

## Features

- NFPA 496, ISA 12.4, and ATEX standards
- Optional alarm output indicates air lock failure
- Optional differential pressure switch for Class I, Group A-D, ATEX certified hazardous area locations
- Type Ex [pz] certification for Zone 2 hazardous locations
- Type Y system certified for Class I and Class II, Division 1 to Division 2
- Type Z system certified for Class I and Class II, Division 2 to nonhazardous area
- Enclosure volume up to 2.54 m<sup>3</sup> (90 ft<sup>3</sup>)

## Function

Model 3003 is a Rapid Exchange<sup>®</sup> purging system that operates on a supply of compressed instrument air or inert gas. It regulates and monitors pressure within sealed protected enclosure(s) in order to remove and prevent flammable gas or vapor accumulations.

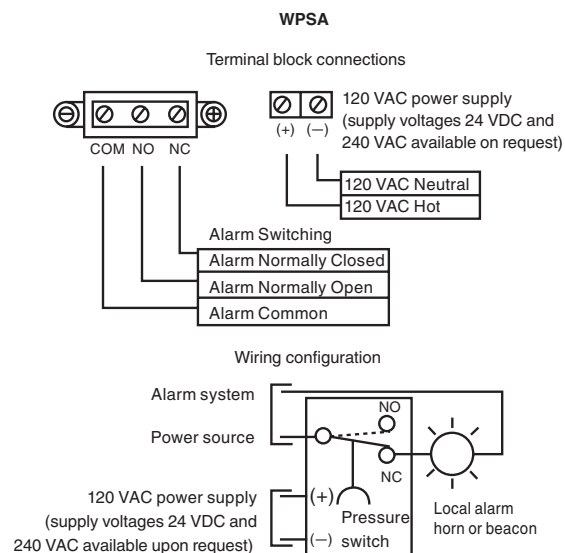
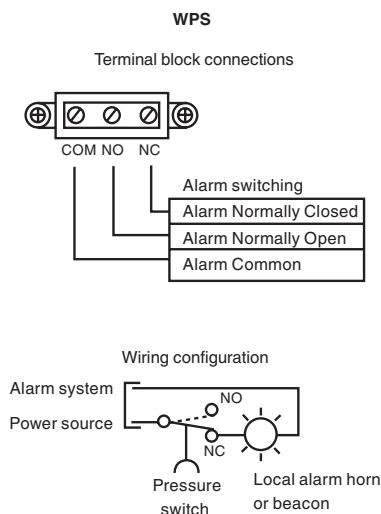
Model 3003 accomplishes the required volume exchanges and maintains a safe pressure. Pepperl+Fuchs Model EPV-3 enclosure protection vent is required for proper operation. This process reduces the hazardous (classified) area rating within protected enclosure(s), in accordance with the NEC-NFPA 70, NFPA 496, ISA 12.4 and IEC 600 79-15 EN 50021.

## Assembly



# BEBCO EPS<sup>®</sup>

## Connection



Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

Pepperl+Fuchs Group  
www.pepperl-fuchs.com

USA: +1 330 486 0002  
pa-info@us.pepperl-fuchs.com

Germany: +49 621 776 2222  
pa-info@de.pepperl-fuchs.com

Singapore: +65 6779 9091  
pa-info@sg.pepperl-fuchs.com

**PEPPERL+FUCHS**  
PROTECTING YOUR PROCESS

|                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|----------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>General specifications</b>                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Series                                                         | 3003 Series                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Hazardous environment                                          | gas                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Electrical specifications</b>                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Connection                                                     | Terminal blocks                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Output</b>                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Output I                                                       | -WPS-                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Output type                                                    | Switch contacts                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Contact loading                                                | 120 VAC @ 15 A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Output II                                                      | -WPSA-                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Output type                                                    | Switch contacts                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Contact loading                                                | 120/220 VAC; 24 VDC @ 10 A; 125 VDC @ 50 mA<br>power requirements: 24 / 120 / 240 VDC @ 3 / 4 / 11 watts                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Pneumatic parameters</b>                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Protective gas supply                                          | instrument grade air or inert gas                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Pressure requirement                                           | 80 - 120 psi (5.5 - 8.3 bar)                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Safe pressure                                                  | Setpoint: 0.25" (6.35 mm)<br>Flow rate: 0.1 - 3.5 SCFH (2.8 - 99 l/hr)                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Purge flow and enclosure pressure rate                         | 12 SCFM / 720 SCFH (340 l/m / 20390 l/hr)<br>(With regulator set to 60 psi min. during exchange)                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Operating conditions</b>                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Process conditions                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Exchange time                                                  | 4 volume exchange rate: 1 min / 3.0 ft <sup>3</sup> (85 l/min)<br>5 volume exchange rate: 1 min / 2.4 ft <sup>3</sup> (68 l/min)                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Ambient conditions</b>                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Ambient temperature                                            | -29 ... 49 °C (-20.2 ... 120.2 °F)                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Mechanical specifications</b>                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Connection type                                                | System supply port: 1/4" FPT<br>Enclosure supply port: 1/2" FPT<br>Enclosure reference fitting: 1/4" tube<br>Switch conduit port size: 1/2" FPT                                                                                                                                                                                                                                                                                                                                                          |
| Material                                                       | Regulator body: zinc w/enamel finish<br>Regulator handle & bowl: polycarbonate<br>Enclosure pressure gauge: alum. w/enamel finish<br>Rapid Exchange® gauge: poly & nickel plated<br>Tube fitting: 316 SS forged body<br>Tubing: 316 SS 1/4" .035 welded<br>Fastener hardware: alum. & stainless steel<br>System face plate: 316 14 ga #3 brush SS<br>System mounting flange: 316 SS tumble finish<br>Manifold body: anodized aluminum<br>Manifold valves: 316 SS<br>Mfr. ID nameplate: silkscreen Lexan® |
| Mass                                                           | 3003-LPS* 4.5 kg (10 lb)<br>3003-WPS* 6.8 kg (15 lb)                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Data for application in connection with hazardous areas</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| EU-Type Examination Certificate                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Marking                                                        | LPS:<br>⊕ II 3G Ex<br>[pz] IIC T4<br><br>WPSA:<br>⊕ II 3G Ex<br>[pz] IIB+H2 T4                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Directive conformity                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Directive 94/9/EC                                              | *-LPS-*:<br>EN 60079-2: 2004<br>EN 60079-0: 2006                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>International approvals</b>                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| FM approval                                                    | Type Y<br>LPS: Class I, Division 1, Groups A, B, C, D<br>WPS: Class 1, Division 1, Groups C, D<br>WPSA: Class I, Division 1, Groups A, B, C, D<br><br>Type Z and Ex [pz]<br>LPS: Class I, Division 2, Groups A, B, C, D<br>WPS: Class 1, Division 2, Groups C, D<br>WPSA: Class I, Division 2, Groups A, B, C, D                                                                                                                                                                                         |
| UL approval                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

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Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

Pepperl+Fuchs Group  
www.pepperl-fuchs.com

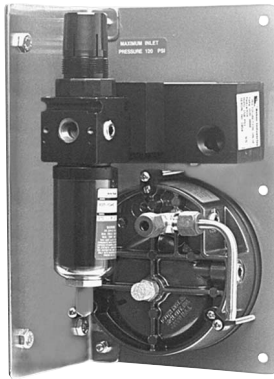
USA: +1 330 486 0002  
pa-info@us.pepperl-fuchs.com

Germany: +49 621 776 2222  
pa-info@de.pepperl-fuchs.com

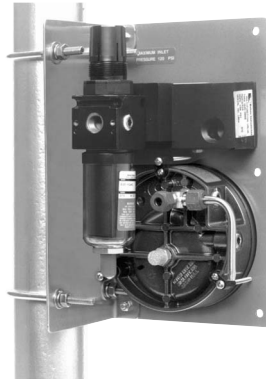
Singapore: +65 6779 9091  
pa-info@sg.pepperl-fuchs.com

|                            |                                                                                                                                                                                                                                                                                                                               |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| cULus                      | <p>Type Y<br/>LPS: Class I, Division 1, Groups A, B, C, D<br/>WPS: Class 1, Division 1, Groups C, D<br/>WPSA: Class I, Division 1, Groups A, B, C, D</p> <p>Type Z and Ex [pz]<br/>LPS: Class I, Division 2, Groups A, B, C, D<br/>WPS: Class 1, Division 2, Groups C, D<br/>WPSA: Class I, Division 2, Groups A, B, C, D</p> |
| <b>General information</b> |                                                                                                                                                                                                                                                                                                                               |
| Supplementary information  | EC-Type Examination Certificate, Statement of Conformity, Declaration of Conformity, Attestation of Conformity and instructions have to be observed where applicable. For information see <a href="http://www.pepperl-fuchs.com">www.pepperl-fuchs.com</a> .                                                                  |

### VM configuration mounting options



Model 3003-LPS-CI-YZ-VML  
Flange mounted to flat vertical  
surface with Model SMK-1  
fastener kit

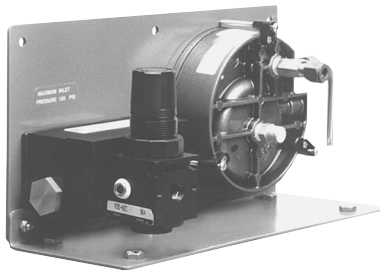


Model 3003-LPS-CI-YZ-VML  
Flange mounted to vertical  
2" pipe stand with  
Model PMK-1 fastener kit



Model 3003-LPS-CI-YZ-VM  
Frame or panel\* mounted  
through cutout in suitable surface  
with Model SMK-6m fastener kit

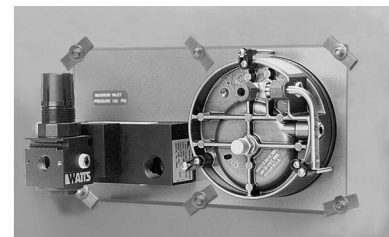
### HM configuration mounting options



Model 3003-LPS-CI-YZ-HMT  
Flange mounted to flat horizontal  
surface with Model SMK-1 fastener kit



Model 3003-LPS-CI-YZ-HMB  
Flange mounted to horizontal 2" pipe  
stand with Model PMK-1 fastener kit

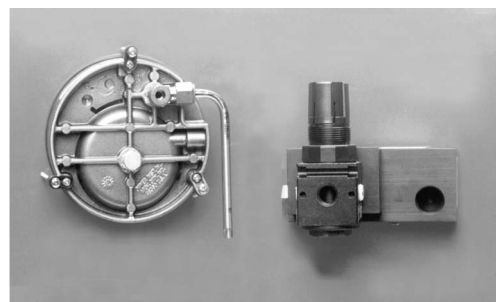


Model 3003-LPS-CI-YZ-HM  
Frame or panel\* mounted through cutout  
in suitable surface with Model SMK-6m  
fastener kit

### CK configuration mounting options



Front view

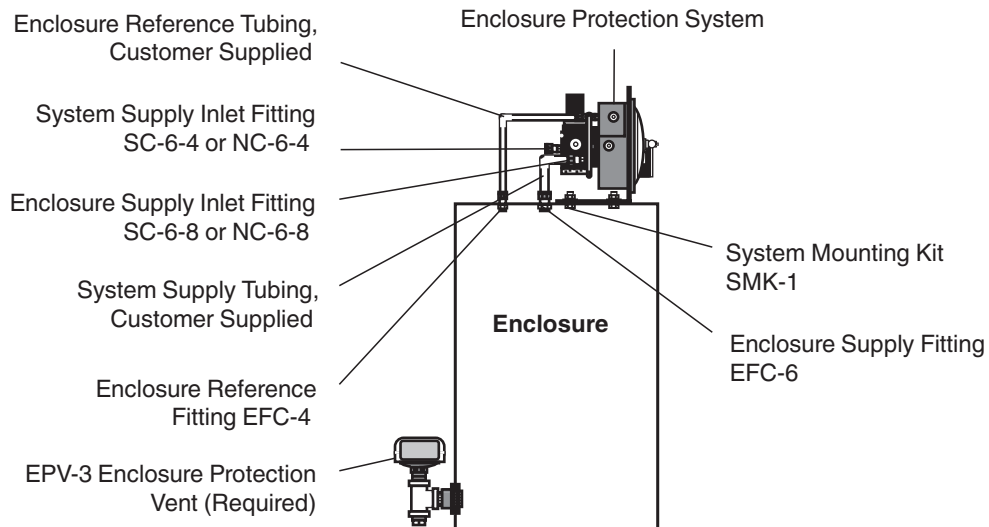


Rear view

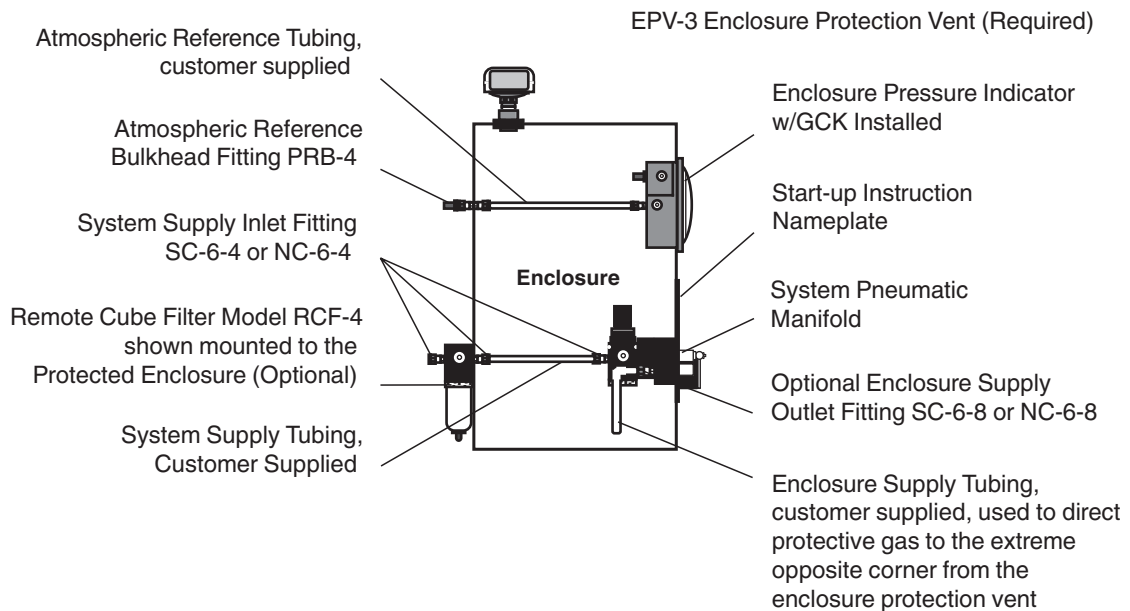
Model 3003-LPS-CI-YZ-CK  
Rear view of frame or panel\* mount through cutout in suitable surface with  
supplied fasteners

## Assembly

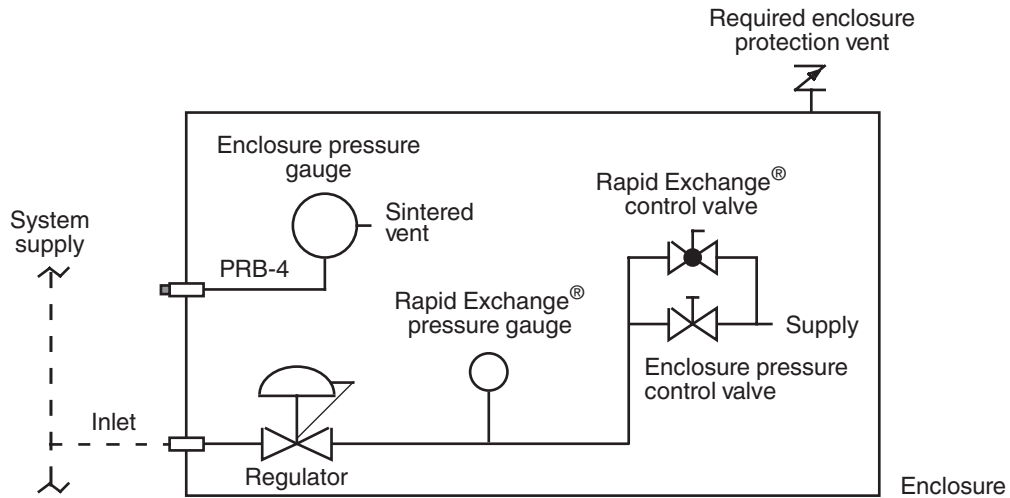
## External Mount



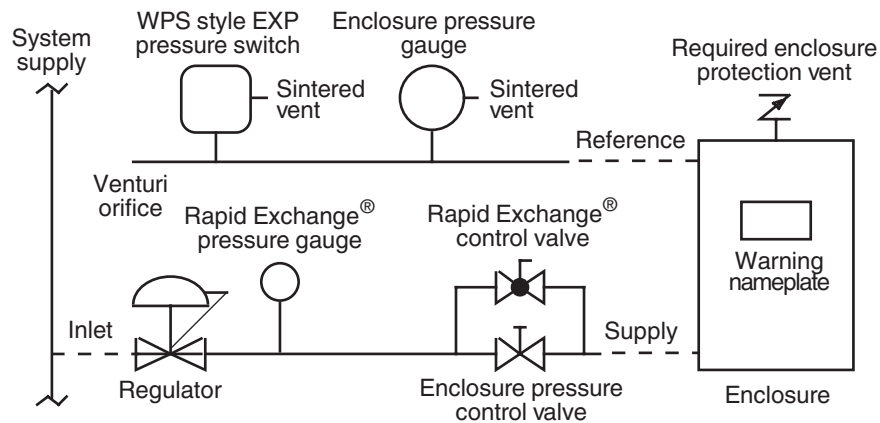
## Internal Mount



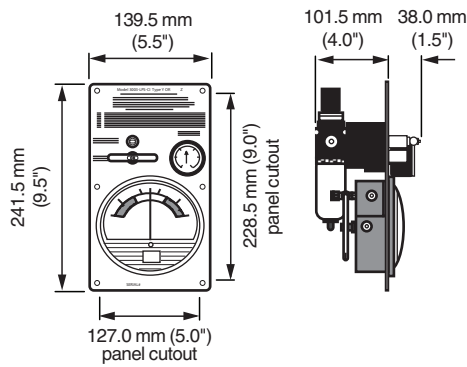
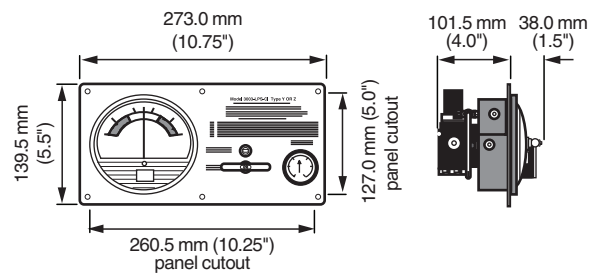
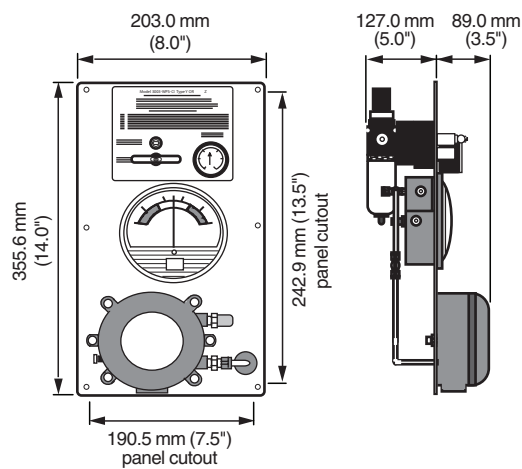
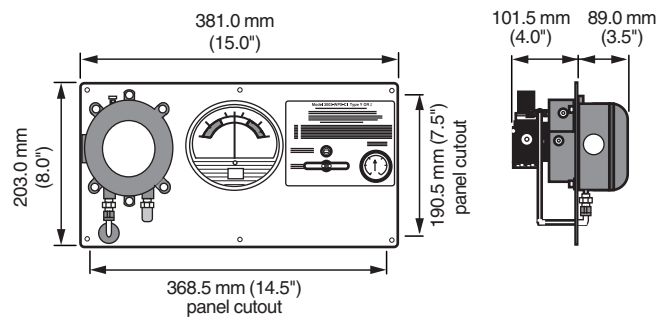
### Standard Pneumatic Installation Diagram



### Panel Mount Installation Diagram

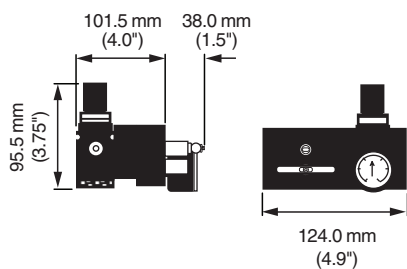


# Dimensions

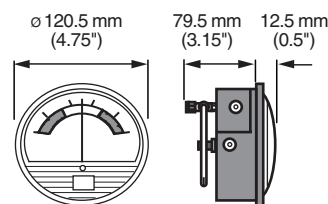
**3003-LPS-CL-\*\*-VM\*-\*\*-\*\*\*\*\***

**3003-LPS-CL-\*\*-HM\*-\*\*-\*\*\*\*\***

**3003-WPS\*-CL-\*\*-VM\*-\*\*-\*\*\*\*\***

**3003-WPS\*-CL-\*\*-HM\*-\*\*-\*\*\*\*\***


## Component kit

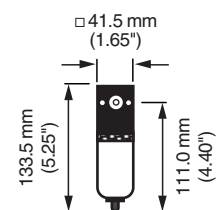
### Pneumatic manifold



### Enclosure pressure gauge



### RCF-4



| System Accessories              |                                       |
|---------------------------------|---------------------------------------|
| Connection fittings             |                                       |
| Part                            | Description                           |
| NC-6-4                          | 3/8" T x 1/4" P ninety connector      |
| SC-6-4                          | 3/8" T x 1/4" P straight connector    |
| NC-6-8                          | 3/8" T x 1/2" P ninety connector      |
| SC-6-8                          | 3/8" T x 1/2" P straight connector    |
| EFC-4                           | 1/4" flush connector                  |
| EBC-4                           | 1/4" bulkhead connector               |
| EFC-6                           | 3/8" flush connector                  |
| EBC-6                           | 3/8" bulkhead connector               |
| EPC-13                          | 1 - 1/4" pipe connector               |
| Additional items                |                                       |
| Part                            | Description                           |
| SMK-1                           | Surface Mounting Kit - Flange         |
| SMK-6m                          | Surface Mounting Kit - Frame/Panel    |
| PMK-1                           | Pipe Mounting Kit                     |
| GCK                             | Gauge Conversion Kit                  |
| ILF-4                           | 1/4" In-Line Filter Kit               |
| RCF-4                           | 1/4" Remote Cube Filter               |
| EPSK-1                          | Explosion Proof Switch Kit (GRP C, D) |
| EPSK-1A                         | Explosion Proof Switch Kit (GRP A-D)  |
| GPSK-1                          | General-purpose Switch Kit            |
| RAH                             | Remote Alarm Horn                     |
| RAB-1                           | Div. 1 Remote Alarm Beacon            |
| RAB-2                           | Div. 2 Remote Alarm Beacon            |
| Warning nameplates              |                                       |
| Part                            | Description                           |
| EWN-1                           | Class I enclosure warning             |
| ETW                             | Enclosure temperature warning         |
| Installation & Operation Manual |                                       |
| Part                            | Description                           |
| DOCT-1369                       | Installation and Operation Manual     |



## Type code/model number

\* only for WPSA option  
\*\* only WPSA and LPS options are Zone 2, ATEX certified