988-028 | PLUG,VERT.,W/CLIP,5.0MM, 5 POS | CTX / UD30 CGS Board - J1 | <1 lb | (<0.45) |
| 102988-026 | PLUG,VERT.,W/CLIP,5.0MM, 3 POS | CTX / UD30 CGS Board - J3 | <1 lb | (<0.45) |
| 103725-002 | HEADER VERT.,3.5MM,3-PIN | CTX / UD30 CGS Board - J2 | <1 lb | (<0.45) |

Stop Plugs and Reducers

| ITEM NUMBER | STYLE | MATERIAL | OVERALL LENGTH (mm) | THREAD TYPE | HEX SIZE |
|-------------|---------------------|-----------------|---------------------|-------------|----------|
| 101197-001 | TYPE A STOP PLUG | ALUMINUM | 14.8 | 3/4 NPT | 12 |
| 101197-002 | TYPE A STOP PLUG | ALUMINUM | 14.5 | 1/2 NPT | 10 |
| 101197-003 | DOME HEAD STOP PLUG | STAINLESS STEEL | 21.5 | M25 | 12 |
| 101197-004 | TYPE A STOP PLUG | STAINLESS STEEL | 14.8 | 3/4 NPT | 12 |
| 101197-005 | DOME HEAD STOP PLUG | ALUMINUM | 21.5 | M25 | 12 |
| 101197-006 | DOME HEAD STOP PLUG | ALUMINUM | 21.5 | M20 | 10 |
| 101197-007 | DOME HEAD STOP PLUG | STAINLESS STEEL | 21.5 | M20 | 10 |
| 101197-008 | DOME HEAD STOP PLUG | NICKEL BRASS | 21.5 | M20 | 10 |
| 101197-009 | DOME HEAD STOP PLUG | NICKEL BRASS | 21.5 | M25 | 12 |
| 101197-010 | TYPE A STOP PLUG | NICKEL BRASS | 14.8 | 3/4 NPT | 12 |
| 101197-011 | TYPE A STOP PLUG | NICKEL BRASS | 14.5 | 1/2 NPT | 10 |
| 101197-012 | TYPE A STOP PLUG | STAINLESS STEEL | 14.5 | 1/2 NPT | 10 |
| 101197-501 | IP WASHER | NYLON | - | M20 | - |
| 101197-502 | IP WASHER | NYLON | - | M25 | - |
| 101197-503 | IP WASHER | TEFLON PTFE | - | M20 | - |
| 101197-504 | IP WASHER | TEFLON PTFE | - | M25 | - |
| 102804-001 | REDUCER | ALUMINUM | - | M25 to M20 | - |
| 102804-003 | REDUCER | STAINLESS STEEL | - | M25 to M20 | - |

Ship Weight: 1/2 NPT = 0.07lb (0.030kg), 3/4 NPT = 0.11lb (0.05kg), M20 = 0.14lb (0.062kg), M25 = 0.28lb (0.125 kg)
Available Stop Plug Approvals: ATEX, IECEx, CEC, NEC, EAC, INMETRO, SAC, UKRAINE, CCoE, ABS, LLOYD'S, RMRS

*TYPE 4 and IP66 rating requires addition of Teflon tape

**Metric threaded stop plugs are fitted with silicone O-Rings

***For silicone sensitive applications the silicone O-Ring can be removed from Metric stop plugs and fitted with an IP washer



Dome Head Stop Plug - Nickel Brass



Type A Stop Plug - Nickel Brass

DISPLAYS AND CONTROLLERS

Power Supplies



EQP21XXPS Power Supplies can be used as singular or duplex. The power supply is available in a DIN rail mount or panel mount configuration for ease of mounting. Power supplies should be sized to approximately 50% of the normal requirement or to local code requirements.

EQP21XX Power Supply

| Model | Part Number | Description | Ship Weight |
|-------------|-------------|--------------------------------|-----------------|
| EQP2120PS-B | 010988-001* | EQP2120PS-B 20A 120/220V PANEL | 3.7 lb (1.7 kg) |
| EQP2120PS | 010988-002 | EQP2120PS 20A 120/220V DIN | 3.7 lb (1.7 kg) |

*For FM approved system

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OVERVIEW

Note: Det-Tronics product videos can be found at: www.YouTube.com/@DetTronicsUSA/videos

Eagle Quantum Premier® System

The **Eagle Quantum Premier System** (Spec Sheet for the EQP Controller: 90-1148) is a combined fire and gas safety system that is globally approved for hazardous locations. It is a distributed releasing system and is certified for annunciation and releasing per FM Approvals FM 3010, UL864 (10th Edition), and NFPA 72: 2013. The EQP System is also certified to IEC61508 as SIL 2 capable. The system is intended for use in hazardous locations and is designed to meet the requirements of approval agencies from around the world. The system is approved by FM Approvals to 6320 and compliant to ANSI/ISA 12.13.1 and CSA 22.2 #152. It is also ATEX certified to EN60079-29-4, IEC 60079-29-4 as a combustible gas controller.

The system consists of a controller and a number of addressable microprocessor-based field devices. The controller coordinates system device configuration, monitoring, annunciation, and control, while the field devices communicate their status and alarm conditions to the controller.

The controller communicates with the field devices through a digital communications link referred to as the LON communications loop. As the name infers, the network topology is laid out as a loop that begins and ends at the controller. All of the field devices are connected into the communication loop. The communication loop is a specialized design to meet the requirements of a Signaling Line Circuit (SLC).

The LON communication loop offers several key advantages:

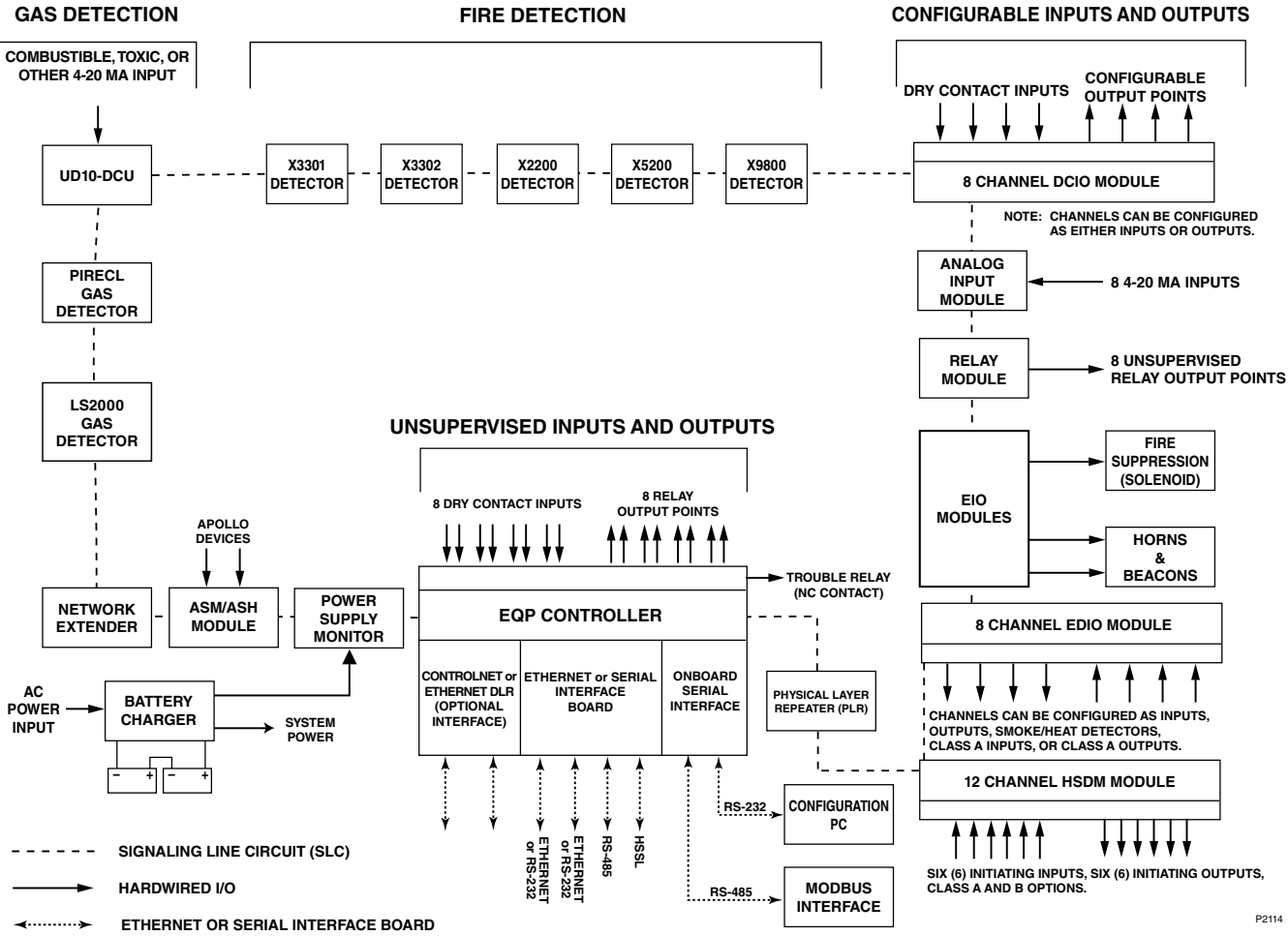
- Certified SIL 2 capable communication protocol
- ANSI/NFPA 72 Class X performance of SLC
- Expandability

The controller continuously executes the user logic programs that are programmed into the controller. The user logic programs are set up in the same fashion as IEC 61131-3 programmable logic programmed into programmable logic controllers (PLCs). Function block diagram logic gates are tied together with inputs, outputs, and other logic gates to perform a specific task. A number of tasks can be tied together to perform a system function.

Typical programmed functions include flame/gas voting, timing delays, timing executions, latching conditions, alarm and trouble notification, suppression control, condition control, and process shutdown notification.

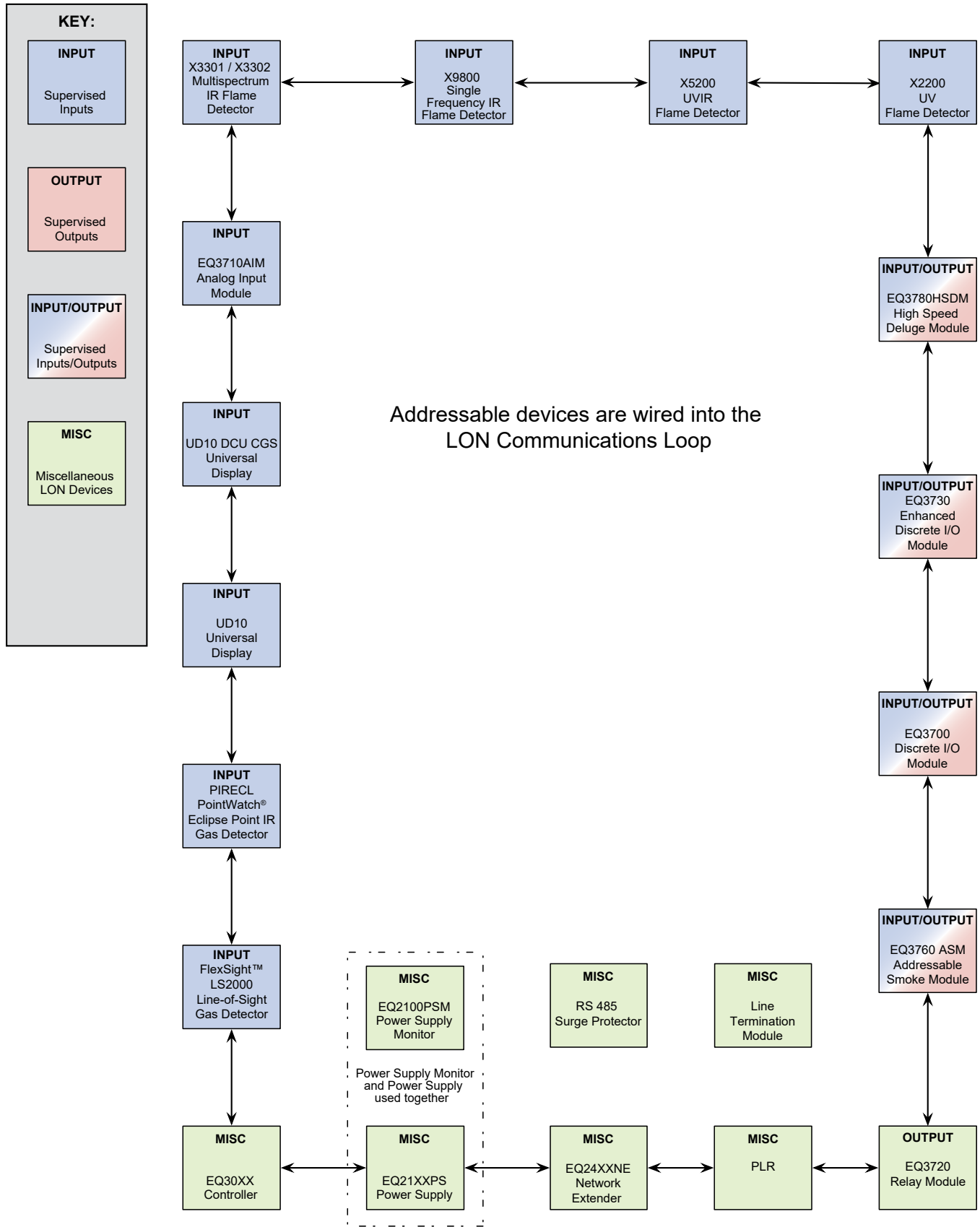
For complete system integration, the controller has the capability to communicate with other systems such as PLCs, distributed control systems (DCSs), and Supervisory Control and Data Acquisition (SCADA). Different communication protocols are supported, allowing the controller to communicate with other systems either directly or through communication gateways. The System Safety Software (S³) package supports an OPC server option that can publish system information to OPC clients.

- EQ3900 Series Cabinets offer a pre-engineered and listed solution
- Simplex and redundant operation
- Class I Div. 2 locations combined with Zone 2 rated devices Type n
- Deluge and pre-action release capability for fire suppression
- Agent release capability for fire suppression
- Supports up to 246 addressable field devices
- Fault-tolerant controller with redundancy setting
- Up to 32,800 feet (10,000 meters) of LON network communication wire
- Eagle Quantum Premier LON version for a variety of Det-Tronics flame and gas detectors
- Support for integrating third-party detectors (4-20 mA, "dry contact" type outputs or two wire smoke detectors) into EQP system
- Field devices have nonvolatile memory for alarm and calibration logging
- System and field device built-in system diagnostics
- IEC 61131-3 programmable logic
- Up to four Modbus RTU communication ports available
- ControlNet and DLR optional communication card (supports redundant communication channels)
- Compliance to FM 3010, NFPA 72, and NFPA 33
- Certified SIL 2 Capable models available
- US Coast Guard type approval
- Addressable Protocol (Apollo)
- Ultra High-Speed Deluge Systems (NFPA 15)



P2114

OVERVIEW



CONTROL ROOM

Model EQ3900 Approved Fire and Gas Releasing Cabinets

Eagle Quantum Premier Ordinary location and Hazardous Location Certified Fire and Gas Alarm Control Panel and Automatic Releasing for Pre-Action and Deluge Systems EQ3900

As part of providing a total systems solution to industrial clients around the world, Detector Electronics Corporation offers several certified systems enclosures for ordinary and hazardous locations. These enclosures can be configured to house various combinations of Eagle Quantum Premier® controllers and IO modules. Models are available for use in hazardous locations, with certifications that include Class I Division 2, and Zone 2 ratings. Regulations require that the enclosure and its contents be certified.

System Cabinets can also be custom configured to provide for many applications, and may maintain certifications depending on the design.

- Flexible and scalable for most applications
- Multiple communication protocols
- Approved for use with flame, smoke, heat, combustible gas, toxic gas, and oxygen detectors
- Simple wire installation
- Configurable device selection for the enclosure
- Electronics and wiring tested at the factory

Both Det-Tronics devices and systems are listed—an official designation that means the Authority Having Jurisdiction (AHJ) recognizes the systems as acceptable and the installed systems when installed according to the instruction manual, will pass regular inspections.



Eagle Quantum Premier Model Summary

| Series/Model | Dimensions (HxWxD) | Inputs/Outputs | EQP Controllers | EDIO/AIM/Relay Modules |
|--------------------------------|------------------------------------------|----------------|-----------------|------------------------|
| 2400 EQP EQ3900G | 24 x 20 x 8 in. (610 x 508 x 203mm) | 16** | 1 | Any combination of 2 |
| 3600 EQP EQ3900G | 36 x 24 x 8 in. (914 x 610 x 203mm) | 32** | Up to 2 | Any combination of 4 |
| 4800 EQP EQ3900G | 48 x 24 x 10 in. (1219 x 610 x 254mm) | 48** | Up to 2 | Any combination of 6 |
| 8300 EQP EQ3900G | 83 x 32 x 24 in. (2108 x 813 x 610mm) | 144** | Up to 2 | Any combination of 18 |
| 2400 RIO EQP EQ3900G | 24 x 20 x 8 in. (610 x 508 x 203mm) | 16** | 0 | Any combination of 2 |
| 3600 RIO EQP EQ3900G | 36 x 24 x 8 in. (914 x 610 x 203mm) | 32** | 0 | Any combination of 4 |
| 4800 RIO EQP EQ3900G | 48 x 24 x 10 in. (1219 x 610 x 254mm) | 48** | 0 | Any combination of 6 |

**All EQP safety system controllers accept up to 246 addressable nodes (flame & gas detectors, input/output modules). The quantity indicated represents the built-in input/output capacity of each module.

EQ3900 Series Systems

As part of providing a listed flame detection and gas releasing system, Detector Electronics Corporation offers several pre-engineered listed system options. Three standardized configurations are available to meet the needs of small, medium, and large applications. Each configuration can be customized to the needs of the application.

Each model includes an appropriately sized cabinet that houses an Eagle Quantum Premier Controller(s), Input Output Module(s), and field wiring termination terminals.

**EQ3900G, Series 2400**

- Red Painted (RAL 3020) Steel Enclosure, locking key handle door, fixed window, mounting feet, Type 4
- 24"(H) x 20"(W) x 8"(D) (610mm x 508mm x 203mm)
- Includes one (1) Eagle Quantum Premier (EQP) Safety System Controller
- Includes two (2) EQ37XX Input / Output modules
- Interposing terminals to accommodate field wiring
- FM/CSA approved for indoor, non-hazardous areas
- Permits compliance with NFPA 72

**EQ3900G, Series 3600**

- Red Painted (RAL 3020) Steel Enclosure, locking key handle door, fixed window, mounting feet, Type 4
- 36"(H) x 24"(W) x 8"(D) (914mm x 610mm x 203mm)
- Includes up to (2) Eagle Quantum Premier (EQP) Safety System Controllers
- Includes four (4) EQ37XX Input / Output modules
- Interposing terminals to accommodate field wiring
- FM/CSA approved for indoor, non-hazardous areas
- Permits compliance with NFPA 72

**EQ3900G, Series 4800**

- Red Painted (RAL 3020) Steel Enclosure, locking key handle door, fixed window, mounting feet, Type 4
- 48"(H) x 24"(W) x 10"(D) (1219mm x 610mm x 254mm)
- Includes up to (2) Eagle Quantum Premier (EQP) Safety System Controllers
- Includes six (6) EQ37XX Input / Output modules
- Interposing terminals to accommodate field wiring
- FM/CSA approved for indoor, non-hazardous areas
- Permits compliance with NFPA 72

**EQ3900G, Series 8300 (Not pictured)**

- Red Painted (RAL 3020) Steel Enclosure, locking key handle door, fixed window, floor standing, Type 4
- 83"(H) x 32"(W) x 32"(D) (2109mm x 813mm x 813mm)
- Includes up to (2) Eagle Quantum Premier (EQP) Safety System Controllers
- Accommodates up to eighteen (18) EQ37XX Input / Output modules
- Interposing terminals to accommodate field wiring
- FM/CSA approved for indoor, non-hazardous areas
- Permits compliance with NFPA 72
- Due to the increased size, capabilities and available options, these models typically require some level of customization

EQ3900 EQP System Enclosure Solutions

| Model No. | Part No. | Enclosure Size | EQP Controller Quantity | Enhanced Discrete Input Output (EDIO) Module Quantity | Relay Module Quantity |
|-------------------|-------------|-----------------------------------------|-------------------------|-------------------------------------------------------|-----------------------|
| EQ3900G, 2400 | 000392-1110 | 24"x20"x8" (610mm x 508mm x 203mm) | 1 | 1 | 1 |
| EQ3900G, 3600 | 000393-1310 | 36"x24"x8" (914mm x 610mm x 203mm) | 1 | 3 | 1 |
| EQ3900G, 3600 | 000393-2310 | 36"x24"x8" (914mm x 610mm x 203mm) | 2 | 3 | 1 |
| EQ3900G, 4800 | 000394-1510 | 48"x24"x10" (1219mm x 610mm x 254mm) | 1 | 5 | 1 |
| EQ3900G, 4800 | 000394-2510 | 48"x24"x10" (1219mm x 610mm x 254mm) | 2 | 5 | 1 |
| EQ3900G, 4800 | 000394-2600 | 48"x24"x10" (1219mm x 610mm x 254mm) | 2 | 6 | 0 |
| EQ3900G, 3600 RIO | 000393-0310 | 36"x24"x8" (914mm x 610mm x 203mm) | 0 | 3 | 1 |

*Other EQ3900 configurations are available that include different enclosure and module types.

Part Number Suffix (Dash Number) denotes the hardware configuration of the EQ3900G. Refer to the following configuration example:

A = Quantity of EQP Controller(s)
 B = Quantity of EQ3730 EDIO(s)
 C = Quantity of EQ3710 AIM(s)
 D = EQ3720 Quantity of Relay Module(s)

Example: **000394-1510 (EQ3900G, 4800)**

1 = One EQP Controller
 5 = Five EQ3730 EDIOs
 1 = One EQ3710 AIM Module
 0 = Zero EQ3720 Relay Modules

Please note that the available hardware configuration is dependent upon the size of the cabinet.

Contact Det-Tronics for additional information on building a system that meets your requirements.

Det-Tronics EQ3900 systems are listed—an official designation that means the Authority Having Jurisdiction (AHJ) recognizes the systems as acceptable and the installed systems pass regular inspections.

Choose Det-Tronics with confidence to engineer, manufacture and test turnkey systems built to your requirements.

CONTROL ROOM

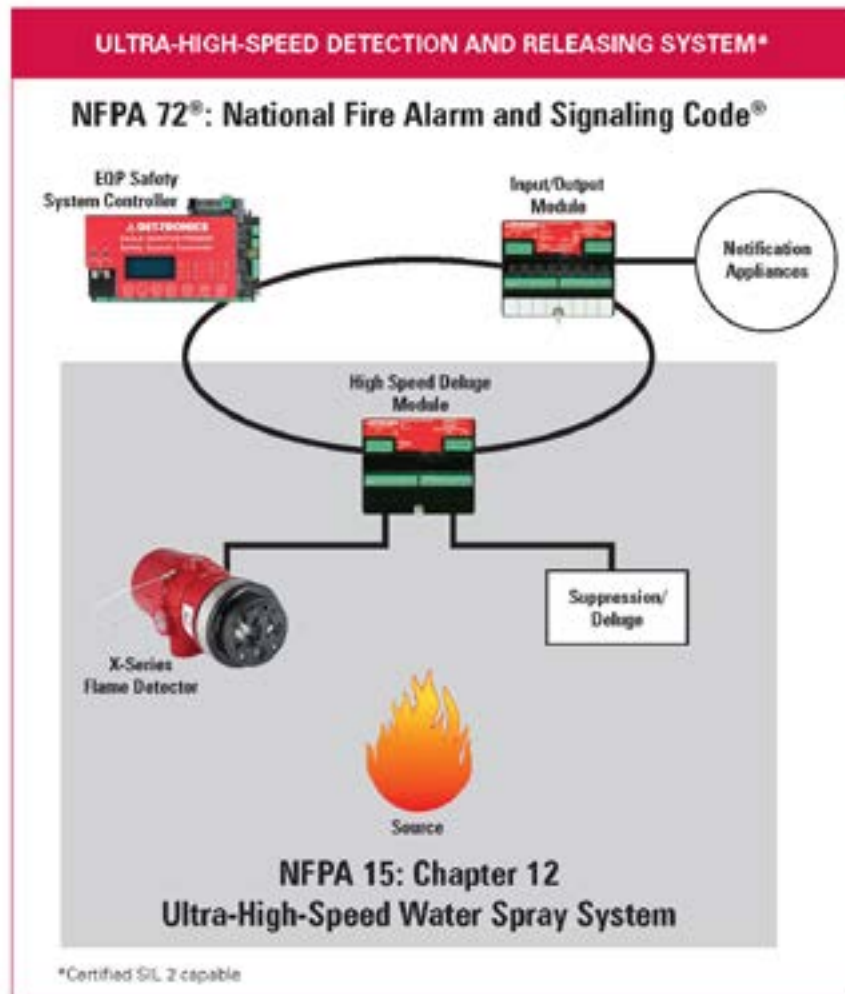
Ultra-High-Speed Flame Detection and Releasing System (Ultra FDRS)



As part of providing a listed flame detection and releasing system to the ultra-high-speed market segment, Detector Electronics Corporation offers several pre-engineered certified system options. Three standardized models are available to meet the needs of the small, medium, and large ultra-high-speed system user. These models utilize the proven EQ3900 Approved Fire and Gas Releasing Cabinet solution.

The Det-Tronics Ultra-High-Speed Flame Detection and Releasing System (Ultra FDRS) is an Eagle Quantum Premier® (EQP) based safety solution capable of functioning in challenging, high-hazard applications.

Each model includes an appropriately sized cabinet that houses an Eagle Quantum Premier® Controller, High Speed Deluge Module(s), Enhanced Discreet Input Output Module(s), physical solenoid disconnect switches, and field wiring termination terminals.



Ultra FDRS Models

**Ultra FDRS Model 2400**

- Red Painted (RAL 3020) Steel Enclosure, locking key handle door, fixed window, mounting feet, Type 4
- 24"(H) x 20"(W) x 8"(D) (610mm x 508mm x 203mm)
- Includes one (1) Eagle Quantum Premier Safety System Controller
- Accommodates up to six (6) inputs from flame detectors (Class B)
- Provides up to six (6) 24VDC ultra-high-speed outputs (Class B)
- Provides up to seven (7) non-high speed inputs or outputs
- Lockable Physical Solenoid Disconnect Switches
- Interposing terminals to accommodate field wiring
- FM/CSA approved for indoor, non-hazardous areas
- Permits compliance with NFPA 72 and NFPA 15 (Chapter 12)

**Ultra FDRS Model 3600**

- Red Painted (RAL 3020) Steel Enclosure, locking key handle door, fixed window, mounting feet, Type 4
- 36"(H) x 24"(W) x 8"(D) (914mm x 610mm x 203mm)
- Includes one (1) Eagle Quantum Premier Safety System Controller
- Accommodates up to eighteen (18) inputs from flame detectors (Class B)
- Provides up to eighteen (18) 24VDC ultra-high-speed outputs (Class B)
- Provides up to seven (7) non-high speed inputs or outputs
- Lockable Physical Solenoid Disconnect Switches
- Interposing terminals to accommodate field wiring
- FM/CSA approved for indoor, non-hazardous areas
- Permits compliance with NFPA 72 and NFPA 15 (Chapter 12)

**Ultra FDRS Model 4800**

- Red Painted (RAL 3020) Steel Enclosure, locking key handle door, fixed window, mounting feet, Type 4
- 48"(H) x 24"(W) x 10"(D)(1219mm x 610mm x 254mm)
- Includes one (1) Eagle Quantum Premier Safety System Controller
- Accommodates up to thirty (30) inputs from flame detectors (Class B)
- Provides up to thirty (30) 24VDC ultra-high-speed outputs (Class B)
- Provides up to seven (7) non-high speed inputs or outputs
- Lockable Physical Solenoid Disconnect Switches
- Interposing terminals to accommodate field wiring
- FM/CSA approved for indoor, non-hazardous areas
- Permits compliance with NFPA 72 and NFPA 15 (Chapter 12)

CONTROL ROOM

Ultra-High-Speed Flame Detection and Releasing System Remote Input Output

(Ultra FDRS RIO)



The Ultra FDRS RIO model allows for the remote installation of high speed deluge modules (HSDM) and enhanced discreet input output modules (EDIO). This concept allows for installation of the Ultra FDRS 2400, 3600, or 4800 models in a given area while the Ultra FDRS RIO is installed in a different area that is located physically closer to individual work areas. The Ultra FDRS RIO cabinet is ordered as needed in a quantity that is sized to the needs of the particular application.

Ultra FDRS Model RIO

- Red Painted (RAL 3020) Steel Enclosure, locking key handle door, mounting feet, Type 4
- 36"(H) x 24"(W) x 8"(D) (914mm x 610mm x 203mm)
- Accommodates up to eighteen (18) inputs from flame detectors (Class B)
- Provides up to eighteen (18) 24VDC ultra-high-speed outputs (Class B)
- Provides up to seven (7) non-high speed inputs or outputs
- Lockable Physical Solenoid Disconnect Switches
- Interposing terminals to accommodate field wiring
- FM/CSA approved for indoor, non-hazardous areas
- Permits compliance with NFPA 72 and NFPA 15 (Chapter 12)

Ultra-High-Speed Flame Detection and Releasing System (Ultra FDRS)

| Model | Part No. | Enclosure Size (mm) | Door Window | EQP Controller Quantity | HSDM Quantity | EDIO Quantity | Physical Disconnect Switch Quantity | Flame Detector Inputs | Ultra-High-Speed 24VDC Outputs | Non-High Speed I/O |
|-----------------|------------|-----------------------------------------|-------------|-------------------------|---------------|---------------|-------------------------------------|-----------------------|--------------------------------|--------------------|
| Ultra FDRS 2400 | 000852-011 | 24"x20"x8" (610mm x 508mm x 203mm) | Yes | 1 | 1 | 1 | 2 | 6 | 6 | 7 |
| Ultra FDRS 3600 | 000852-012 | 36"x24"x8" (914mm x 610mm x 203mm) | Yes | 1 | 3 | 1 | 6 | 18 | 18 | 7 |
| Ultra FDRS 4800 | 000852-013 | 48"x24"x10" (1219mm x 610mm x 254mm) | Yes | 1 | 5 | 1 | 10 | 30 | 30 | 7 |
| Ultra FDRS RIO | 000852-022 | 36"x24"x8" (914mm x 610mm x 203mm) | No | 0 | 3 | 1 | 6 | 18 | 18 | 7 |

*Other non-standard Ultra FDRS options are available. These non-standard options may incur higher costs and longer lead times. Contact Det-Tronics for additional information on building a system that meets your requirements.

Det-Tronics Ultra FDRS systems are listed—an official designation that means the Authority Having Jurisdiction (AHJ) recognizes the systems as acceptable and the installed systems pass regular inspections.

CONTROL ROOM

EQ3900G Power Distribution / Monitoring Enclosure Solution



This wall-mounted enclosure accommodates the Power Supply Monitor, terminal blocks, relays, circuit breakers, and fuses as physical space allows.

- Red Painted (RAL 3020) Steel Enclosure
- 20"(H) x 20"(W) x 8"(D) (508mm x 508mm x 203mm)
- Front Access Door with Locking Key Handle
- Passive Venting
- Type 4, IP66
- No Viewing Window or Operators
- One EQ2100 PSM Power Supply Monitor installed
- Provides required isolation for high voltage circuitry



Backup Battery Enclosure



This wall-mounted enclosure holds up to four 12 Volt, sealed lead acid, top-post, 100AH batteries.

- Red Painted (RAL 3020) Steel Enclosure
- 30" (H) x 30" (W) x 8" (D) (762mm x 762mm x 203mm)
- One shelf
- Latching front access door
- Filtered vents
- Type 1

Choose Det-Tronics with confidence to engineer, manufacture, and test turn-key systems that are built to your requirements.

CONTROL ROOM

Eagle Quantum Premier Controller - EQ30XX



Eagle Quantum Premier Controller EQ30XX (Spec Sheet: 90-1148) The Eagle Quantum Premier Controller is a microprocessor-based module that performs all the communication and control functions for the system. The controller can be configured in a simplex or redundant mode of operation. It includes all the required operator interface controls for a fire alarm and releasing system.

- Fire detection and alarm
- Fire suppression control
- Gas detection and alarm
- Available in certified enclosures
- Compliance to ANSI/ISA 60079-29-1 performance standard
- Performance certified to FM 6320
- Performance certified to EN/IEC 60079-29-1
- Simplex or redundant operation
- Certified SIL 2 capable models available
- Programmable logic
- Optional Dual Ethernet Ports (Modbus TCP/IP)
- Multiple serial ports (three RS-232 and two RS-485)
- Transformer isolation of network ports
- Utilizes Modbus RTU, Modbus TCP/IP
- DRL Device level ring EtherNet DLR
- Eight Programmable Relay Outputs
- Dedicated Fault Output
- Eight Digital Inputs
- Four-line, 20-character alphanumeric display
- LED status indicators
- Fault-tolerant communication loop
- Extensive built-in diagnostics
- Real-time clock
- Compact design
- U.S. Coast Guard type approval

EQ30XX Model Matrix

| MODEL | DESCRIPTION | | | | | | | | |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----------------|---|----------|---|-----------------------|---|-----------------------|
| EQ3001 | Eagle Quantum Premier Controller - 246 Nodes | | | | | | | | |
| EQ3016 | Eagle Quantum Premier Controller - 16 Nodes | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>MOUNTING OPTION</th> </tr> </thead> <tbody> <tr> <td>D</td> <td>Din Rail</td> </tr> <tr> <td>P</td> <td>Panel</td> </tr> </tbody> </table> | TYPE | MOUNTING OPTION | D | Din Rail | P | Panel | | |
| TYPE | MOUNTING OPTION | | | | | | | | |
| D | Din Rail | | | | | | | | |
| P | Panel | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>COM BOARD 1</th> </tr> </thead> <tbody> <tr> <td>N</td> <td>None</td> </tr> <tr> <td>D</td> <td>EtherNet DLR</td> </tr> </tbody> </table> | TYPE | COM BOARD 1 | N | None | D | EtherNet DLR | | |
| TYPE | COM BOARD 1 | | | | | | | | |
| N | None | | | | | | | | |
| D | EtherNet DLR | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>COM BOARD 2</th> </tr> </thead> <tbody> <tr> <td>N</td> <td>None</td> </tr> <tr> <td>E</td> <td>Ethernet IP</td> </tr> <tr> <td>S</td> <td>Serial Port Expansion</td> </tr> </tbody> </table> | TYPE | COM BOARD 2 | N | None | E | Ethernet IP | S | Serial Port Expansion |
| TYPE | COM BOARD 2 | | | | | | | | |
| N | None | | | | | | | | |
| E | Ethernet IP | | | | | | | | |
| S | Serial Port Expansion | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>APPROVALS*</th> </tr> </thead> <tbody> <tr> <td>S</td> <td>SIL</td> </tr> <tr> <td>T</td> <td>SIL/FM/CSA/ATEX/IECEX</td> </tr> <tr> <td>W</td> <td>FM/CSA/ATEX/IECEX</td> </tr> </tbody> </table> | TYPE | APPROVALS* | S | SIL | T | SIL/FM/CSA/ATEX/IECEX | W | FM/CSA/ATEX/IECEX |
| TYPE | APPROVALS* | | | | | | | | |
| S | SIL | | | | | | | | |
| T | SIL/FM/CSA/ATEX/IECEX | | | | | | | | |
| W | FM/CSA/ATEX/IECEX | | | | | | | | |

*Type Approvals can use one or more letters to designate the approvals of the product.

NOTE: Contact Customer Service when ordering replacement EQ30XX controllers for redundant systems.

CONTROL ROOM

EQ3001 Controller - SIL 2

| Model | Part Number | Mounting | Ethernet | Ethernet/ IP DLR | Serial Port Expansion/ Redundancy Port | SIL/FM/CSA/ ATEX/IECEX |
|-------------------------------------|-------------|----------|----------|---------------------|-------------------------------------------|---------------------------|
| EQ3001PNNT | 007609-072 | Panel | | | | X |
| EQ3001DNNT | 007609-073 | DIN | | | | X |
| EQ3001PNET | 007609-086 | Panel | X | | X | X |
| EQ3001DNET | 007609-087 | DIN | X | | X | X |
| EQ3001PNST | 007609-077 | Panel | | | X | X |
| EQ3001DNST | 007609-078 | DIN | | | X | X |
| EQ3001DDET | 007609-189 | DIN | X | X | X | X |
| EQ3001PNST-C* | 007609-277 | Panel | | | X | X |
| Ship Weight: 5.0 lb (2.3 kg) | | | | | | |

*US Coast Guard type approval under 46 CFR 161.002. For use with USCG approved system only.

EQ3016 Controller - SIL 2

| Model | Part Number | Mounting | Ethernet | Ethernet/ IP DLR | Serial Port Expansion/ Redundancy Port | SIL/FM/CSA/ ATEX/IECEX |
|-------------------------------------|-------------|----------|----------|---------------------|-------------------------------------------|---------------------------|
| EQ3016PNNT | 007609-472 | Panel | | | | X |
| EQ3016DNNT | 007609-473 | DIN | | | | X |
| EQ3016PNET | 007609-486 | Panel | X | | X | X |
| EQ3016DNET | 007609-487 | DIN | X | | X | X |
| EQ3016PNST | 007609-477 | Panel | | | X | X |
| EQ3016DNST | 007609-478 | DIN | | | X | X |
| EQ3016DDET | 007609-689 | DIN | X | X | X | X |
| Ship Weight: 5.0 lb (2.3 kg) | | | | | | |

EQ3001 Controller

| Model | Part Number | Mounting | Ethernet | Ethernet/ IP DLR | Serial Port Expansion/ Redundancy Port | FM/CSA/ ATEX/IECEX |
|-------------------------------------|-------------|----------|----------|---------------------|-------------------------------------------|-----------------------|
| EQ3001PNNW | 007609-062 | Panel | | | | X |
| EQ3001DNNW | 007609-063 | DIN | | | | X |
| EQ3001PNEW | 007609-082 | Panel | X | | X | X |
| EQ3001DNEW | 007609-083 | DIN | X | | X | X |
| EQ3001PNSW | 007609-067 | Panel | | | X | X |
| EQ3001DNSW | 007609-068 | DIN | | | X | X |
| EQ3001PCSW-C* | 007609-269 | Panel | | | X | X |
| EQ3001DDEW | 007609-185 | DIN | X | X | X | X |
| Ship Weight: 5.0 lb (2.3 kg) | | | | | | |

*US Coast Guard type approval under 46 CFR 161.002. For use with USCG approved system only.

EQ3016 Controller

| Model | Part Number | Mounting | Ethernet | Ethernet/ IP DLR | Serial Port Expansion/ Redundancy Port | FM/CSA/ ATEX/IECEX |
|-------------------------------------|-------------|----------|----------|---------------------|-------------------------------------------|-----------------------|
| EQ3016PNNW | 007609-462 | Panel | | | | X |
| EQ3016DNNW | 007609-463 | DIN | | | | X |
| EQ3016PNEW | 007609-482 | Panel | X | | X | X |
| EQ3016DNEW | 007609-483 | DIN | X | | X | X |
| EQ3016PNSW | 007609-467 | Panel | | | X | X |
| EQ3016DNSW | 007609-468 | DIN | | | X | X |
| EQ3016PNNW-C* | 007609-282 | Panel | | | | X |
| EQ3016DDEW | 007609-685 | DIN | X | X | X | X |
| Ship Weight: 5.0 lb (2.3 kg) | | | | | | |

*US Coast Guard type approval under 46 CFR 161.002. For use with USCG approved system only.

CONTROL ROOM

Redundancy Parts

| Part Number* | Description | Ship Weight |
|--------------|---------------------------------------------------------|------------------|
| 008981-001 | Controller to Controller High Speed Serial Cable (4 ft) | 1.0 lb (0.45 kg) |
| 008982-001 | EQ3LTM LON Termination Module (2 required per LON) | 1.0 lb (0.45 kg) |

*Parts can only be used with EQP Controllers with serial port expansion option.

Controller Communication Cables

| Part Number | Description | Length | | | Ship Weight |
|-------------|----------------------------------------------------|--------------------|-------------------|--------------------|------------------|
| | | 15 ft. (4.57 m) | 30 ft. (9.14m) | 50 ft. (15.24m) | |
| 007633-001 | Controller RS-232 Cable (DB9 Female PC Connection) | X | | | 1.0 lb (0.45 kg) |
| 007633-002 | Controller RS-232 Cable (DB9 Female PC Connection) | | X | | 1.0 lb (0.45 kg) |
| 007633-003 | Controller RS-232 Cable (DB9 Female PC Connection) | | | X | 1.6 lb (0.7 kg) |

Typical Order for a Redundant System

| Qty | Part Number | Description |
|-----|-------------|--------------------------------------------------------------------|
| 2 | 007609-078 | EQ3001DNST Controller |
| 1 | 008981-001 | Controller to Controller redundancy High Speed Serial Cable (4 ft) |
| 2 | 008982-001 | EQ3LTM LON Termination Module (2 required per LON) |



Interface Hardware RS 485 and Hart

| Part Number | Description | Ship Weight |
|-------------|---------------------------------|-----------------|
| 014008-001 | EQ2230RSP Surge Protector RS485 | 1.0 lb (.45 kg) |
| 008056-001 | HIM, HART Interface Module, EQP | 1.0 lb (.45 kg) |

Power Supplies



EQP21XXPS Power Supplies are used in pairs where the primary source of input supply is connected to one and the secondary source is connected to the other. A maximum of eight power supplies operated in parallel can be connected to each input supply. Both the primary and secondary sets must be individually capable of operating the system without the other supply. The secondary source is required to be continuously powered.

EQP21XX Power Supply

| Model | Part Number | Description | Ship Weight |
|-------------|-------------|--------------------------------|-----------------|
| EQP2120PS-B | 010988-001* | EQP2120PS-B 20A 120/220V PANEL | 3.7 lb (1.7 kg) |
| EQP2120PS | 010988-002 | EQP2120PS 20A 120/220V DIN | 3.7 lb (1.7 kg) |

*For FM approved system

NOTE: Requires a minimum of two supplies & one diode module per system. Also requires a GFM (below).



EQP2410 Converter serves as a DC voltage regulator for the secondary/back-up power supply source. It converts grounded DC input source into floating DC output power for ground fault monitoring capability.

EQP2410 Converter

| Model | Part Number | Description | Ship Weight |
|-------------|-------------|----------------------------|-----------------|
| EQP2410PS-P | 010892-001* | 10A 24VDC CONVERTER, PANEL | 2.7 lb (1.2 kg) |
| EQP2410PS | 010892-002 | 10A 24VDC CONVERTER, DIN | 2.7 lb (1.2 kg) |

*For FM approved system

NOTE: Converters can be used in conjunction with a power supply (above) but can only be used as a secondary supply.



Diode Module

| Model | Part Number | Description | Ship Weight |
|-------|-------------|--------------------------------|------------------|
| N/A | 009934-003* | DIODE REDUNDANCY MOD W/MTG BKT | 2.0 lb (0.90 kg) |
| N/A | 009934-004 | DIODE REDUNDANCY MOD DIN RAIL | 2.0 lb (0.90 kg) |

*For FM approved system

NOTE: Required for use with power supplies/converters listed above.



EQ2220GFM Ground Fault Monitor (Spec Sheet: 90-1134) provides ground fault monitoring in a system that includes reliable dual isolated 24 Vdc power. The output from the ground fault monitor is a contact closure in the presence of a ground fault. The ground fault monitor is DIN rail mountable and is intended to be mounted in the same enclosure as the controller.

Ground Fault Monitor (For use with power supplies above)

| Model | Part Number | Description | Ship Weight |
|------------|-------------|----------------------|-----------------|
| EQ2220GFM | 007941-001 | Ground Fault Monitor | 0.5 lb (0.2 kg) |
| EQ2220GFMR | 007941-901 | Ground Fault Monitor | 0.5 lb (0.2 kg) |

CONTROL ROOM



EQ3900RPS (Manual: 95-8745) The EQ3900RPS Remote Power Supply is an industrial power supply that accepts two independent AC inputs and produces 24 Vdc with up to 18 amperes output current. The EQ3900RPS remote power supply can be configured with various numbers of 24 Vdc power outputs, fuse monitoring, and status indicators. There are two designs for the EQ3900RPS depending upon where they will be located. One model is intended for use in hazardous locations, with certification for Class I, Division 1 and Class I, Division 2 per the National Electrical Code, and one model for ordinary locations.

| MODEL | DESCRIPTION | |
|-----------|-------------------------------|---------------------------------------------------------|
| EQ3900RPS | Remote LON-based Power Supply | |
| | TYPE | ENCLOSURE |
| | E | Explosion-proof (Class I, Division 1) FM Only |
| | G | Ordinary Location |
| | TYPE | 24 VDC POWER OUTPUTS (Notes 1 & 2) |
| | 1 | 1 24Vdc Power Output (18 Amp Fuses) |
| | 2 | 2 24Vdc Power Outputs (9 Amp Fuses) |
| | 3 | 3 24Vdc Power Outputs (6 Amp Fuses) |
| | TYPE | FUSE MONITORING (Notes 2 & 3) |
| | 0 | 0 Fuse Monitoring |
| | 1 | 1 Fuse Monitoring (Power Outputs: #1) |
| | 2 | 2 Fuse Monitoring (Power Outputs: #1 & #2) |
| | 3 | 3 Fuse Monitoring (Power Outputs: #1, #2, & #3) |
| | TYPE | INDICATIONS (More than one can be chosen) (Notes 3 & 5) |
| | N | No Indicator or Operator |
| | A | Power Present Indicator |
| | B | Power Trouble Indicator |
| | C | Ground Fault Indicator |
| | D | Ground Fault Test Operator |
| | TYPE | WINDOW |
| | N | No Window |
| | W | Window |

- NOTES:**
1. Maximum total current draw = 18 amperes. All power outputs have same fuse rating.
 2. Fuse monitoring by EQP only. No local indication.
 3. Consult factory if other configuration are desired.
 4. Consult factory for size and number of conduit entries.
 5. No ingress rating if operators are included.

EQ3900 RPS Power Supply

| Description | Part Number | Material | Entries | Class I, Div 1 | Approval |
|-------------|-------------|----------|----------|----------------|----------|
| EQ3900RPS | REQUEST | AL | Up to 12 | X | FM |
| EQ3900RPS | REQUEST | SS | Up to 12 | | FM/CSA |





Power Supply (Spec Sheet: 90-1134). Six approved power supply options are available:

- 10 Amp / 60HZ (EQ2110PS)*
- 30 Amp / 60HZ (EQ2130PS)*
- 75 Amp / 60HZ (EQ2175PS)*
- 10 Amp / 50HZ (EQ2111PS)*
- 30 Amp / 50HZ (EQ2131PS)*
- 75 Amp / 50HZ (EQ2176PS)*

Contact the factory for additional options and current certifications

*Requires the use of the Det-Tronics Power Supply Monitor, detailed below.

EQ21XX Power Supplies

| Model* | Part Number | Description | | | Ship Weight |
|----------|-------------|-------------|-------------|------|------------------|
| EQ2110PS | 000604-013 | 10A | 120VAC | 60HZ | 50 lb (25.0 kg) |
| EQ2130PS | 000604-014 | 30A | 120/208/220 | 60HZ | 115 lb (57.5 kg) |
| EQ2175PS | 000604-015 | 75A | 120/208/220 | 60HZ | 150 lb (75.0 kg) |
| EQ2111PS | 000604-034 | 10A | 220/240VAC | 50HZ | 50 lb (25.0 kg) |
| EQ2131PS | 000604-035 | 30A | 220/240VAC | 50HZ | 115 lb (57.5 kg) |
| EQ2176PS | 000604-036 | 75A | 220/240VAC | 50HZ | 150 lb (75.0 kg) |

*Requires use of EQ2100PSM Power Supply Monitor



EQ2100PSM Power Supply Monitor (Spec Sheet: 90-1134) is used in conjunction with any of the EQ21XX (p/n 000604-XXX) power supplies and backup batteries to provide an approved source of power for the Eagle Quantum Premier system. Since the power supply monitor resides on the communication loop (LON), any trouble condition related to system power will immediately be reported to the Operator Interface Station through the Local Control Unit. Status conditions being monitored include power supply failure, loss of AC power, loss of battery power, power ground fault, AC voltage, DC voltage, and battery changing current levels.

- Supports NFPA 72 Class X communication
- Monitors primary AC supply and battery integrity
- Compatible with 10, 30 and 75 amp output power supplies
- Field addressable
- FM approved and CSA Certified for use in Eagle Quantum
- Feet for panel mounting

Power Supply Monitor (For use with EQ21XX power supplies)

| Model | Part Number | Description | Ship Weight |
|-----------|-------------|----------------------|---------------|
| EQ2100PSM | 006979-001 | Power Supply Monitor | 5 lb (2.3 kg) |

*Enclosure not included

CONTROL ROOM



The **EQ38XX Power Distribution Module** (Manual: 95-8558) integrates isolation, conditioning, ground fault monitoring, and distribution to five outputs that power the controller, cabinet devices, and field devices. The PDM is designed to provide continuous power to the outputs by relying upon two independent 24 Vdc input power sources. One power source must be derived from a line power source and the other source must be from a backed-up power source.

- Automatic Resetting Overload Protection for field devices (no fuses to replace)
- Ground Fault Monitoring
- Visual LED indicators for power and each power input
- Visual LED indicators for ground faults
- Anodized aluminum heat sink
- Panel mount

Power Distribution Module

| Model | Part Number | Description | Ship Weight |
|-----------|-------------|---------------------------|---------------|
| EQ3800PDM | 007360-001 | Power Distribution Module | 4 lb (1.8 kg) |

Operator Interface Safety System Software



Safety System Software (S³). The Eagle Quantum Premier uses the safety system software to provide a user friendly, fully integrated, high performance package. The software provides convenient and accurate system configuration and status information including diagnostic and trouble shooting tools. An optional embedded OPC server provides additional flexibility.

The software database contains all of the information to easily configure the Eagle Quantum Premier system. All device information is presented in a series of user-friendly point configuration screens. Point display screens for each node are available to display detailed status information, recent alarms and calibration records.

In summary the software collects, tracks, displays, and distributes your safety system information while allowing intuitive operator input for command and control functions of these safety systems.

Operating System Requirements:

The S³ software suite is designed to run on an Intel® based computer with a minimum Core i5 processor. S3 is compatible with Windows 10 and Windows 11.

The Safety System Software has the following features:

- Configure field devices
- Program, simulate, monitor and document controller logic
- Review real time status through pre-built point displays
- An optional OPC Server license is available

Operating Interface Safety System Software

| Part Number* | Description | Ship Weight |
|--------------|------------------------------------------------------------------------------------------------------------|------------------|
| 007800-011 | Safety System Software configuration/runtime package 60 node version no driver , USB key. | 0.5 lb (0.23 kg) |
| 007800-013 | Safety System Software configuration/runtime package 250 node version no driver , USB key. | 0.5 lb (0.23 kg) |
| 007800-012 | Safety System Software configuration/runtime package 60 node version with OPC driver , USB key. | 0.5 lb (0.23 kg) |
| 007800-014 | Safety System Software configuration/runtime package 250 node version with OPC driver , USB key. | 0.5 lb (0.23 kg) |

NOTE: The 60 node version of S3 is recommended for the 16 node controller.

*It is strongly recommended that purchasers of S3 attend the appropriate training class:

Register at Det-Tronics University from the website: www.det-tronics.com

Package Includes:

- S³ Installation software
- 30 ft. serial cable with DB9 serial and EQP interface connectors
- 30 ft. Ethernet cable
- Licensed software key (resembles a USB drive)
- High speed USB serial adapter

Course 102: Advanced EQP Training

COURSE 102:

ADVANCED EQP (FOR CUSTOMERS AND DISTRIBUTORS)

This 3-day class is designed for System Integration Engineers, Designers, and Maintenance personnel. The curriculum will cover the Eagle Quantum Premier System hardware, software, configuration, logic programming, troubleshooting, maintenance, and design practices. This course does not apply to other standard flame and gas detection systems.

EQP Training

| Part Number | Description |
|--------------|------------------------------|
| TRAINING 102 | DET-U Course 102, EQP System |

Register at Det-Tronics University from the website: www.det-tronics.com

DEVICES

EQ3760 Addressable Smoke Module



The EQP **Addressable Smoke Module** (Spec Sheet: 90-1226) is designed to expand the input and output capability of the Det-Tronics EQP system.

The ASM is an interface device designed to provide continuous and automated fire protection. It ensures system operation through continuous supervision of system inputs/outputs and Local Operating Network/Signaling Line Circuit (LON/SLC) monitoring in the controller.

The ASM is located directly on the LON of the EQP system, with a loop of up to 100 addressable devices tied into the ASM. This allows the EQP controller to annunciate a fire alarm from either its own LON based I/O or from the ASM connected addressable smoke and heat detection loops.

System status can be determined using the troubleshooting procedures, Eagle Quantum Safety System Software (S³), and the status indicators on the module.



- Expands the capabilities of the Det-Tronics EQP system
- Class 1 Div. 2 locations combined with Zone 2 rated devices Type N
- Certified SIL 2 Capable
- Provides power and communications to 100 addressable devices
- Supports Apollo devices with XP95A, Discovery protocol over SLC
- ASM alarm and fault status are logged in the EQP controller
- LEDs for easy annunciation of power, faults and an active device on the loop
- Monitors single addressable devices
- Provides remote I/O capabilities via LON/SLC
- DIN rail or panel mounting
- Plug-in wiring connectors
- RFI and EMI hardened
- Smoke detectors are globally approved (see product data sheets)
- Option Intrinsically Safe detectors



EQ3760 ASM Model Matrix

| MODEL | DESCRIPTION | |
|--------|--------------------------------|-------------------|
| EQ3760 | Addressable Smoke Module (ASM) | |
| | TYPE | MOUNTING OPTION |
| | D | DIN Rail |
| | P | Panel |
| | TYPE | APPROVALS |
| | T | FM/CSA/ATEX/IECEX |

EQ3760 ASM Module

| Model | Part Number | Material | FM/CSA/ATEX/IECEX | Ship Weight |
|----------|-------------|----------|-------------------|---------------|
| EQ3760DT | 014050-001 | AL | X | 3 lb (1.4 kg) |
| EQ3760PT | 014050-002 | AL | X | 3 lb (1.4 kg) |

DEVICES

EQ3730 EDIO Enhanced Discrete Input/Output Module



EQ3730 EDIO Enhanced Discrete Input/Output Module (Spec Sheet: 90-1189)

The 8 Channel EDIO Module is specially designed to expand the input and output (I/O) capability of the Det-Tronics Eagle Quantum Premier System. The unit is designed to provide continuous and automated fire/gas protection while ensuring system operation through continuous supervision of system I/O and signaling line circuit (SLC). The EDIO module provides eight channels of configurable input or output points that can be configured as input/output, two-wire smoke/heat detector, Class A input, Class A output. Each input point can accept fire detection devices such as heat, smoke, or unitized flame detectors. Each output point can be configured for signaling or releasing output operation. Each channel on the module is provided with individual indicators for active and fault conditions.



- Monitors eight independent I/O channels
- IDC Class A or B wiring
- Class 1 Div. 2 locations combined with Zone 2 rated devices Type N
- Individual channels are configurable as an input/output/two-wire smoke/heat detectors/ Class A input/Class A output
- A smoke/heat channel can support up to 15 two-wire smoke and heat devices per channel
- For Class A input and output wiring two channels are required per Class A circuit
- Certified SIL 2 models available
- Individual point style is configurable as a supervised or an unsupervised point
- User configurable supervision for opens and/or shorts
- Individual point type is configurable for alarm/supervisory/other input styles, notification/releasing/dry contact output
- Exceeds the requirements of NFPA 72
- Panel or DIN rail mounting

EQ3730 EDIO Model Matrix

| MODEL | DESCRIPTION | |
|--------|--------------------------------------------------------|-----------------------|
| EQ3730 | 8 Channel Enhanced Discrete Input/Output Module (EDIO) | |
| | TYPE | MOUNTING OPTION |
| | D | DIN Rail |
| | P | Panel |
| | TYPE | APPROVALS* |
| | S | SIL |
| | T | SIL/FM/CSA/ATEX/IECEX |
| | W | FM/CSA/ATEX/IECEX |

*Type Approvals can use one or more letters to designate the approvals of the product.

EQ3730 EDIO Module - SIL 2

| Model | Part Number | Material | SIL/FM/CSA/ATEX/IECEX | Ship Weight |
|----------|-------------|----------|-----------------------|------------------|
| EQ3730PT | 009174-012 | AL | X | 1.0 lb (0.45 kg) |
| EQ3730DT | 009174-013 | AL | X | 2.0 lb (0.90 kg) |

EQ3730 EDIO Module

| Model | Part Number | Material | FM/CSA/ATEX/IECEX | Ship Weight |
|----------|-------------|----------|-------------------|------------------|
| EQ3730PW | 009174-002 | AL | X | 1.0 lb (0.45 kg) |
| EQ3730DW | 009174-003 | AL | X | 2.0 lb (0.90 kg) |

Explosion-proof Input Output Module



EQ3770EIO (Manual: 95-8761)The Eagle Quantum Premier EQ3770 EIO Input/Output module for hazardous locations provides an economic solution for field mounted systems and devices. The EIO can be used with most EQ37XX devices, and can be combined with an onboard ground fault monitor.

The enclosure can be configured to house various Eagle Quantum Premier 8 channel IO modules. They are intended for use in hazardous locations, with certifications that include Class I, Division 1 per the National Electrical Code, and Zone 1 per EN/IEC60079-1.

EQ3770 EIO

| Discription | Part Number | Material | Treads | Window | Div/Zone Exd | FM | ATEX/IECex |
|-------------|-------------|----------|--------|--------|--------------|----|------------|
| EQ3770EIO | 000520-051 | AL | 8-NPT | | X | X | |
| EQ3770EIO | 000520-052 | AL | 8-NPT | X | X | X | |

DEVICES

EQ3780HSDM High Speed Deluge Module



EQ3780HSDM High Speed Deluge Module (HSDM) (Spec Sheet: 90-1233) is specifically designed to expand the capability of the Det-Tronics Eagle Quantum Premier® (EQP) System by providing the capability to activate ultra-high speed suppression systems for hazardous applications such as munitions manufacturing. The HSDM provides up to six (6) configurable input channels and up to six (6) configurable output channels that can be programmed for supervised or unsupervised operation. Typical initiating devices include optical flame detectors, heat detectors, and manual pull stations. Output channels are designed to activate Factory Mutual (FM) approved solenoids. Solenoids that are activated by the HSDM are typically used to initiate pilot-actuated deluge valves. A unique cascade output feature allows the output of the HSDM to be connected to the input of another HSDM, extending the systems capability to activate multiple solenoids with a single input.

- Typical 2 mS independent response time
- Available only as part of a EQ3900 Series Certified System (See Systems Section B.5 for further details)
- Uniquely programmable outputs - one-to-one, one-to-many, or many-to-one
- Cascade capability to activate multiple solenoids with a single input
- Internal independent logic capabilities
- RFI and EMI hardened (CE Marked and Maritime Compliant)
- Expands the capabilities of the Det-Tronics Eagle Quantum Premier® system
- Provides up to six (6) Class B Input Channels (Supports Class A wiring when two input channels are combined)
- Provides up to six (6) Class B Output Channels (Supports Class A wiring when two output channels are combined)
- Input and Output channels are configurable as supervised or unsupervised points
- Output Channels are capable of continuously driving 2A at 30Vdc, up to a maximum of 10A per module
- Individual channel LEDs indicate Normal, Active, and Fault status
- Provides remote I/O capabilities via LON/SLC
- Panel or DIN rail mounting
- Module level status LED indicator
- Plug-in wiring connectors
- Meets the requirements of NFPA 72
- Allows customer to meet requirements of NFPA 15, Chapter 12
- FM, CSA, ATEX, IECEx, Exida, and DNV certified
- Certified SIL 2 Capable

EQ3780 HSDM Model Matrix

| MODEL | DESCRIPTION | |
|--------|--------------------------|-----------------------|
| EQ3780 | High Speed Deluge Module | |
| | TYPE | INSTALLATION OPTION |
| | D | Din Rail |
| | P | Panel |
| | TYPE | APPROVALS |
| | T | SIL/FM/CSA/ATEX/IECEX |

EQ3700 DCIO Discrete Input/Output Module



EQ3700 DCIO Input/Output Module (Spec Sheet: 90-1149) The 8 Channel DC I/O Module is specially designed to expand the Input and Output (I/O) capability of the Det-Tronics Eagle Quantum Premier System. The unit is designed to provide continuous and automated fire/gas protection while ensuring system operation through continuous supervision of system I/O and signaling line circuit (SLC). The DCIO module provides eight channels of configurable I/O points that can be programmed for supervised or unsupervised operation. Each input point can accept fire detection devices such as heat, smoke, or unitized flame detectors. Each output point can be configured for signaling or releasing output operation. Each channel on the module is provided with individual indicators for active and fault conditions.

- Monitors eight independent I/O channels
- IDC Class B wiring
- Class 1 Div. 2 locations combined with Zone 2 rated devices Type N
- Individual channels are configurable as an Input or Output
- Individual point Style is configurable as a supervised or an unsupervised point
- Individual point Type is configurable for alarm/supervisory/other input styles, notification/releasing/dry contact output
- Meets the requirements of NFPA 72
- Panel or DIN rail mounting

EQ3700 DCIO Model Matrix

| MODEL | DESCRIPTION | | | | | | |
|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----------------|---|----------|---|-------------------|
| EQ3700 | 8 Channel Discrete Input/Output Module (DCIO) | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>MOUNTING OPTION</th> </tr> </thead> <tbody> <tr> <td>D</td> <td>DIN Rail</td> </tr> <tr> <td>P</td> <td>Panel</td> </tr> </tbody> </table> | TYPE | MOUNTING OPTION | D | DIN Rail | P | Panel |
| TYPE | MOUNTING OPTION | | | | | | |
| D | DIN Rail | | | | | | |
| P | Panel | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>APPROVALS</th> </tr> </thead> <tbody> <tr> <td>R</td> <td>RUSSIA</td> </tr> <tr> <td>W</td> <td>FM/CSA/ATEX/IECEX</td> </tr> </tbody> </table> | TYPE | APPROVALS | R | RUSSIA | W | FM/CSA/ATEX/IECEX |
| TYPE | APPROVALS | | | | | | |
| R | RUSSIA | | | | | | |
| W | FM/CSA/ATEX/IECEX | | | | | | |

EQ3700 DCIO Module

| Model | Part Number | Material | FM/CSA/ATEX/IECEX | Ship Weight |
|----------|-------------|----------|-------------------|------------------|
| EQ3700PW | 007371-002 | AL | X | 1.0 lb (0.45 kg) |
| EQ3700DW | 007371-003 | AL | X | 2.0 lb (0.90 kg) |

DEVICES

EQ3710 AIM Analog Input Module



EQ3710 AIM Analog Input Module (Spec Sheet: 90-1183). The 8 Channel Analog Input Module expands the input capability of the Det-Tronics Eagle Quantum Premier System. The unit provides a means of connecting devices with a 4-20 mA output signal to the Eagle Quantum Premier System.

Each channel is fully configurable to provide device and alarm information. This information includes tag name, descriptor, engineering units, fault alarm, low/high alarm, and alarm threshold limits.

- Compliance to ANSI/ISA-12.13.01, for combustible gas
- Compliance to ANSI/ISA 92.0.01, CSA 22.2 #152, and EN60079-29-1
- NFPA 72 Approved 4-20 mA flame detector input
- Class 1 Div. 2 locations combined with Zone 2 rated devices Type N
- Certified SIL 2 Capable models available
- Monitors eight independent channels
- Panel or DIN rail mounting
- Optional HART Interface module (HIM) available
- Supports 2 or 3 wire 4-20 mA transmitters

EQ3710 AIM Model Matrix

| MODEL | DESCRIPTION | | | | | | | | |
|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----------------|---|----------|---|-----------------------|---|-------------------|
| EQ3710 | 8 Channel Analog Input Module (AIM) | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>MOUNTING OPTION</th> </tr> </thead> <tbody> <tr> <td>D</td> <td>Din Rail</td> </tr> <tr> <td>P</td> <td>Panel</td> </tr> </tbody> </table> | TYPE | MOUNTING OPTION | D | Din Rail | P | Panel | | |
| TYPE | MOUNTING OPTION | | | | | | | | |
| D | Din Rail | | | | | | | | |
| P | Panel | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>APPROVALS</th> </tr> </thead> <tbody> <tr> <td>S</td> <td>SIL</td> </tr> <tr> <td>T</td> <td>SIL/FM/CSA/ATEX/IECEX</td> </tr> <tr> <td>W</td> <td>FM/CSA/ATEX/IECEX</td> </tr> </tbody> </table> | TYPE | APPROVALS | S | SIL | T | SIL/FM/CSA/ATEX/IECEX | W | FM/CSA/ATEX/IECEX |
| TYPE | APPROVALS | | | | | | | | |
| S | SIL | | | | | | | | |
| T | SIL/FM/CSA/ATEX/IECEX | | | | | | | | |
| W | FM/CSA/ATEX/IECEX | | | | | | | | |

*Type Approvals can use one or more letters to designate the approvals of the product.

EQ3710 AIM - SIL 2

| Model | Part Number | Material | SIL/FM/CSA/ ATEX/IECEX | Ship Weight |
|----------|-------------|----------|---------------------------|------------------|
| EQ3710DT | 007918-013 | AL | X | 2.0 lb (0.90 kg) |
| EQ3710PT | 007918-012 | AL | X | 1.0 lb (0.45 kg) |

EQ3710 AIM

| Model | Part Number | Material | FM/CSA/ ATEX/IECEX | Ship Weight |
|----------|-------------|----------|-----------------------|------------------|
| EQ3710DW | 007918-003 | AL | X | 2.0 lb (0.90 kg) |
| EQ3710PW | 007918-002 | AL | X | 1.0 lb (0.45 kg) |

DEVICES

EQ3720 RM Relay Module



EQ3720 RM Relay Module (Spec Sheet: 90-1181) The 8 Channel Relay Module is specially designed to expand the output capability of the Det-Tronics Eagle Quantum Premier System. The Relay Module provides eight channels of relay output points that are programmed for unsupervised operation. The output relays are rated up to 2 amps per channel at 30 Vdc maximum or 0.5 amps per channel at 30 Vac.

- Class 1 Div. 2 locations combined with Zone 2 rated devices Type N
- Controls eight independent form “C” relay output channels
- Panel or DIN rail mounting
- “Hold last state” capable
- Recommended for use as an interface to normally energized (fail-safe) systems

EQ3720 RM Model Matrix

| MODEL | DESCRIPTION | | | | | | |
|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----------------|---|----------|---|-------------------|
| EQ3720 | 8 Channel Relay Module (RM) | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>MOUNTING OPTION</th> </tr> </thead> <tbody> <tr> <td>D</td> <td>Din Rail</td> </tr> <tr> <td>P</td> <td>Panel</td> </tr> </tbody> </table> | TYPE | MOUNTING OPTION | D | Din Rail | P | Panel |
| TYPE | MOUNTING OPTION | | | | | | |
| D | Din Rail | | | | | | |
| P | Panel | | | | | | |
| | <table border="1"> <thead> <tr> <th>TYPE</th> <th>APPROVALS</th> </tr> </thead> <tbody> <tr> <td>R</td> <td>RUSSIA</td> </tr> <tr> <td>W</td> <td>FM/CSA/ATEX/IECEX</td> </tr> </tbody> </table> | TYPE | APPROVALS | R | RUSSIA | W | FM/CSA/ATEX/IECEX |
| TYPE | APPROVALS | | | | | | |
| R | RUSSIA | | | | | | |
| W | FM/CSA/ATEX/IECEX | | | | | | |

EQ3720 Relay Module

| Model | Part Number | Material | FM/CSA/ATEX/IECEX | Ship Weight |
|----------|-------------|----------|-------------------|------------------|
| EQ3720DW | 007792-003 | AL | X | 2.0 lb (0.90 kg) |
| EQ3720PW | 007792-002 | AL | X | 1.0 lb (0.45 kg) |

EQ3720 Relay Module - Russia

| Model | Part Number | Material | RUSSIA | Ship Weight |
|----------|-------------|----------|--------|------------------|
| EQ3720DR | 007792-903 | AL | X | 2.0 lb (0.90 kg) |
| EQ3720PR | 007792-902 | AL | X | 1.0 lb (0.45 kg) |

Contact factory for availability.

FlexVu® UD10-DCU Universal Display



FlexVu UD10-DCU Universal Display (Spec Sheet 90-1200) is recommended for applications that require a gas detector with digital readout of detected gas levels. Its LON interface board makes the FlexVu UD10 compatible with Eagle Quantum Premier Systems by digitizing the 4-20 mA analog signal from the attached sensor/transmitter and transmitting the value as a process variable over the LON to the EQP controller. The UD10 is designed for use with a variety of Det-Tronics gas sensors for combustible and toxic detection. When used with the EQP controller, it meets all gas performance standards.

- Compliance to ISA-92.0.01 Part 1 performance standard
- Performance certified to FM 6320, CSA 22.2 #152, EN60079-29-1, ANSI/ISA 60079-29-1, and IEC60079-29-1
- Division Approval Ratings: FM and CSA
- Zone Approval Ratings: FM, CSA, ATEX, and IECEx
- Accepts 4-20 mA input from a variety of detection devices (gas, flame, pressure, flow, etc.)
- Compatible with FlexSonic Acoustic leak detector AC100/ATX10, providing spectrum display and configuration setup menus
- Non-intrusive menu allows device calibration without de-classifying the hazardous area
- Continuously displays gas level, gas type, and units measured
- Alarm setpoints adjustable via network
- Data logger for event time and date stamping
- Heated and backlit display
- IP66 rated
- Emulates the EQ22xxDCU for direct replacement
- Replaces EQ2200 DCUEx for direct replacement

FlexVu UD10 DCU Model Matrix

| MODEL | DESCRIPTION | |
|-------|------------------------|-----------------------------|
| UD10 | Universal Display Unit | |
| | TYPE | MATERIAL |
| | A | Aluminum |
| | S | Stainless Steel (316) |
| | TYPE | THREAD TYPE |
| | 5M | 5 Port, Metric M25 |
| | 5N | 5 Port, 3/4" NPT |
| | TYPE | OUTPUTS |
| | 28 | EQP - DCU Emulator |
| | TYPE | APPROVALS |
| | B | INMETRO (BRAZIL) |
| | W | FM/CSA/ATEX/IECEX |
| | TYPE | CLASSIFICATION (Div/Zone) |
| | 2 | Ex d (Flameproof) |
| | TYPE | OPTIONAL CONDITIONING BOARD |
| | (Blank) | None |
| | C | CGS |

DEVICES

FlexVu UD10-DCU Universal Display

| Model | Part Number | Material | Threads | EQP-DCU Emulator | Cond. Board | FM/CSA/ATEX/IECEX |
|-------------------------------------------------------------------------------|-------------|----------|---------|------------------|-------------|-------------------|
| UD10A5M28W2 | 010765-005 | AL | M25 | X | | X |
| UD10A5N28W2 | 010765-006 | AL | 3/4 NPT | X | | X |
| UD10S5M28W2 | 010765-007 | 316 SS | M25 | X | | X |
| UD10S5N28W2 | 010765-008 | 316 SS | 3/4 NPT | X | | X |
| Ship Weight: Aluminum = 4.2lb (1.9kg) Stainless Steel = 10.5lb (4.8kg) | | | | | | |

FlexVu UD10-DCU Universal Display - CGS

| Model | Part Number | Material | Threads | EQP-DCU Emulator | Cond. Board | FM/CSA/ATEX/IECEX |
|-------------------------------------------------------------------------------|-------------|----------|---------|------------------|-------------|-------------------|
| UD10A5M28W2C | 010254-005 | AL | M25 | X | CGS | X |
| UD10A5N28W2C | 010254-006 | AL | 3/4 NPT | X | CGS | X |
| UD10S5M28W2C | 010254-007 | 316 SS | M25 | X | CGS | X |
| UD10S5N28W2C | 010254-008 | 316 SS | 3/4 NPT | X | CGS | X |
| Ship Weight: Aluminum = 4.2lb (1.9kg) Stainless Steel = 10.5lb (4.8kg) | | | | | | |

FlexVu UD10-DCU Universal Display - Brazil

| Model | Part Number | Material | Threads | EQP-DCU Emulator | Cond. Board | INMETRO |
|-------------------------------------------------------------------------------|-------------|----------|---------|------------------|-------------|---------|
| UD10A5N28B2 | 010765-086 | AL | 3/4 NPT | X | | X |
| UD10S5M28B2 | 010765-087 | 316 SS | M25 | X | | X |
| UD10S5N28B2 | 010765-088 | 316 SS | 3/4 NPT | X | | X |
| UD10A5N28B2C | 010254-086 | AL | 3/4 NPT | X | CGS | X |
| UD10S5M28B2C | 010254-087 | 316 SS | M25 | X | CGS | X |
| UD10S5N28B2C | 010254-088 | 316 SS | 3/4 NPT | X | CGS | X |
| Ship Weight: Aluminum = 4.2lb (1.9kg) Stainless Steel = 10.5lb (4.8kg) | | | | | | |

FlexVu UD10 Spare Module

| Part Number | Description | Output | Ship Weight |
|-------------|---------------------|---------|----------------|
| 010535-001 | UD10 Display Module | EQP-DCU | 1 lb (0.45 kg) |

FlexVu UD10 Accessories

| Part Number | Description | Ship Weight |
|-------------|-----------------------------------------------|-----------------|
| 009700-001 | Magnetic Tool | <1 lb (0.45 kg) |
| 014019-001 | Gas Inspector 11 CD | <1 lb (0.45 kg) |
| 014020-001 | W6300G1006 Gas Inspector 11 Kit (includes CD) | 1 lb (0.45 kg) |
| 102988-002 | Plug, 5.0mm, 6 Position - P2 | <1 lb (0.45 kg) |
| 102988-026 | Plug, 5.0mm, 3 Position - P1 (J10, CGS) | <1 lb (0.45 kg) |
| 102988-028 | Plug, 5.0mm, 5 Position - (J3, CGS) | <1 lb (0.45 kg) |
| 103726-002 | Plug, 3.5mm, 3 Position - J2 | <1 lb (0.45 kg) |
| 103726-004 | Plug, 3.5mm, 5 Position - J3 | <1 lb (0.45 kg) |
| 103726-011 | Plug, 3.5mm, 12 Position - J4 | <1 lb (0.45 kg) |

EQ2400NE Network Extender



EQ2400NE Network Extender (Spec Sheet: 90-1132) expands the capabilities of the Eagle Quantum Premier system by allowing additional nodes as well as additional wiring to be added to the LON communication loop. Without a network extender, the communication network is limited to 60 nodes on a 2,000 meter loop. Each network extender increases the capacity of the loop by 40 nodes and an additional 2,000 meters of wiring. The maximum system size is 246 field nodes and 10,000 meters of wiring. To ensure optimum performance, it is important to distribute the network extenders along the loop so that no more than 40 nodes or 2,000 meters of wiring are on either side of a network extender.

Network extender circuitry supports communication in both directions. If a network fault should occur, uninterrupted communication can continue in the opposite direction.

- Increases network capacity by 40 nodes per unit (system maximum = 246)
- Each extender increases wiring length by 2,000 meters
- Visual indication of network traffic
- Up to 6 extenders can be added per system

EQ24xxNE - Network Extender

| Model | Part Number | Material | Thread | Ports | FM/CSA/ ATEX/IECEX | Ship Weight |
|----------|-------------|----------|---------|-------|-----------------------|----------------|
| EQ2453NE | 006941-009 | AL | 3/4 NPT | 5 | X | 6 lb (2.7 kg) |
| EQ2408NE | 006941-007 | AL | 3/4 NPT | 6 | X | 6 lb (2.7 kg) |
| EQ2407NE | 006941-003 | AL | M25/M20 | 5 | X | 6 lb (2.7 kg) |
| EQ2409NE | 006941-008 | AL | M25/M20 | 6 | X | 6 lb (2.7 kg) |
| EQ2463NE | 006941-010 | SS | 3/4 NPT | 5 | X | 10 lb (4.5 kg) |
| EQ2417NE | 006941-006 | SS | M25/M20 | 5 | X | 10 lb (4.5 kg) |

DEVICES

EQ2400PLR Physical Layer Repeater



EQ2400PLR Physical Layer Repeater (spec sheet 90-XXXX) is a repeater module that is connected between two network segments. A network segment is defined as the segment between two network extenders or the segment between an EQP controller and a network extender. The purpose of the physical layer repeater is to eliminate communication interference resulting from network wiring opens caused by a break in the wire or a bad connection. An open wire will result in the reflection of the network signal back along the network wiring segment. This interference has the potential to cause a network device to fault isolate. This will occur at a device located at a certain distance from the network open. Typically the distance lies between 350 and 500 meters and is dependent upon the electrical characteristics of the network cable.

- Suppresses reflection
- Amplifies signal

EQ24XX PLR Physical Layer Repeater

| Model | Part Number | Material | Thread | Ports | FM/CSA/ | Ship Weight |
|-----------|-------------|----------|---------|-------|---------|----------------|
| EQ2453PLR | 009183-001 | AL | 3/4 NPT | 5 | X | 6 lb (2.7 kg) |
| EQ2457PLR | 009183-002 | AL | M25/M20 | 6 | X | 6 lb (2.7 kg) |
| EQ2463PLR | 009183-003 | SS | 3/4 NPT | 5 | X | 10 lb (4.5 kg) |
| EQ2467PLR | 009183-004 | SS | M25/M20 | 5 | X | 10 lb (4.5 kg) |
| EQ24EMPLR | 009183-005 | - | - | - | - | 1 lb (0.46 kg) |

Risk Area Heat Detector Model HD



The **Risk Area Heat Detector** (Spec Sheet: 90-1211) accurately senses the surrounding air temperature and actuates an electrical contact output at a pre-determined temperature.

The certified SIL 2 Capable heat detector can be used as an alarm device to sense excessive heat or fire and warn personnel, or it can be used as a signaling device to sense fire and send a signal to an alarm panel for actuation of a fire suppression system.

The design of the heat detector utilizes Rate Compensation, which provides enhanced performance when compared to fixed-temperature or rate-of-rise detectors. The Model HD Detector senses the surrounding air temperature and actuates its output when the temperature reaches the pre-determined level, regardless of the fire growth rate. The unique properties of the alloy outer shell allow the Model HD to respond more quickly as the fire growth rate increases; i.e. the faster the fire grows, the sooner the unit will react.

The device is furnished with an explosion-proof junction box. The detector's electrical contact is factory wired to a screw terminal block located within the junction box. All external wiring to the device is also connected to this terminal block. The screw terminals accept wiring from 12 to 24 AWG. The junction box is available in aluminum or stainless steel, with two or four conduit entries, and either 3/4 inch NPT or 25 mm threads.

The Model HD is ideally suited for use in hazardous (classified) locations.

- Repeatable - resets itself, nothing to replace, testable
- Certified SIL 2 Capable models available
- Rugged - withstands shock and vibration
- Versatile - various temperature settings available
- Economical - wide spacings reduce installation costs
- Factory set internal contact area is hermetically sealed in stainless steel
- Ease of wiring and installation
- Aluminum or stainless steel junction box, stainless steel heat detector
- Approved and certified to FM, CSA, IECEx, and ATEX Hazardous Location standards
- Compatible with EDIO and DCIO LON devices

APPLICATIONS

- | | |
|------------------------------------------|--------------------------------------|
| • Turbine enclosures | • Power generation |
| • Confined spaces and dirty environments | • Gas station islands |
| • Fuel cells | • Miscellaneous industrial processes |
| • Gas compressors | • Anywhere fire can occur |

DEVICES

HD Model Matrix

| MODEL | DESCRIPTION |
|-------|-------------------------|
| HD | Risk Area Heat Detector |
| TYPE | SETTING |
| 140 | 140° F (60° C) |
| 160 | 160° F (71° C) |
| 190 | 190° F (88° C) |
| 210 | 210° F (99° C) |
| 225 | 225° F (107° C) |
| 275 | 275° F (135° C) |
| 325 | 325° F (163° C) |
| 360 | 360° F (182° C) |
| 450 | 450° F (232° C) |
| 500 | 500° F (260° C) |
| 600 | 600° F (316° C) |
| 725 | 725° F (385° C) |
| TYPE | MATERIAL |
| A | Aluminum |
| S | Stainless Steel (316) |
| TYPE | THREAD TYPE |
| 2M | 2 Port, Metric M25 |
| 2N | 2 Port, 3/4" NPT |
| 4M | 4 Port, Metric M25 |
| 4N | 4 Port, 3/4" NPT |
| TYPE | OUTPUT |
| 11 | Contact Closure |
| TYPE | APPROVALS |
| B | INMETRO (Brazil) |
| S | SIL |
| T | SIL/FM/CSA/ATEX/IECEX |
| TYPE | CLASSIFICATION |
| 1 | Div/Zone Ex d e |
| 2 | Div/Zone Ex d |

Risk Area Heat Detector Model HD 140-190 Degrees

| Part Number | Model | °F Setting | Material | # of Ports | Threads | Ex d e | Ex d | FM/CSA/ ATEX/IECEX/ SIL |
|-----------------------------------------------------------------------------------|--------------|------------|----------|------------|---------|--------|------|-------------------------------|
| 010935-001 | HD140A2N11T1 | 140 | AL | 2 | 3/4 NPT | X | | X |
| 010935-002 | HD140A2M11T1 | 140 | AL | 2 | M25 | X | | X |
| 010935-005 | HD140A2N11T2 | 140 | AL | 2 | 3/4 NPT | | X | X |
| 010935-006 | HD140A2M11T2 | 140 | AL | 2 | M25 | | X | X |
| 010935-003 | HD140S2N11T1 | 140 | SS | 2 | 3/4 NPT | X | | X |
| 010935-004 | HD140S2M11T1 | 140 | SS | 2 | M25 | X | | X |
| 010935-007 | HD140S2N11T2 | 140 | SS | 2 | 3/4 NPT | | X | X |
| 010935-008 | HD140S2M11T2 | 140 | SS | 2 | M25 | | X | X |
| 010935-017 | HD160A2N11T1 | 160 | AL | 2 | 3/4 NPT | X | | X |
| 010935-018 | HD160A2M11T1 | 160 | AL | 2 | M25 | X | | X |
| 010935-021 | HD160A2N11T2 | 160 | AL | 2 | 3/4 NPT | | X | X |
| 010935-022 | HD160A2M11T2 | 160 | AL | 2 | M25 | | X | X |
| 010935-030 | HD160A4M11T2 | 160 | AL | 4 | M25 | | X | X |
| 010935-019 | HD160S2N11T1 | 160 | SS | 2 | 3/4 NPT | X | | X |
| 010935-020 | HD160S2M11T1 | 160 | SS | 2 | M25 | X | | X |
| 010935-023 | HD160S2N11T2 | 160 | SS | 2 | 3/4 NPT | | X | X |
| 010935-024 | HD160S2M11T2 | 160 | SS | 2 | M25 | | X | X |
| 010935-033 | HD190A2N11T1 | 190 | AL | 2 | 3/4 NPT | X | | X |
| 010935-034 | HD190A2M11T1 | 190 | AL | 2 | M25 | X | | X |
| 010935-037 | HD190A2N11T2 | 190 | AL | 2 | 3/4 NPT | | X | X |
| 010935-038 | HD190A2M11T2 | 190 | AL | 2 | M25 | | X | X |
| 010935-035 | HD190S2N11T1 | 190 | SS | 2 | 3/4 NPT | X | | X |
| 010935-036 | HD190S2M11T1 | 190 | SS | 2 | M25 | X | | X |
| 010935-039 | HD190S2N11T2 | 190 | SS | 2 | 3/4 NPT | | X | X |
| 010935-040 | HD190S2M11T2 | 190 | SS | 2 | M25 | | X | X |
| Ship Weight: Aluminum = 4.5 lb (2.0 kg) Stainless Steel = 9.70 lb (4.4 kg) | | | | | | | | |

*For "xxx", Insert required temperature from model matrix.

(Seed number reference 010935-000)

DEVICES

Risk Area Heat Detector Model HD 210-275 Degrees

| Part Number | Model | °F Setting | Material | # of Ports | Threads | Ex d e | Ex d | FM/CSA/ ATEX/IECEX |
|-----------------------------------------------------------------------------------|--------------|------------|----------|------------|---------|--------|------|-----------------------|
| 010935-049 | HD210A2N11T1 | 210 | AL | 2 | 3/4 NPT | X | | X |
| 010935-050 | HD210A2M11T1 | 210 | AL | 2 | M25 | X | | X |
| 010935-053 | HD210A2N11T2 | 210 | AL | 2 | 3/4 NPT | | X | X |
| 010935-054 | HD210A2M11T2 | 210 | AL | 2 | M25 | | X | X |
| 010935-051 | HD210S2N11T1 | 210 | SS | 2 | 3/4 NPT | X | | X |
| 010935-052 | HD210S2M11T1 | 210 | SS | 2 | M25 | X | | X |
| 010935-055 | HD210S2N11T2 | 210 | SS | 2 | 3/4 NPT | | X | X |
| 010935-056 | HD210S2M11T2 | 210 | SS | 2 | M25 | | X | X |
| 010935-065 | HD225A2N11T1 | 225 | AL | 2 | 3/4 NPT | X | | X |
| 010935-066 | HD225A2M11T1 | 225 | AL | 2 | M25 | X | | X |
| 010935-069 | HD225A2N11T2 | 225 | AL | 2 | 3/4 NPT | | X | X |
| 010935-070 | HD225A2M11T2 | 225 | AL | 2 | M25 | | X | X |
| 010935-067 | HD225S2N11T1 | 225 | SS | 2 | 3/4 NPT | X | | X |
| 010935-068 | HD225S2M11T1 | 225 | SS | 2 | M25 | X | | X |
| 010935-071 | HD225S2N11T2 | 225 | SS | 2 | 3/4 NPT | | X | X |
| 010935-072 | HD225SM11T2 | 225 | SS | 2 | M25 | | X | X |
| 010935-081 | HD275A2N11T1 | 275 | AL | 2 | 3/4 NPT | X | | X |
| 010935-082 | HD275A2M11T1 | 275 | AL | 2 | M25 | X | | X |
| 010935-085 | HD275A2N11T2 | 275 | AL | 2 | 3/4 NPT | | X | X |
| 010935-086 | HD275A2M11T2 | 275 | AL | 2 | M25 | | X | X |
| 010935-083 | HD275S2N11T1 | 275 | SS | 2 | 3/4 NPT | X | | X |
| 010935-084 | HD275S2M11T1 | 275 | SS | 2 | M25 | X | | X |
| 010935-087 | HD275S2N11T2 | 275 | SS | 2 | 3/4 NPT | | X | X |
| 010935-088 | HD275S2M11T2 | 275 | SS | 2 | M25 | | X | X |
| Ship Weight: Aluminum = 4.5 lb (2.0 kg) Stainless Steel = 9.70 lb (4.4 kg) | | | | | | | | |

Risk Area Heat Detector Model HD 325-360 Degrees

| Part Number | Model | °F Setting | Material | # of Ports | Threads | Ex d e | Ex d | FM/CSA/ ATEX/IECEX |
|-----------------------------------------------------------------------------------|--------------|------------|----------|------------|---------|--------|------|-----------------------|
| 010935-097 | HD325A2N11T1 | 325 | AL | 2 | 3/4 NPT | X | | X |
| 010935-098 | HD325A2M11T1 | 325 | AL | 2 | M25 | X | | X |
| 010935-101 | HD325A2N11T2 | 325 | AL | 2 | 3/4 NPT | | X | X |
| 010935-102 | HD32512M11T2 | 325 | AL | 2 | M25 | | X | X |
| 010935-099 | HD325S2N11T1 | 325 | SS | 2 | 3/4 NPT | X | | X |
| 010935-100 | HD325S2M11T1 | 325 | SS | 2 | M25 | X | | X |
| 010935-103 | HD325S2N11T2 | 325 | SS | 2 | 3/4 NPT | | X | X |
| 010935-104 | HD325S2M11T2 | 325 | SS | 2 | M25 | | X | X |
| 010935-113 | HD360A2N11T1 | 360 | AL | 2 | 3/4 NPT | X | | X |
| 010935-114 | HD360A2M11T1 | 360 | AL | 2 | M25 | X | | X |
| 010935-117 | HD360A2N11T2 | 360 | AL | 2 | 3/4 NPT | | X | X |
| 010935-118 | HD360A2M11T2 | 360 | AL | 2 | M25 | | X | X |
| 010935-115 | HD360S2N11T1 | 360 | SS | 2 | 3/4 NPT | X | | X |
| 010935-116 | HD360S2M11T1 | 360 | SS | 2 | M25 | X | | X |
| 010935-119 | HD360S2N11T2 | 360 | SS | 2 | 3/4 NPT | | X | X |
| 010935-120 | HD360S2M11T2 | 360 | SS | 2 | M25 | | X | X |
| Ship Weight: Aluminum = 4.5 lb (2.0 kg) Stainless Steel = 9.70 lb (4.4 kg) | | | | | | | | |

Risk Area Heat Detector Model HD 450 - 725 Degrees

| Part Number | Model | °F Setting | Material | # of Ports | Threads | Ex d e | Ex d | SIL/FM/CSA/ ATEX/IECEX |
|-----------------------------------------------------------------------------------|--------------|------------|----------|------------|---------|--------|------|---------------------------|
| 012456-005 | HD450A2N11T2 | 450 | AL | 2 | 3/4 NPT | | X | X |
| 012456-006 | HD450A2M11T2 | 450 | AL | 2 | M25 | | X | X |
| 012456-037 | HD600A2N11T2 | 600 | AL | 2 | 3/4 NPT | | X | X |
| 012456-038 | HD600A2M11T2 | 600 | AL | 2 | M25 | | X | X |
| 012456-039 | HD600S2N11T2 | 600 | SS | 2 | 3/4 NPT | | X | X |
| 012456-040 | HD600S2M11T2 | 600 | SS | 2 | M25 | | X | X |
| Ship Weight: Aluminum = 4.5 lb (2.0 kg) Stainless Steel = 9.70 lb (4.4 kg) | | | | | | | | |

DEVICES

Stop Plugs and Reducers

| ITEM NUMBER | STYLE | MATERIAL | OVERALL LENGTH (mm) | THREAD TYPE | HEX SIZE |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-----------------|---------------------|-------------|----------|
| 101197-001 | TYPE A STOP PLUG | ALUMINUM | 14.8 | 3/4 NPT | 12 |
| 101197-002 | TYPE A STOP PLUG | ALUMINUM | 14.5 | 1/2 NPT | 10 |
| 101197-003 | DOME HEAD STOP PLUG | STAINLESS STEEL | 21.5 | M25 | 12 |
| 101197-004 | TYPE A STOP PLUG | STAINLESS STEEL | 14.8 | 3/4 NPT | 12 |
| 101197-005 | DOME HEAD STOP PLUG | ALUMINUM | 21.5 | M25 | 12 |
| 101197-006 | DOME HEAD STOP PLUG | ALUMINUM | 21.5 | M20 | 10 |
| 101197-007 | DOME HEAD STOP PLUG | STAINLESS STEEL | 21.5 | M20 | 10 |
| 101197-008 | DOME HEAD STOP PLUG | NICKEL BRASS | 21.5 | M20 | 10 |
| 101197-009 | DOME HEAD STOP PLUG | NICKEL BRASS | 21.5 | M25 | 12 |
| 101197-010 | TYPE A STOP PLUG | NICKEL BRASS | 14.8 | 3/4 NPT | 12 |
| 101197-011 | TYPE A STOP PLUG | NICKEL BRASS | 14.5 | 1/2 NPT | 10 |
| 101197-012 | TYPE A STOP PLUG | STAINLESS STEEL | 14.5 | 1/2 NPT | 10 |
| 101197-501 | IP WASHER | NYLON | - | M20 | - |
| 101197-502 | IP WASHER | NYLON | - | M25 | - |
| 101197-503 | IP WASHER | TEFLON PTFE | - | M20 | - |
| 101197-504 | IP WASHER | TEFLON PTFE | - | M25 | - |
| 102804-001 | REDUCER | ALUMINUM | - | M25 to M20 | - |
| 102804-003 | REDUCER | STAINLESS STEEL | - | M25 to M20 | - |
| Ship Weight: 1/2 NPT = 0.07lb (0.030kg), 3/4 NPT = 0.11lb (0.05kg), M20 = 0.14lb (0.062kg), M25 = 0.28lb (0.125 kg) Available Stop Plug Approvals: ATEX, IECEx, CEC, NEC, EAC, INMETRO, SAC, UKRAINE, CCoE, ABS, LLOYD'S, RMRS | | | | | |



Dome Head Stop Plug - Nickel Brass



Type A Stop Plug - Nickel Brass

*Type/TYPER 4 and IP66 rating requires addition of Teflon tape

**Metric threaded stop plugs are fitted with silicone O-Rings

***For silicone sensitive applications the silicone O-Ring can be removed from Metric stop plugs and fitted with an IP washer

Manual Call Stations (non-addressable)



Class 1, Division 1

| Part Number | Description | Ship Weight |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| 000115-316 | MCP, PB, 3XM20, Red, Duty 3.3K Series, 10K EOL | 5.5 lb (2.5 kg) |
| 000115-317 | MCP, PB, 3XM20, Red, Duty 1.5K Series, 2.4K EOL | 5.5 lb (2.5 kg) |
| 000115-333 | MCP, BG, ATEX, IECEx, Tag, Red 10K EOL, 1K Series, DP | 5.5 lb (2.5 kg) |
| 000115-195 | Manual Pull Station, push button with lift flap (dual action), SPST contact, surface mount, alloy housing painted red, key for reset, 1/2" NPT bottom, includes "FIRE-PUSH BUTTON" label, Class 1, Division 1, Groups C-D, Type 4X, UL | 5.5 lb (2.5 kg) |
| 000115-003 | Manual Pull station, Dual Action Lift and Pull Ring, 3/4" Entry, Class 1, Division 1, SPDT Contacts, Groups C & D, Aluminum material, UL, ULC, CSA, CSFM Listed, Red Finish | 5.5 lb (2.5 kg) |
| 000115-040 | Manual Pull Station, pull ring with lift flap (dual action), SPDT contact, surface mount, Aluminum housing, two 3/4" NPT (F) entries, Class 1, Division 1, Groups B, C, & D, Type 4/7/9, ULC, Red Finish | 5.5 lb (2.5 kg) |
| 000115-010 | Manual Pull Station, Single Action (Dual if used with Lift Flap), DPDT Contacts, Aluminum material, Class 1, Division 1, Groups B, C, & D, Type 4X, UL Listed, Red Finish, Model B-9 | 3.5 lb (1.6 kg) |
| 000210-709 | Lift Flap for B-9, "CO2 Release" label | 0.5 lb (.23 kg) |
| 000115-011 | Lift Flap for B-9, "FIRE ALARM" label | 0.5 lb (.23 kg) |
| 000115-012 | Lift Flap for B-9, "FIRE SYSTEM RELEASE" label | 0.5 lb (.23 kg) |
| 000115-027 | Lift Flap for B-9, "FM-200 Release" label | 0.5 lb (.23 kg) |

NOTE: Average lead time is 4-6 weeks. For additional options, please consult the factory.



Class 1, Division 2

| Part Number | Description | Ship Weight |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| 000115-006 | MCP Push Button, 24V, Red, IECEx Call Point | 2.7 lb (1.3 kg) |
| 000115-278 | MCP, PB, Single Switch, Red, ATEX Call Point | 2.7 lb (1.3 kg) |
| 000115-279 | MCP, PB, Single Switch, YEL, ATEX Call Point | 2.7 lb (1.3 kg) |
| 000115-053 | Manual Pull Station, pushbutton type with lift flap (dual action), Class 1, Division 2, Groups A, B, C, & D, Type 4X, SPST contact, surface mount, GRP housing painted red, key for reset, two 1/2" NPT (F) entries, includes "FIRE ALARM" label and 10K EOL resistor, UL | 2.7 lb (1.3 kg) |
| 000115-054 | Manual Call Station, break glass type, SPST contact, Class 1, Division 2, Groups A, B, C, & D, Type 4X, SPST contact, surface mount, GRP housing painted red, key for test, two 1/2" NPT (F) entries, includes "FIRE BREAK GLASS" label, no EOL resistor, UL | 2.7 lb (1.3 kg) |

NOTE: Average lead time is 4-6 weeks. For additional options please consult the factory.

DEVICES

General Purpose

| Part Number | Description | Ship Weight |
|-------------|-----------------------------------------------------------------------------------|-----------------|
| 000515-012 | Manual Pull Station, Dual Action w/ Labels, DPST Contacts, Red Finish, Model 3300 | 1.2 (.6 kg) |
| 000115-051 | Manual Pull Station, Dual Action w/ Labels, SPST Contacts, Red Finish, Model 3300 | 1.2 (.6 kg) |
| 000515-013 | Weatherproof Backbox for 3300 Pull Station | 1 lb (.45 kg) |
| 000515-014 | Indoor Backbox for 3300 Pull Station | 0.5 lb (.23 kg) |

NOTE: Average lead time is 4-6 weeks. For additional options please consult the factory.

Accessories

| Part Number | Description | Ship Weight |
|-------------|-----------------------------------------------|-----------------|
| 000115-028 | Glass Breakrods for B-9 (10 Pk) | 0.5 lb (.23 kg) |
| 000515-015 | Glass Breakrods for 3300 Pull Station (12 Pk) | 0.5 lb (.23 kg) |
| 000515-016 | Spare Key for 3300 Pull Station | 0.5 lb (.23 kg) |
| 000106-108 | EOL Resistor, 10K Ohm | <1 lb (<.45 kg) |
| 000115-334 | Spare Break Glass, E2S 50=1 EA Pack of 50 | 2 lb (.9 kg) |

NOTE: Average lead time is 4-6 weeks. For additional options please consult the factory.

Horns (non-addressable)

Class 1, Division 1



| Part Number | Description | Ship Weight |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| 000121-408 | Sounder/Beacon Combo, E2X, 24 Vdc, 1/2" NPT, Lens Clear | 10.3 lb (4.7 kg) |
| 000122-135 | Sounder, 24 Vdc, 110 dB @ 1M, ATEX Z1&2, 250mA, Blue Housing, 2-M20 | 10.3 lb (4.7 kg) |
| 000122-186 | Sounder, 24 Vdc, Red Housing, IP66 4XM20, 32 Tones, 104 dB(A) | 10.3 lb (4.7 kg) |
| 000122-240 | Sounder, ATEX, IECEx, Tag, Red 2XM20, 3.3K EOL, Plug | 10.3 lb (4.7 kg) |
| 000122-241 | Horn, 24 Vdc, 2XM20, Blk Body SS Bracket, UL, IECEx, ATEX | 10.3 lb (4.7 kg) |
| 000122-254 | Sounder, 117 dB, C1D1, Red 24 Vdc, 1X1/2"NPT, 2XM20, ATEX, UL | 10.3 lb (4.7 kg) |
| 000122-144 | Horn, 27 Tones, marine grade alloy, Up to 100+/-3 dB, UL Class 1, Division 1, Groups C & D, Type 4x, Voltage: 24 Vdc, Cable Entries: 1x3/4" NPT LHS, 1x3/4" NPT RHS, Duty Label: None, Tag Label: None, Other Features: None, Finish: Red Finish | 12.3 lb (5.6 kg) |
| 000122-098 | Horn, Alloy, Up to 100+/-3dB, UL Class 1, Div 1, Groups C & D, Type 4x, 24VDC, 3/4" NPT bottom entry, No duty or tag label, Fitted with 10K EOL Resistor), Red finish | 12.3 lb (5.6 kg) |
| 000122-024 | Horn, Explosion-Proof, Class 1, Division 1, 24 Vdc, 3/4" Entry, 100 dB @ 10 ft., UL, cUL, CSFM | 10.3 lb (4.7 kg) |
| 000122-036 | Siren, Explosion-Proof, Class 1, Division 1, Groups B, C, & D, 4 Selectable Tones, 24 Vdc, 108 dB @ 10 ft., Type 4X, UL, cUL | 23 (10.5 kg) |

NOTE: Average lead time is 5-6 weeks. For additional options please consult the factory.

Class 1, Division 2



| Part Number | Description | Ship Weight |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| 000122-079 | Horn, up to 115 dB, UL Class 1 Division 2, Class 1 Zones 1 & 2, Type 4X & 6, GRP material, 24 Vdc, no labels, one (1) 1/2" NPT entry, no special features, red finish | 13.2 lb (6 kg) |
| 000122-074 | Horn, up to 118dB(A), GRP, UL Class 1 Division 2, Class 1 Zones 1 & 2, Class II Div 2, Groups F & G, Type 4x & 6, Voltage: 12V-48V d.c, Labels: None, Entries: 2x1/2" NPT, Options: None, Color: Painted Red | 13.2 lb (6 kg) |
| 000122-099 | Horn, up to 118dB, GRP material, Certified EExd IIC T5, ATEX approved Ex II 2GD, IP66 & 67, 24 Vdc, No labels, two M20 entries, Natural Black finish | 13.2 lb (6 kg) |
| 000122-031 | Alarm Horn, Class 1, Division 2, Groups A, B, C, & D, 24 Vdc, 0-110 dB @ 10 ft., Type 4X, UL, ULC, CSFM (requires tone module) | 6.1 lb (2.7 kg) |
| 000122-052 | Universal Tone Module, 32 switchable Tones, UL, ULC, CSA, CSFM | 0.5 lb (.23 kg) |
| 000106-108 | End of Line (EOL) Resistor, for supervision of end devices, 10K Ohm | <1 lb (<.45 kg) |

NOTE: Average lead time is 5-6 weeks. For additional options please consult the factory.

DEVICES

General Purpose



| Part Number | Description | Ship Weight |
|-------------|----------------------------------------------------------------------|-----------------|
| 000122-039 | Horn, 80 to 92 dB @ 10 ft, surface mount, diode polarized, UL Listed | 1 lb (.45 kg) |
| 000122-037 | Indoor backbox, general purpose | 0.5 lb (.23 kg) |
| 000122-033 | Horn, 24 Vdc, Non-Polarized, general purpose, Model 450 | 1.5 lb (.68 kg) |
| 000122-034 | Panel Mount Gasket Kit, 350/450 | 0.5 lb (.23 kg) |
| 000122-035 | Back Box for 450 Horn | 1 lb (.45 kg) |
| 000122-245 | Sounder, IS, 105 dB, ATEX, FM, IP66 25mA, 16-28 Vdc, Red | 1.5 lb (.68 kg) |

NOTE: Average lead time is 5-6 weeks. For additional options please consult the factory.

Accessories

| Part Number | Description | Ship Weight |
|-------------|-----------------------|-----------------|
| 000106-108 | EOL Resistor, 10K Ohm | <1 lb (<.45 kg) |

NOTE: For additional options please consult the factory.

Strobes (non-addressable)

Class 1, Division 1



| Part Number | Description | Ship Weight |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| 000121-458 | Beacon, ATEX, IECEx, Tag, Red 2XM20, 3.3K EOL, Plug, Red Body | 7.1 lb (3.2 kg) |
| 000121-459 | Beacon, ATEX, IECEx, Tag, Yellow 2XM20, 3.3K EOL, Plug, Red Body | 7.1 lb (3.2 kg) |
| 000121-460 | Beacon, 5J, Red, Black Body, 2XM20 UL, IECEx, ATEX, 24 Vdc | 7.1 lb (3.2 kg) |
| 000121-510 | Beacon, Xexon, Class 1 Div 1, Red/Red 5 Joule, 2X3/4 NPT, 2XM20, ATEX, UL | 7.1 lb (3.2 kg) |
| 000121-513 | Strobe, 10 Joule, Blue Lens, Red Body, Class 1 Div 2, Z2, 24 Vdc | 7.1 lb (3.2 kg) |
| 000121-514 | Strobe, 10 Joule, Amber Lens, Red Body, Class 1 Div 2, Z2, 24 Vdc | 7.1 lb (3.2 kg) |
| 000121-515 | Strobe, 10 Joule, Clear Lens, Red Body, Class 1 Div 2, Z2, 24 Vdc | 7.1 lb (3.2 kg) |
| 000121-516 | Strobe, 10 Joule, Red Lens, Red Body, Class 1 Div 2, Z2, 24 Vdc | 7.1 lb (3.2 kg) |
| 000121-121* | Xenon Strobe (5 Joule), Type 4X & 6, Alloy, UL Class 1, Division 1, Groups C & D, 24 Vdc, Red lens with no guard, 1/2" entries, No duty or Tag labels, Red finish | 4.5 lb (2 kg) |
| 000121-116* | Xenon Strobe 21 Joule, Type 4X & 6, UL Class 1, Division 1, Groups C & D, 24 Vdc, 3/4" NPT Entry, 60 flash per minute, Clear Lens with no lens guard, no duty or tag label, Alloy material, Red finish | 14.5 lb (6.6 kg) |
| 000121-028** | Strobe, Amber Lens, Class 1, Division 1, Groups C & D, 24 Vdc, 80 flash per minute, 3/4" Type 4X, UL, ULC, CSA, CSFM | 18 lb (8.2 kg) |
| 000121-029** | Strobe, Red Lens Class 1, Division 1, Groups C & D, 24 Vdc, 80 flash per minute, 3/4" Type 4X, UL, ULC, CSA, CSFM | 18 lb (8.2 kg) |
| 000121-030** | Strobe, Blue Lens Class 1, Division 1, Groups C & D, 24 Vdc, 80 flash per minute, 3/4" Type 4X, UL, ULC, CSA, CSFM | 18 lb (8.2 kg) |

NOTE: Average lead time is 5-6 weeks. For additional options please consult the factory.

*Stand-alone device

**Mounting accessory required

DEVICES

Class 1, Division 2



| Part Number | Description | Ship Weight |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| 000121-155 | Strobe, Xenon type, 15 Joule, 24 Vdc, Pipe mount, 3/4" NPT (F) entry, natural black GRP housing, 60 flashes per minute, diode polarized, red lens with wire guard, Class 1, Division 2, Groups A-D, Type 4X, cULus | 5.8 lb (2.6 kg) |
| 000121-166 | Strobe, Xenon type, 15 Joule, 24 Vdc, Pipe mount, 3/4" NPT (F) entry, natural black GRP housing, 60 flashes per minute, diode polarized, blue lens with wire guard, Class 1, Division 2, Groups A-D, Type 4X, cULus | 5.8 lb (2.6 kg) |
| 000121-156 | Strobe, Xenon type, 15 Joule, 24 Vdc, Pipe mount, 3/4" NPT (F) entry, natural black GRP housing, 60 flashes per minute, diode polarized, amber lens with wire guard, Class 1, Division 2, Groups A-D, Type 4X, cULus | 5.8 lb (2.6 kg) |
| 000121-163 | Strobe, Xenon type, 15 Joule, 24 Vdc, pipe mount, 3/4" NPT (F) entry, natural black GRP housing, 60 flashes per minute, diode polarized, clear lens with wire guard, Class 1, Division 2, Groups A-D, Type 4X, cULus | 5.8 lb (2.6 kg) |
| 000121-133 | Strobe, Clear Lens, Class I, Division 2, 4-wire with supervisory diode, Type 4X, 24 Vdc, 80 flash/per minute, 1/2" Pipe Mount, UL, ULC, CSA, CSFM | 2 lb (.9 kg) |
| 000121-122 | Xenon Strobe 5 Joule, ATEX Approved Ex II 2GD, EExd IIB T5, IP66 & 67 GRP Material, two M20 entries, 24 Vdc, 60 flash per munite, Red Lens with guard, Backstrap mounting, No duty or tag labels, Red finish | 5.5 lb (2.5 kg) |
| 000121-031 | Strobe, Red Lens, 24 Vdc, 4X, Class 1, Division 2, Groups, A, B, C, & D, UL, cUL CSA, non-polarized | 1.5 lb (.68 kg) |
| 000121-035 | Strobe, Amber Lens, 24 Vdc, 4X, Class 1, Division 2, Groups, A, B, C, & D, UL, cUL CSA, non-polarized | 1.5 lb (.68 kg) |
| 000121-037 | Strobe, Blue Lens, 24 Vdc, 4X, Class 1, Division 2, Groups, A, B, C, & D, UL, cUL CSA, non-polarized | 1.5 lb (.68 kg) |
| 000121-478 | Beacon, LED Warning, Red, 24DC 2-1/2" NPT, Brass Plug, Guard | 3.3 lb (1.5 kg) |
| 000121-499 | Beacon/Horn Combo, Class 1, Div 2, E2S Auto-Sync | 10 lb (4.5 kg) |
| 000121-501 | Beacon, Xenon, Class 1, Div 2, Red/Red 5 Joule, Guard, CSFM | 3.3 lb (1.5 kg) |
| 000121-502 | Beacon, Xenon, Class 1, Div 2, Red/Amber 5 Joule, Guard, CSFM | 3.3 lb (1.5 kg) |
| 000121-503 | Beacon, Xenon, Class 1, Div 2, Red/Clear 5 Joule, Guard, CSFM | 3.3 lb (1.5 kg) |

NOTE: Average lead time is 5-6 weeks. For additional options please consult the factory.

General Purpose

| Part Number | Description | Ship Weight |
|-------------|-------------------------------------------------------------------------------------------------------|-----------------|
| 000121-073 | Strobe, Type 4X, Xenon type, 2.2 Joule, 1/2" pipe mount, 24 Vdc, red lens, UL/ULc/CSA, non-polarized | <1 lb (<.45 kg) |
| 000121-115 | Strobe, Type 4X, Xenon type, 2.2 Joule, 1/2" pipe mount, 24 Vdc, blue lens, UL/ULc/CSA, non-polarized | <1 lb (<.45 kg) |
| 000505-005 | End of Line / Polarizing Assembly, 10k Ohm | <1 lb (<.45 kg) |
| 000121-038 | Strobe, White Lens, 24 Vdc, 1/2" Pipe Mount, 300 Candlepower, Type 4X, UL, cUL, CSA, non-polarized | 2 lb (.9 kg) |
| 102778-003 | Strobe, Blue Lens, 24 Vdc, 1/2" Pipe Mount, 300 Candlepower, Type 4X, UL, cUL, CSA, non-polarized | 2 lb (.9 kg) |
| 102778-004 | Strobe, Red Lens, 24 Vdc, 1/2" Pipe Mount, 300 Candlepower, Type 4X, UL, cUL, CSA, non-polarized | 2 lb (.9 kg) |
| 000121-069 | Strobe, Amber Lens, 24 Vdc, 1/2" Pipe Mount, 300 Candlepower, Type 4X, UL, cUL, CSA, non-polarized | 2 lb (.9 kg) |
| 000121-506 | Beacon, 3 Way, G/A/R, UL, 3/4 NPT, M20, SS Guard | 10 lb (4.5 kg) |

NOTE: Average lead time is 5-6 weeks. For additional options please consult the factory.

Accessories

| Part Number | Description | Ship Weight |
|-------------|------------------------------------------|-----------------|
| 000121-054 | Ceiling Mount for 27XST, Federal CMXC | 1.5 lb (.68 kg) |
| 000121-331 | Wall Mount for 27XST, Federal WMXC-SB | 1.5 lb (.68 kg) |
| 000121-318 | Pendant Mount for 27XST, Federal PMXC-S8 | 1.5 lb (.68 kg) |
| 000121-319 | Dome Guard for 27XST, Federal DGXC-SB | <1 lb (<.45 kg) |

NOTE: Average lead time is 5-6 weeks. For additional options please consult the factory.

DEVICES

Combination Horn/Strobe

Class 1, Division 2

| Part Number | Description | Ship Weight |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| 000121-075 | Horn/Strobe Combination Unit Consisting of the following: Xenon Strobe, 5 Joule, Class 1, Division 2, Type 4X & 6, GRP Material, two (2) 1/2" NPT entries, 24 Vdc, 60 flash/minute, red lens with guard, no labels, red finish Sounder, up to 115 dB, Class 1 Division 2, Class 1 Zones 1 & 2, Type 4X & 6, GRP material, 24 Vdc, no Labels, one (1) 1/2" NPT entry, no special features, red finish 2-Way Baseplate | 23 lb (10.5 kg) |
| 000121-079 | Horn/Strobe Combination Unit Consisting of the following: Xenon Strobe, 5 Joule, ATEX Approved Ex II 2G, EExd IIB T5, IP66 & 67, GRP Material, 24 Vdc, 60 flash/minute, red lens with guard, two (2) 20 mm entries, no labels Sounder, Up to 115 dB, ATEX Certified EExd IIC T5, IP66 & 67, GRP material, 24 Vdc, no labels, one (1) 20 mm entry, no special features, red finish 2-Way Baseplate | 23 lb (10.5 kg) |

NOTE: Average lead time is 5-6 weeks. For additional options please consult the factory.

General Purpose

| Part Number | Description | Ship Weight |
|-------------|-------------------------------------------------------------------------------------------|-----------------|
| 000122-078 | Horn/Strobe, outdoor general purpose, clear lens labeled "FIRE", requires outdoor backbox | 1.5 lb (.68 kg) |
| 000121-120 | Horn/Strobe, indoor general purpose, clear lens labeled "FIRE", requires indoor backbox | 1.5 lb (.68 kg) |
| 000122-037 | Indoor/outdoor backbox (use with 000122-078 or 000121-120) | <1 lb (<.45 kg) |
| 000122-251 | A141, DC24G-P, Siren, 140 dB, IP65, 24 vdc, 45 Tones, w/Control Unit | |
| 000122-253 | Sounder, 116 dB, Class 1, Div 2, Red, 2 x 1/2" NPT, CSFM | |

NOTE: Average lead time is 5-6 weeks. For additional options please consult the factory.

Accessories

| Part Number | Description | Ship Weight |
|-------------|--------------------------------------------------------------------------------|-----------------|
| 000106-108 | 000106-108 End of Line (EOL) Resistor, for supervision of end devices, 10K Ohm | <1 lb (<.45 kg) |

NOTE: For additional options please consult the factory.

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Availability and specifications are subject to change without notice.
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SERVICES

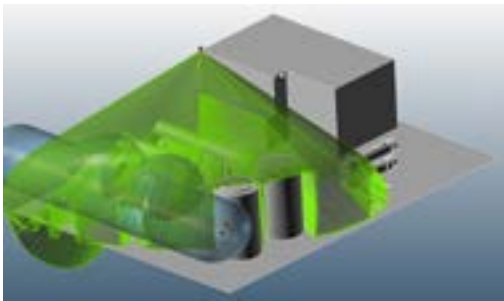
Note: Det-Tronics product videos can be found at: www.YouTube.com/@DetTronicsUSA/videos

3D Flame and Gas Mapping

DESCRIPTION OF SERVICE

The **3D Flame and Gas Mapping** service combines Det-Tronics expertise and proven detection technologies along with 3D mapping software to provide quantitative coverage analysis to ensure optimized detector placement. The 3D Flame and Gas Mapping service can help identify undetected hazards which may lead to a compromise in safety. The hazards include:

- Blind spots with zero coverage
- Lack of adequate coverage in high risk areas
- Obstructions in a detector's field of view



DELIVERABLES

A statistical analysis assessment report and a comprehensive flame and gas detector placement guide are provided upon completion of the analysis.

PROCESS

The 3D Flame and Gas Mapping solution requires Det-Tronics in-house experts to:

1. Consult and gather customer process data and requirements
2. Conduct safety analysis of requirements and process data using a 3D software mapping tool to determine detector placement
3. Identify zero coverage areas
4. Define coverage per detector

Information required from the customer includes:

- 3D model of process being mapped
- Hazard assessment
- Environmental attributes
- AHJ requirements

PRICING

Please contact the local Regional Sales Manager for a 3D Flame and Gas Mapping quotation.

If a 3D model of the process does not exist, Det-Tronics in-house expertise can convert 2D drawings into 3D models. Engineering labor rates will apply. Consult the local Regional Sales Manager for details.

2026 Det-Tronics University Field Training Rate Schedule

TRAINING DELIVERABLES

All courses provide verbal presentation, practical hands-on with applicable equipment or software, course material handouts, and respective product documentation for each participant. Certificates of Completion are issued on request.

FACTORY-CERTIFIED TECHNICAL TRAINER RATES

| | |
|------------------------------------------------------------------------------|------------|
| On-Site Per Day Rate (not to exceed 4 students and 8 hours)..... | \$2,750.00 |
| Day Rate for Each Additional student (not to exceed 10 total students) | \$460.00 |
| Webinar/Phone Training Hourly Rate..... | \$560.00 |
| Custom Course Development Hourly Rate | \$325.00 |
| Custom Demonstration Setup (Requiring Project Engineering) Day Rate | \$2,800.00 |
| On-Site Hourly Rate | \$285.00 |
| Time and One-Half | \$427.00 |
| Double Time | \$570.00 |
| Travel Per Hour Rate..... | \$210.00 |

- NOTES:**
1. Prices are effective January 1, 2026 and subject to change without notice.
 2. Customer cancellations received 1 to 2 weeks from the scheduled delivery date will be charged 50% of the estimated cost of Field Service that is scheduled. If the cancellation is received less than one week from the scheduled delivery date, 100% will be charged.

TRAVEL, SHIPPING AND LIVING EXPENSES

Airfare, Auto Rental, Parking, Tolls, Hotel, Meals, etc.Cost +15%
 Mileage.....Based on the IRS rate for the year incurred +15%
 Shipping (each 2-person training demo kit weight can reach 100 lb).....Cost +15%
 Det-Tronics will supply receipts and documentation for the substantiation of reasonable travel and living expenses. These shall include air travel, hotel receipt, meals, car rental if used and misc expenses.

JANUARY 1, 2026

The above charges are for a normal eight-hour working day with time and one-half charged for Saturdays, and time over eight (8) hours for a weekday; Sundays and holidays and work after twelve (12) continuous hours will be charged at double time.

NOTES

1. Det-Tronics personnel are not required to work more than 12 hours in any 24-hour period.
2. Double time applies to all work/travel performed on Sundays, holidays, and work after 12 continuous hours.
3. Det-Tronics personnel are not required to work more than 12 hours in any 24-hour period.
4. All weekday or weekend travel time is chargeable per the above notes.
5. Eight-hour minimum charge for all one-day sessions with four-hour minimum per day thereafter.
6. Hazardous Duties, Offshore or other duties defined as hazardous (offshore platforms, chemical exposure, etc.) are subject to an additional charge of \$200 per day above the standard daily rate.
7. Requests for training at locations deemed to be hazardous by Det-Tronics/Carrier (offshore platforms, dangerous chemical exposure, political unrest, etc.) or to be performed in a Travel Warning/Travel Alert location may be subject to additional charges, subcontracted, delayed, or cancelled.

DET-TRONICS FACTORY HOLIDAYS*

| | | |
|------------------------|---------------------|--------------------|
| New Years Day | Memorial Day | Winter Holiday + 1 |
| Martin Luther King Day | Independence Day +1 | |
| Presidents' Day | Labor Day | |
| Good Friday | Thanksgiving + 1 | |

*Christmas Holidays are subject to change depending upon the specific days on which Christmas Eve and Day occur.

TRAINING EVENT SCHEDULING

Typically scheduled within 8-12 weeks of receiving purchase order; dependent on trainer and equipment availability.

TERMS OF PAYMENT

Purchase Orders must be received prior to shipping equipment and conducting training sessions. Fax to 952-829-8750 or email: orders.det-tronics@carrier.com
 Training Invoices are due and payable upon receipt. International Training Support is by Letter of Credit or Prepaid (estimated amount).

SERVICES

2026 Field Services Rate Schedule

FIELD SERVICE ENGINEER AND PROJECT/SOFTWARE ENGINEER

| Rates | Field Service Engineer | Project/Software Engineer | Specialist |
|-----------------------|------------------------|---------------------------|------------|
| On Site Per Hour Rate | \$285.00 | \$300.00 | \$325.00 |
| Travel Per Hour Rate | \$210.00 | \$210.00 | \$210.00 |

1. Time and one-half applies to all work / travel performed after 8 hours per day or on Saturday.
2. Double time applies to all work/travel performed on Sundays, holidays, and work after 12 continuous hours.
3. Det-Tronics personnel are not required to work more than 12 hours in any 24-hour period.
4. All weekday or weekend travel time is chargeable per the above notes.
5. Eight-hour minimum charge for all one-day service calls with four-hour minimum per day thereafter.
6. Requests for service work at locations deemed to be hazardous by Det-Tronics/Carrier (offshore platforms, dangerous chemical exposure, political unrest, etc.) or to be performed in a Travel Warning/Travel Alert location may be subject to additional charges, subcontracted, delayed, or cancelled.

DET-TRONICS FACTORY HOLIDAYS*

| | | |
|------------------------|---------------------|-------------------|
| New Years Day | Memorial Day | Winter Holiday +1 |
| Martin Luther King Day | Independence Day +1 | |
| Presidents' Day | Labor Day | |
| Good Friday | Thanksgiving + 1 | |

*The Winter Holiday is subject to change depending upon the specific days on which Christmas Eve and Day occur.

WORKDAY DEFINED

The above charges are for a normal eight-hour working day with time and one-half charged for Saturdays, and time over eight (8) hours for a weekday; Sundays and holidays and work after twelve (12) continuous hours will be charged at double time. In addition, the travel and living expenses will be billed at cost, plus 10%. Det-Tronics will supply receipts and documentation for the substantiation of reasonable travel and living expenses. These shall include (1) air travel receipt if used, (2) hotel receipt if used, and (3) car rental receipt if used. No other receipts for living expenses will be furnished unless specifically requested by the purchaser in writing prior to the start of the assignment.

TIME SHEETS

Before the work commences, satisfactory arrangements must be made with Det-Tronics to review and sign Daily Time Sheets. It is suggested that the customer submits a written document to Det-Tronics, stating whether the customer or their authorized representative will be signing the time sheets. Disputes of any nature should be immediately reported, in writing, to Det-Tronics. Approval and acceptance of the work will be assumed if no arrangements have been made to sign the time sheets and invoicing will be submitted accordingly. Once signed, the time card is considered as acceptance of the work performed.

EXPENSES

| Expense | Rates |
|-----------------|--------------------------------------------------|
| Travel | At Cost +15% |
| Shipping | At Cost +15% |
| Living Expenses | At Cost +15% |
| Mileage | Based on the IRS rate for the year incurred +15% |

TERMS OF PAYMENT

Purchase Orders must be received prior to shipping equipment and/or scheduling service. Fax to 952-829-8750 or email: orders.det-tronics@carrier.com. Invoices are due and payable upon receipt. International Field Service Support is by Letter of Credit or Prepaid (estimated amount).

CANCELLATION OR CHANGE IN SCHEDULING REQUEST

If Buyer cancels scheduled Field Services less than two (2) weeks but more than one (1) week prior to the scheduled date for those Field Services, Det-Tronics will bill Buyer a fee equivalent to fifty percent (50%) of the estimated cost of the scheduled Field Services. If Buyer cancels scheduled Field Services one (1) week or less prior to the scheduled date for those Field Services, Det-Tronics will bill Buyer a fee equivalent to one hundred percent (100%) of the estimated cost of the scheduled Field Services (each, a "Cancellation Fee"). Cancellation Fees are exclusive of and in addition to any charges to Buyer for the actual performance of the Field Services when performed. Buyer agrees that the Cancellation Fees are not a penalty, but rather a reasonable measure of damages, based upon potential inability to reschedule service technicians and rearrange travel schedules on short notice and other inefficiencies and additional work that may result to Det-Tronics from the cancellation. Det-Tronics may immediately cancel an order previously accepted if Buyer commits a material breach of these Field Service Terms and fails to remedy the breach within ten (10) business days following written notification thereof, if Buyer misuses Det-Tronics confidential information or commits a violation of the Code of Ethics, or if Buyer becomes insolvent or a petition is filed or proceedings commenced by or against Buyer relating to bankruptcy, receivership, reorganization or assignment for the benefit of creditors.

Repair Center Services

Refer to Customer Care/Technical Support & Repairs official web page (www.det-tronics.com) for RMA Services process forms, policies, terms, and repairable/non-repairable products list.

Repairs

REPAIR CENTER

Available only for active models listed in this price schedule. Before returning equipment for repair, contact Detector Electronics Customer Service Department to obtain a Return Material Authorization (RMA) number that will be reserved for your specific return order, and referenced in all documentation. Pack the return shipment carefully to avoid damage in transit. Place the RMA number, with your name and address as sender, plainly on the outside of the package.

CLASS I

Repair Charge \$640
Test Fee \$410

| | |
|----------------|--------------------------------|
| ATX10 | FlexSonic Acoustic Transmitter |
| U9500 Infiniti | Gas Transmitter |
| UD10/UD20/UD30 | Universal Display |
| Model 505 | Gas Transmitter |

CLASS II

Repair Charge \$1165
Test Fee \$525

| | |
|----------------|-------------------------------------|
| EQ2100PSM | Power Supply Monitor |
| EQ24xxNE | EQP Component |
| EQ3700 DCIO | EQP Component |
| EQ3710 AIM | EQP Component |
| EQ3720 RM | EQP Component |
| EQ3730 EDIO | EQP Component |
| LS2000 | Line-of-Sight Infrared Gas Detector |
| PIR9400 | IR Detector |
| PIRECL | IR Gas Detector |
| X-Series Heads | Sensor Module |
| EQ37xx ASM/ASH | EQP Component |

CLASS III

Repair Charge \$2100
Test Fee \$700

| | |
|---------|---------------------------------|
| EQ3016 | Eagle Quantum Premier (16 Node) |
| PIRDUCT | IR Detector |
| U5015 | Smoke Detector |
| W867 | (Battery Replacement) \$1705 |
| X2200 | UV Flame Detector |
| X3301 | MIR Flame Detector |
| X3302 | Hydrogen Flame Detector |
| X5200 | UVIR Flame Detector |
| X9800 | IR Flame Detector |

CLASS IV

Repair Charge \$3500
Test Fee \$815

| | |
|--------|----------------------------------|
| AC100 | FlexSonic Acoustic Sensor |
| EQ3001 | Eagle Quantum Premier (246 Node) |
| R7094 | IR Controller |

CLASS V

| | |
|---------------------------|-------|
| Gas Sensor Test Fee (all) | \$410 |
| IR Sensor Module Test Fee | \$410 |
| UV Sensor Module Test Fee | \$410 |
| W8067S Bulb Replacement | \$410 |

SERVICES

NON-REPAIRABLE ITEMS

| | | | | |
|-----------------------------|---------------------------|----------------------------|--------------------------|----------------------------------------------|
| 006148-002 Network Extender | 1100 Gas Controller | DE6000-001 IR Module | PM-6 Flame Detector | TXL Gas Detector |
| 006605-xxx U7602 E-Pkg | 2000 Gas Controller | EA 2000 CG Gateway | PM-6M, MX Flame Detector | U7099 Flame Detector |
| 006598-001 E-Mod | 2100 Gas Controller | EAGLE 2000 | PM-9 Flame Detector | U7600 A/B/C Flame Det. |
| 30-2056B IR Detector | 8000 Gas Controller | EQ2101MR Gen. Assy. Cage | PSS Test Lamps | U7602 Flame Det/Controller |
| 30-3003/D Smoke Det. | 8100 Gas Controller | EQ2220GFM | PW9200 PathWatch | U7652 Flame Detector |
| 400 Gas TX | Air Dilution Kit | GTS Gas Module | R5010 Controller | U7698 A-D Flame Det./Controller |
| 405 Gas TX | C7050 Flame Detector | GTX Gas Transmitter | R6001 Zone Unit | U7698 Flame Det./Controller |
| 410 Gas TX | C7052 Flame Detector | K-Series TX | R6003 Zone Unit | U5005/6 Smoke Detector |
| 415 Gas TX | C7061C Gas Detector | Laser Aimer | R7300 Flame Detector | U8700 Gas Detector |
| 500 Gas TX | C7064E Sensor/Transmitter | MIR1 Gas Detector | R730X Flame Controller | U8800 Gas Detector |
| 700 Transmitter | C7065 Sensor/Transmitter | MIR2 Gas Detector | EQ22XX DCU, IDC | U8810 Gas TX |
| 704 Transmitter | C7093D & E Flame Detector | MIR3 Gas Transmitter | EQ25XX SAM, ARM | U-Series Flame Detector DExxxx IR modules |
| 710 Gas Controller | C7098B Flame Detector | Model HD Heat Detector | R73XX Controller Brd | UD10 NTMOS Interface Bd. |
| 740 Gas Controller | CGS | NTMOS Gas Detector | R74XX Flame Controller | UV Tube Module |
| 800 Transmitter | DE2020 Camera | NTMOS H2S Gas Sensor | R1425 Detonator Module | W866 Test Lamp |
| 808 Transmitter | DE4161-001 Electronic Mod | OPECL (RX/TX modules only) | R6006 Relay Module | W868 Test Lamp |
| 810 Gas Controller | DE4960-001 Electronic Mod | PIRVOL IR Gas Detector | R8460 Gas Controller | W1212 Battery |
| 820 Gas Controller | DE5203 Circuit Brd. Rpl. | PM-5CX Flame Detector | R8466 Gas Controller | W8066 UV Lamp |
| 880 Gas Controller | DE5500-001 E-Mod | PM-5CXJ Flame Det. | SW9200 SlickWatch | W8067B Test Lamp |
| 1000 Gas Controller | DE5994-003 E-Mod | PM-5MP, MPX Flame Det. | THZ Gas Detector | X3300/Pulse Flame Det |

FACTORY REPAIR PRICING POLICY

Det-tronics Factory Repair Center utilizes standardized repair service pricing that characterizes product repair and testing fees by product class (groupings of similar products) for approved Repair Material Authorization (RMA) returns.

An authorized purchase order for the amount of the standard product class pricing is required prior to the Repair Center issuing an RMA identification number. All equipment returned within an approved RMA is to be shipped freight pre-paid to the Repair Center, and equipment return freight costs and any required sales tax will be added to invoice when applicable at actual cost.

Testing fees apply to non-warranty products tested and not repaired, or products subsequently found compliant with factory manufacturing quality & test parameters, eg no problem found. Testing fees will be waived if the customer property is repaired or a replacement item is purchased as part of the same transaction. All equipment requiring major component/assembly replacement such as pc boards or sensor modules will be invoiced at actual time and material cost as required to repair the product.

Typical equipment repair turn-around time ranges from one to four weeks after receipt at Repair Center, contingent upon prior RMA approval and provision of an accurate, concise description of the product problems or symptoms observed by the customer

Customer property returned to the Repair Center without an RMA identification number, authorized purchase order, or without any description of the product problem or symptoms will be handled on a case by case basis and special handling charges may apply.

Customer approval will be sought before proceeding if the repair costs fall out of our standard product class repair cost guidelines. Products returned for repair that do not fall into one of the defined product classes will be charged at 40 percent of the current list price for that item.

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REFERENCES

Acronyms

| | |
|--------|-----------------------------------------------------------------------------------|
| °C | Celsius |
| °F | Fahrenheit |
| Ω | Ohm |
| AFE | Analog Front End |
| AGC/TE | Automatic Gain Control/Thermoelectric Cooler |
| AGLD | Acoustic Gas Leak Detection |
| AIC | Acoustic Integrity Check |
| AIM | Analog Input Module |
| AL | Aluminum |
| amp(s) | Ampere/Amperes |
| AMPR | Acoustic Multi-Spectral Pattern Recognition |
| ANSI | American National Standards Institute |
| Arc | Arc Rejection – an algorithm that prevents false alarms from transient UV sources |
| ARM | Agent Release Module |
| ASH | Addressable Smoke & Heat |
| ASM | Addressable Smoke Module |
| assy | Assembly |
| ATEX | Standard for products used in explosive atmospheres |
| Aux | Auxiliary |
| AWG | American Wire Gauge |
| bd(s) | Boards |
| BNC | Bayonet Neill-Concelman Connector |
| cal | Calibration |
| CCTV | Closed Circuit Television |
| CD | Compact Disc |
| CE | 'Conformité Européenne', French for 'European Conformity' |
| CFR | Code of Federal Regulations |
| COMM | Communication |
| config | Configuration |
| COV | Cone of Vision |
| cps | Counts per second |
| Ctrlr | Controller |
| CSA | Canadian Standards Association Certification |
| dB | Decibels |
| dBA | Decibels adjusted |
| DCIO | Discrete Input/Output |
| DCS | Distributed Control System |
| DCU | Digital Communication Unit |
| DDL | Device Description Language |
| DSP | Digital Signal Processing |
| DNV | Det Norske Veritas (Norway) approved |
| DVR | Digital Video Recorder |
| e | Increased Safety |
| ea | Each |
| EC | Electrochemical |
| EDIO | Enhanced Discrete Input/Output |
| EMC | Electro-Magnetic Compatibility |
| EMI | Electro-Magnetic Interference |
| Encl | Enclosure |
| EOL | End of Line |
| EQ | Eagle Quantum |
| EQP | Eagle Quantum Premier® |
| EVF | External Voltage Fluctuation |
| Ex d | Flame Proof |
| Ex e | Increased Safety |
| Ex db* | Flame Proof |
| Ex eb* | Increased Safety |

*New alternative markings

REFERENCES

| | |
|----------------|-----------------------------------------------------------|
| Exp | Explosion-proof |
| FAT | Factory Acceptance Test |
| FCA | Free Carrier |
| FF | Foundation™ Fieldbus |
| FOV | Field of View |
| FM | FM Approvals |
| ft | Foot or feet |
| GUI | Graphic User Interface |
| HART | Highway Addressable Remote Transducer |
| HMI | Human Machine Interface |
| Ht | Height |
| Hz | Hertz |
| GB | Gigabyte |
| GFM | Ground Fault Monitor |
| ia | Intrinsic Safety (Class I, Zone 0) |
| ib | Intrinsic Safety (Class I, Zone 1) |
| IEC | International Electrotechnical Commission |
| ID | Inside diameter |
| IDC | Initiating Device Circuits |
| IDCGF | Initiating Device Circuits Ground Fault |
| IECEX | Standard for explosive equipment for explosive atmosphere |
| Ind | Independent |
| IP | Ingress Protection |
| IR | Infrared |
| IS | Intrinsically Safe |
| ISA | The Instrumentation, Systems, and Automation Society |
| J-box | Junction box |
| kg | kilogram |
| kHz | kiloHertz |
| lb | Pound |
| LCD | Liquid Crystal Display |
| LED | Light Emitting Diode |
| LFL-m | Lower Flammable Limit, meters |
| LON | Local Operating Network |
| LOS | Line-of-Sight |
| LPM | Liter(s) Per Minute |
| m | Meter(s) |
| mA | Milliampere(s) |
| MIR | Multispectrum Infrared |
| MOS | Metal-Oxide Semiconductor |
| mm | Millimeter(s) |
| mt | Mount |
| mtg | Mounting |
| N/A | Non-Applicable |
| N/C | No Charge |
| NE | Network Extender |
| NEC | National Electrical Code |
| NFPA | National Fire Protection Association |
| No. | Number |
| N.C. | Normally Closed contacts |
| NPT | National Pipe Thread |
| N.O. | Normally Open contacts |
| NT | Nanotechnology |
| NTSC | National Television System Committee |
| NVM | Nonvolatile Memory |
| o _i | Optical Integrity |

REFERENCES

| | |
|----------------|-----------------------------------------------|
| OD | Outside diameter |
| OEM | Original Equipment Manufacturer |
| OPC | Open for Process Control |
| oz | Ounce |
| p/n | Part number |
| PAL | Phase Alternating Line |
| PB | Pushbutton |
| PC | Personal Computer |
| PIRTB | Point-type Infrared Termination Box |
| pkg | Package |
| PLC | Programmable Logic Controller |
| PM | Power Monitor |
| ppb | Parts per billion |
| ppm | Parts per million |
| PSD | Power Spectral Density |
| PSM | Power Supply Monitor |
| PVC | Polyvinyl Chloride |
| R | Russian approved |
| Repl | Teplacement |
| RFI | Radio frequency interference |
| RH | Relative humidity |
| rly(s) | Relay/relays |
| RM | Relay Module |
| RTC | Real Time Clock |
| RTU | Remote Terminal Unit |
| RUS | Russian approved |
| Rx | Receiver |
| S ³ | Safety System Software |
| SAM | Signal Audible Module |
| SCADA | Supervisory Control and Data Acquisition |
| SD | Secure Digital |
| sec | Seconds |
| sep | Separation |
| SIL | Safety Integrity Level |
| sgl | Single |
| SPL | Sound Pressure Level |
| SS | Stainless Steel |
| STAR | Selectable Transient Arc Rejection |
| surv | Surveillance |
| Tx | Transmitter |
| TAR | Transient Arc Rejection |
| TDSA | Time Domain Signal Analysis |
| temp | Temperature |
| UCR | Upper Count Rate |
| UEL | Upper Explosive Limit |
| UL | Underwriter Laboratories |
| ULC | Underwriter Laboratories of Canada Listed |
| Um | Maximum voltage |
| USB | Universal Serial Bus |
| UV | Ultraviolet |
| UVIR | Ultraviolet/Infrared |
| Vac | Volts alternating current |
| Vdc | Volts direct current |
| VDS | Verband der Sachversicherer (German approval) |
| Vol | Volume |
| w/ | With |
| w/o | Without |
| WDT | Watch Dog Timer |

Product Life Cycle Information

Contact your Det-Tronics Representative.

Terms and Conditions and Warranty

All sales are subject to Det-Tronics' "Terms and Conditions of Sale" found at www.det-tronics.com.

Please visit the website frequently. Det-Tronics reserves the right to make changes to Terms and Conditions of Sale without notice.

Note: Det-Tronics product videos can be found at: www.YouTube.com/@DetTronicsUSA/videos

REFERENCES

Ordering Information

Pricing and availability:

Det-Tronics
6901 West 110th Street
Minneapolis, Minnesota 55438 USA
+952-946-6491 or 1-800-765-3473
www.det-tronics.com

Det-Tronics reserves the right to make substitutions or changes to products, prices, or terms and conditions without notice.

Pricing and payments are payable in U.S. Dollars. Delivery is FCA, Minneapolis, Minnesota, USA. Risk of loss and title shall transfer to Buyer at delivery to the first carrier. Prices shown do not include V.A.T., federal, state or local taxes, or customs duty. Custom export crating will be quoted upon request.

Expedited Shipments

Any order received and accepted before 11:00 AM CST, requesting same day shipment, will be treated as an “expedited shipment”. Additionally, any order received and accepted after 11:00 AM CST, requesting next day shipment, will be treated as an “expedited shipment”. There will be a minimum charge for “expedited shipments” of \$350. Detector Electronics cannot guarantee same day shipment for orders placed after 11:00 AM CST or non-domestic delivery addresses.

DISCLAIMER

Any technical assistance, recommendations or suggestions provided by Detector Electronics Corporation (Det-Tronics) as to the number or placement of any devices in any particular installation are provided for informational purposes only and are dependent upon there having been full, complete and accurate information provided to Det-Tronics. The end user (Owner) and the installer are the ultimate decision makers and are responsible to ensure that the actual installation is fully compliant with all local codes, rules and regulation, is fully approved by the authority having jurisdiction, and achieves the desired performance. Det-Tronics recommendations do not account for the unreported presence of disturbing elements (e.g., walls, partitions, solid objects, obstacles, wind, etc.) and cannot account for future changes to site conditions.

Document Charges

Certificates

| | <u>Each</u> |
|---------------------------------------------------|------------------|
| Approval Certificates (i.e. FM, CSA, ATEX, IECEx) | No Charge |
| Certificate of Origin | No Charge |
| Calibration Certificate | No Charge |
| Certificate of Guarantee/Warranty | No Charge |
| Certificate of Quality | No Charge |
| Compliance/Conformance Certificate | No Charge |
| Test and Inspection Certificate | No Charge |
| Consularized Documents | Consult Factory |
| | |
| Dossiers/Binders - Consisting of: | |
| Index | |
| Test Data | |
| Product Specification Sheet | \$900.00 per set |
| Product Manual | |
| Product Catalog | |
| Any additions to above | Consult Factory |
| | |
| Drawings: | |
| Product Detail Drawing per product | Consult Factory |
| Spare Parts List per product | Consult Factory |
| Custom Drawings | Consult Factory |
| Any additions to above | Consult Factory |
| | |
| Product Manuals - Additional | \$3.00 |
| Test Data | \$170.00 |
| Courier of Documents (Letter Envelope only): | |
| Domestic (within U.S.) | \$55.00 |
| International | \$85.00 |

Note: The above prices are not discountable.

Miscellaneous Charges

| | <u>Each</u> |
|-----------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Assembly of product with another product Example: Transmitter and Sensor | \$300.00 per set |
| | |
| Paper Tags | Refer to Price List / Price Catalog |
| Stainless Steel Tags | Refer to Price List / Price Catalog |
| Stainless Steel Tags Attached | Refer to Price List / Price Catalog |
| Stainless Steel Tags Attached & Dip Switch | Refer to Price List / Price Catalog |
| | |
| Inspection at factory | Add \$2000 to orders up to \$250,000. Please consult the factory for Inspections of orders greater than \$250,000 (This is based on a local inspector.) |
| | |
| Engineering testing for gas curves (must pre-qualify) | Consult Factory |

Det-Tronics may not accept some items for testing, such as hazardous, toxic, carcinogenic, pyrophoric, or hypergolic materials. In this case, an estimated gas curve may be provided based upon the Safety Data Sheet (S.D.S.), previous test data and engineering judgement. All requests for testing must be accompanied with an S.D.S for that material before any shipment of the material is made. Recent Minnesota State law also may preclude Det-Tronics from accepting or handling certain hazardous materials. Following is the recommended procedure for requests gas curve testing:

1. The request for gas curve testing, complete with appropriate S.D.S., should be issued to Det-Tronics Customer Service Dept. A purchase order issued to Det-Tronics for testing services will be required upon request approval.
2. A one-ounce sample of liquids or 7.5 liters of gaseous materials shall be packaged and shipped in the appropriate container to the attention of: Gas Sensor Gas Curve Test Lab.
3. A Material Safety Data Sheet must accompany each sample to be tested.
4. Technical information typically required for each compound includes: specific gravity, molecular weight, vapor density, flashpoint, and lower and upper flammability limit.
5. All sample materials will be returned to the customer after test completion for proper disposal.



52-1002-26.0



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