Instructions

Eagle Quantum Premier®
Remote Power Supply
for Hazardous Locations
Model EQ3900RPS

DET-TRONICS

INSTRUCTIONS

Eagle Quantum Premier® Remote Power Supply for Hazardous Locations Model EQ3900RPS

Figure 1—External View of EQ3900RPS

Figure 2—Internal View of EQ3900RPS

DESCRIPTION

As part of providing a total systems solution to industrial clients around the world, Detector Electronics Corporation offers a certified power supply for mounting in hazardous locations.

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. The EQ3900RPSE 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 the EQ3900RPSG is for ordinary locations.

NOTE

The EQ3900RPS uses previously approved EQP2120-PS power supplies. Refer to the EQP System Manual (form 95-8533) for more information on EQP2120-PS power supply requirements.

IMPORTANT

The two independent AC inputs must be reviewed and accepted by the local Authority Having Jurisdiction (AHJ) as fulfilling the requirements of a primary and secondary power supply according to NFPA 72.

The EQ3900RPS has been approved by FM and CSA for use with the Det-Tronics Eagle Quantum Premier® System.

FEATURES

- Hazardous area certified solution (Explosion-proof Class I, Division 1 (for EQ3900RPSE)
- Ordinary location certified solution (for EQ3900RPSG)
- Simple wire installation into terminal blocks
- Electronics and wiring tested at the factory

ENCLOSURE

The EQ3900RPS uses a 12x24x12 explosion proof enclosure, the same as is used for the Det-Tronics EQ3900E. The EQ3900RPSG uses a 24x20x12 ordinary location enclosure. Depending upon the equipment selection, the front door may or may not have a window, indicators, and operators installed.

SPECIFICATIONS

INPUT—
120/220 VAC nominal, 50/60 Hz
6 amperes maximum

OUTPUT—
24 Vdc nominal - cannot be adjusted
18 amperes maximum

CERTIFICATION—
For complete approval details, refer to the appropriate Appendix:

Appendix A - FM
Appendix B - CSA

Refer to the Eagle Quantum Premier manual (form number 95-8533) for system certification details.

WEIGHT (Approximate)—
250 pounds (114 kg)

STORAGE AND OPERATING ENVIRONMENT—
0-95% RH non-condensing
Storage -20°C to 60°C
Operating -20°C to 50°C

INSTALLATION

The enclosure must be securely bolted in place using the provided mounting hardware per the manufacturer's instructions.

MOUNTING

Refer to the drawing in Figure 1 for mounting dimensions.

ENCLOSURE ENTRY

The number and position of wiring entries must be specified when the enclosure is ordered. The enclosures can accept a certain number and size of entries as specified by the enclosure manufacture. Only suitably certified cable glands or stopping plugs can be used; see ratings. Consult with Det-Tronics Corporation on the exact number and sizes of entries that are available.

WIRING INSTRUCTIONS

Electrical wiring schematics for the custom device configuration will be provided with the power supply. Wiring is made to the appropriate terminals located inside of the enclosure and is secured in place. Field wiring rated at least 10°C above maximum ambient must be used. Refer to the drawing in Figure 3 for the wiring diagram.

ORDERING INFORMATION

Refer to the EQ3900RPS Model Matrix for details. Please note that the only operator that can be installed in the EQ3900RPS is the "Ground Fault Test" operator, which creates a ground fault in order to test the Ground Fault monitoring circuit.

EQP EQ3900RPS Model Matrix

MODEL	DESCRIPTION
EQ3900RPS	Remote LON Based Power Supply

TYPE	ENCLOSURE
E	Explosion-Proof (Class I, Division 1)
G	Ordinary Locations

TYPE	24 VDC POWER OUTPUTS (NOTES 1 & 3)
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 Output: #1)
2	2 Fuse Monitoring (Power Outputs: #1 & #2)
3	3 Fuse Monitoring (Power Outputs: #1, #2, & #3)

TYPE	INDICATORS (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 configurations are desired.
4 Consult factory for size and number of conduit entries.
5. No ingress rating if operators are included

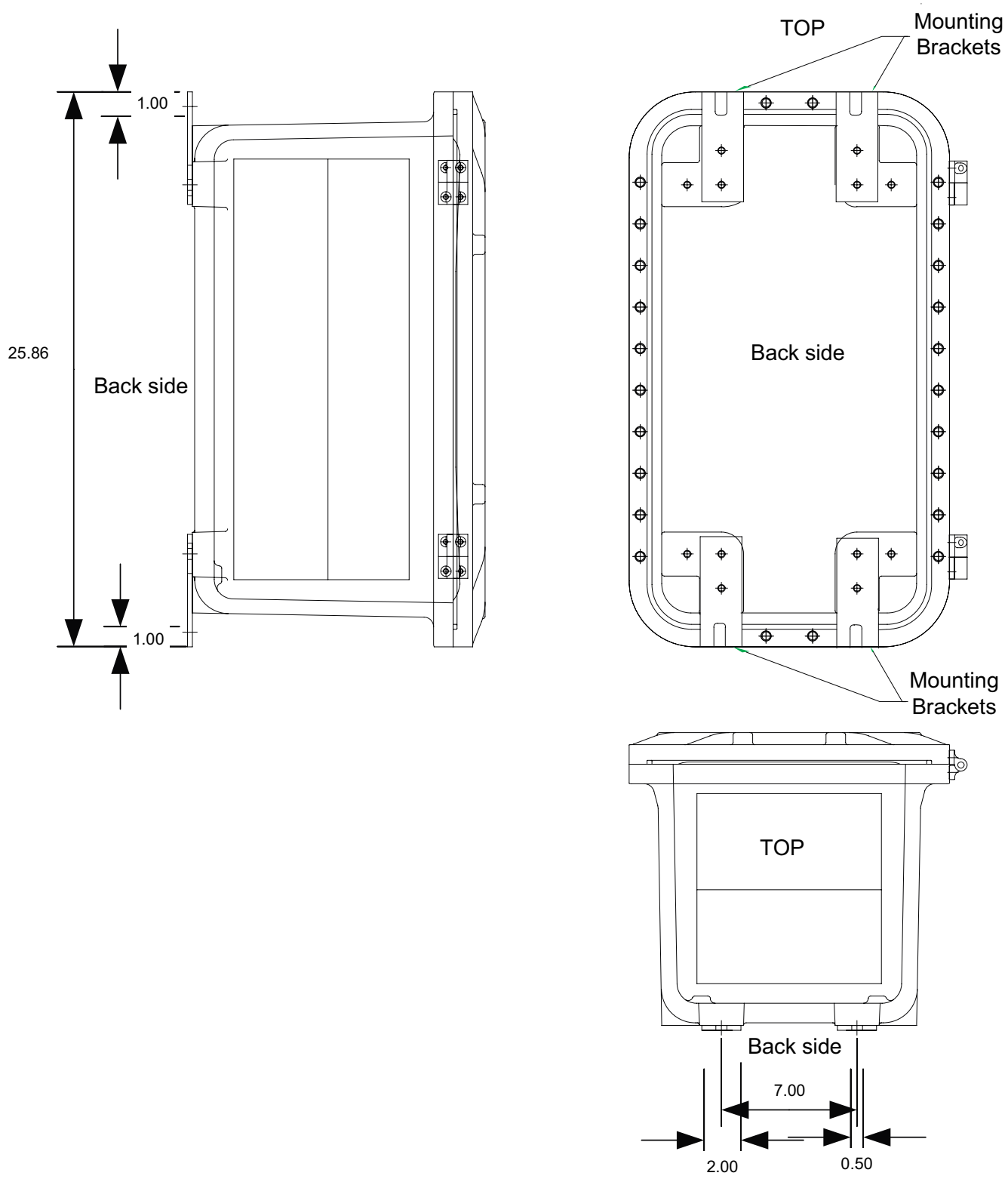

Figure 1 — EQ3900RPSE Explosion-proof Enclosure - Mounting Dimensions

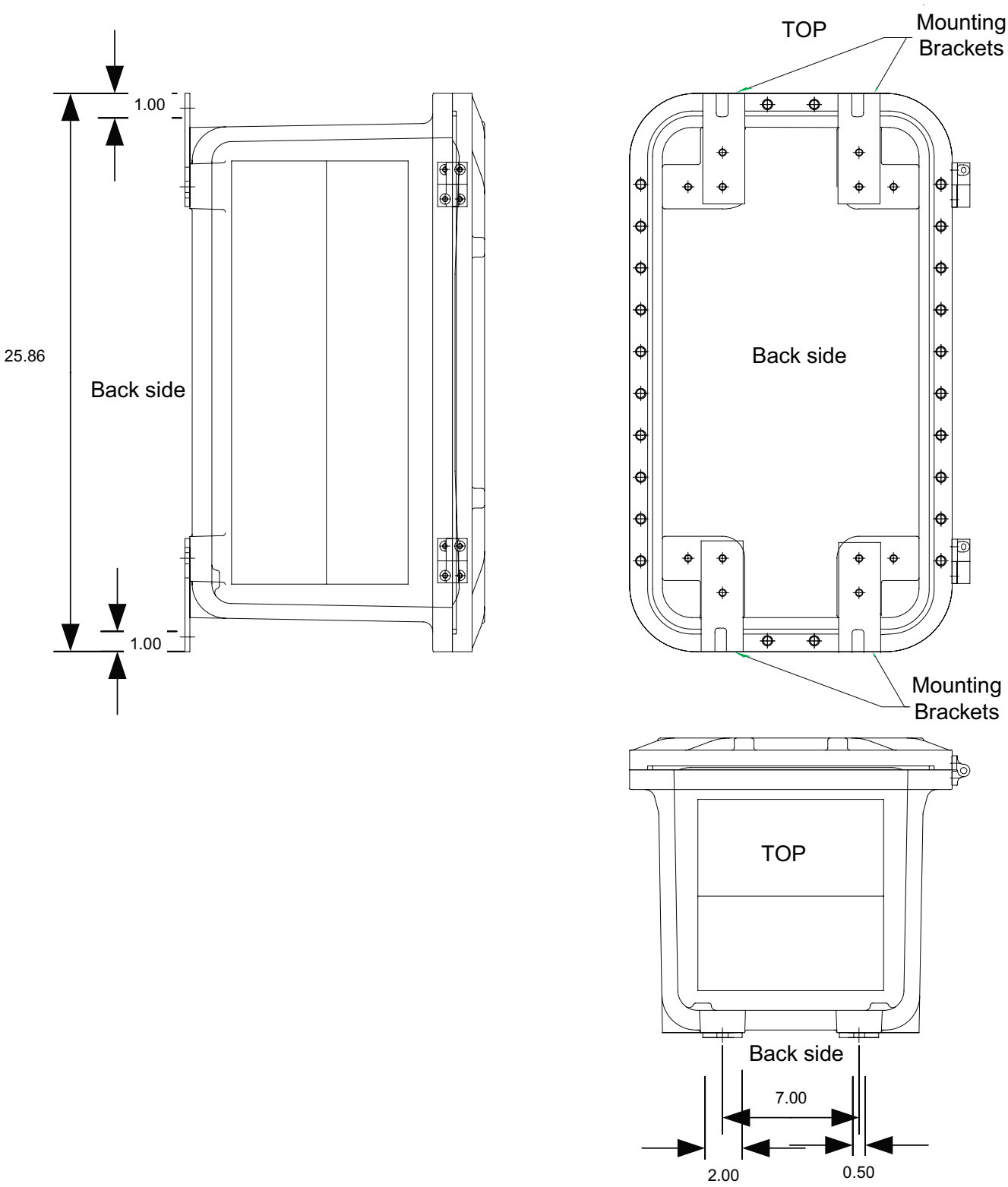

Figure 2 — EQ3900RPSG Ordinary Locations Enclosure - Mounting Dimensions

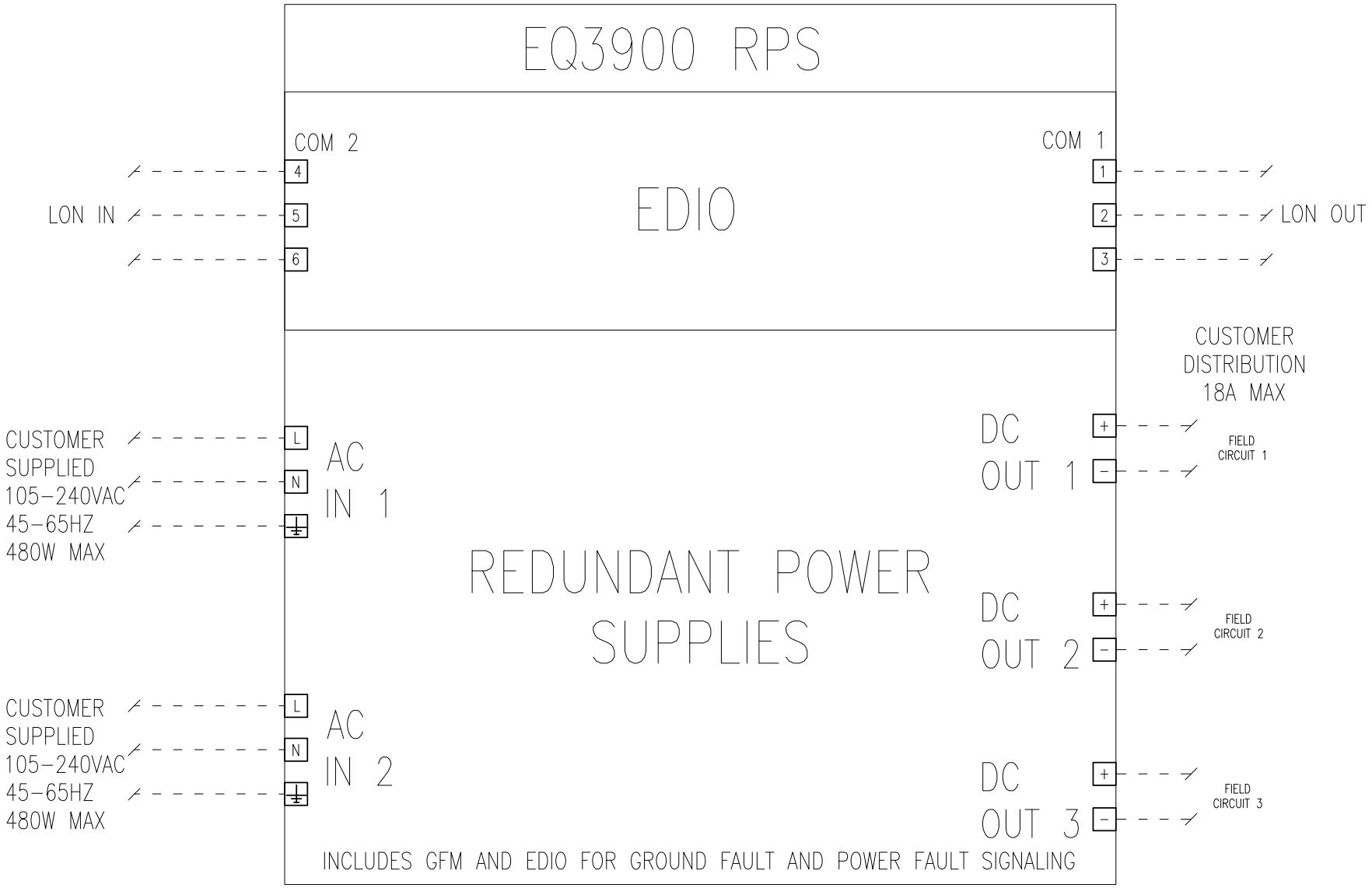

Figure 3 — Typical Wiring Diagram

APPENDIX A

FM APPROVAL

Model	EQ3900RPSE		EQ3900RPSG	
Location	Hazardous Locations Rating: Class I, Div. 1, Groups C and D (T6) NEMA/Type 4 (Only when no operators are installed)		Ordinary Location	
Ratings	Ambient Temperature: Input Voltage: Input Current: Output Voltage: Output Current: Enclosure:	–20°C to +50°C 120–220 VAC, 50/60 Hz 6 Amperes Maximum 24 Vdc - cannot be adjusted 18 Amperes Maximum Killark EXB-122412 with or without GLXR27 Window.	Ambient Temperature: Input Voltage: Input Current: Output Voltage: Output Current: Enclosure:	–20°C to +50°C 120–220 VAC, 50/60 Hz 6 Amperes Maximum 24 Vdc - cannot be adjusted 18 Amperes Maximum Hoffman CS0242012/ CS0242012556 with or without window.

APPENDIX B

CSA APPROVAL

Model	EQ3900RPSE		EQ3900RPSG	
Location	Hazardous Location Rating: Class I, Div 1, Groups C and D (T5/T6) Class I, Div 2, Groups A, B, C, and D (T4) Class II, Div. 1, Groups E, F, and G (T4) Class III, Enclosure Type 4 NEMA/Type 4 (Only when no operators are installed)		Ordinary Location	
Ratings:	Ambient Temperature: Input Voltage: Input Current: Output Voltage: Output Current: Enclosure:	–20°C to +50°C 120–220 VAC, 50/60 Hz 6 Amperes Maximum 24 Vdc - cannot be adjusted 18 Amperes Maximum Killark EXB-122412 with or without GLXR27 Window.	Ambient Temperature: Input Voltage: Input Current: Output Voltage: Output Current: Enclosure:	–20°C to +50°C 120–220 VAC, 50/60 Hz 6 Amperes Maximum 24 Vdc - cannot be adjusted 18 Amperes Maximum Hoffman CS0242012/ CS0242012556 with or without window.

95-8745

FlexSonic® Acoustic
Leak Detector

X3301 Multispectrum
IR Flame Detector

PointWatch Eclipse® IR
Combustible Gas Detector

FlexVu® Universal Display
with GT3000 Toxic Gas Detector

Eagle Quantum Premier®
Safety System

Carrier

DET-TRONICS

Corporate Office
6901 West 110th Street
Minneapolis, MN 55438 USA
www.det-tronics.com

Phone: +1 952.941.6665
Toll-free: +1 800.765.3473
Fax: 952.829.8750
det-tronics@carrier.com