

3003



- NFPA 496, ISA 12.4
- Optional alarm output indicates air lock failure
- Optional differential pressure switch for Class I, Group A-D, hazardous area locations
- Type Y system certified for Class I, Division 1 to Division 2
- Type Z system certified for Class I, Division 2 to nonhazardous area
- Enclosure volume up to 2.54 m³ (90 ft³)

3003 Series purge and pressurization system



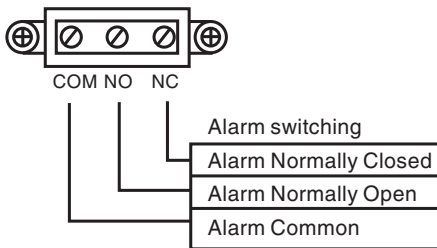
Function

The model 3003 is a Rapid Exchange®- purging system that operates on a supply of compressed instrument air or inert gas. The system regulates and monitors pressure within sealed protected enclosure(s), in order to remove and prevent flammable gas or vapor accumulations. The system accomplishes the required volume exchanges and maintains a safe pressure. A 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.

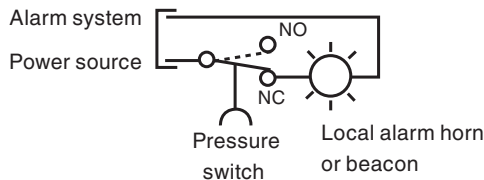
Connection

WPS

Terminal block connections

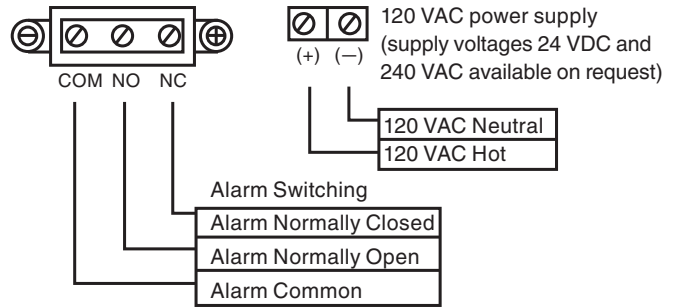


Wiring configuration

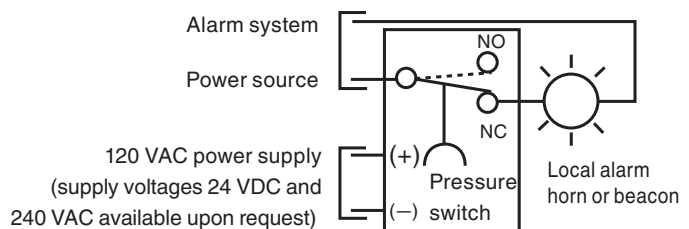


WPSA

Terminal block connections



Wiring configuration



Technical Data

General specifications

| | |
|--------|-----------------------------|
| Series | 3003 Series |
| System | Type Y Purge , Type Z Purge |

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

Technical Data

| | |
|--|--|
| Hazardous environment | gas |
| Electrical specifications | |
| Connection | Terminal blocks |
| Output | |
| 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 power requirements: 24 / 120 / 240 VDC @ 3 / 4 / 11 watts |
| Pneumatic parameters | |
| 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) 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) (With regulator set to 60 psi min. during exchange) |
| Operating conditions | |
| Process conditions | |
| Exchange time | 4 volume exchange rate: 1 min / 3.0 ft ³ (85 l/min) 5 volume exchange rate: 1 min / 2.4 ft ³ (68 l/min) |
| Ambient conditions | |
| Ambient temperature | -29 ... 49 °C (-20.2 ... 120.2 °F) |
| Mechanical specifications | |
| Connection type | System supply port: 1/4" FPT Enclosure supply port: 1/2" FPT Enclosure reference fitting: 1/4" tube Switch conduit port size: 1/2" FPT |
| Material | Regulator body: zinc w/enamel finish Regulator handle & bowl: polycarbonate Enclosure pressure gauge: alum. w/enamel finish Rapid Exchange [®] gauge: poly & nickel plated Tube fitting: 316 SS forged body Tubing: 316 SS 1/4" .035 welded Fastener hardware: alum. & stainless steel System face plate: 316 14 ga #3 brush SS System mounting flange: 316 SS tumble finish Manifold body: anodized aluminum Manifold valves: 316 SS Mfr. ID nameplate: silkscreen Lexan [®] |
| Mass | 3003-LPS* 4.5 kg (10 lb) 3003-WPS* 6.8 kg (15 lb) |
| International approvals | |
| FM approval | Type Y LPS: Class I, Division 1, Groups A, B, C, D WPS: Class 1, Division 1, Groups C, D WPSA: Class I, Division 1, Groups A, B, C, D Type Z LPS: Class I, Division 2, Groups A, B, C, D WPS: Class 1, Division 2, Groups C, D WPSA: Class I, Division 2, Groups A, B, C, D |
| UL approval | |
| cULus | Type Y LPS: Class I, Division 1, Groups A, B, C, D WPS: Class 1, Division 1, Groups C, D WPSA: Class I, Division 1, Groups A, B, C, D Type Z LPS: Class I, Division 2, Groups A, B, C, D WPS: Class 1, Division 2, Groups C, D WPSA: Class I, Division 2, Groups A, B, C, D |

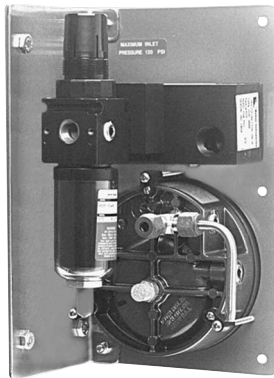
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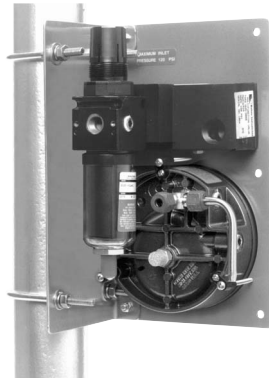
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 PEPPERL+FUCHS

Mounting

VM configuration mounting options



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

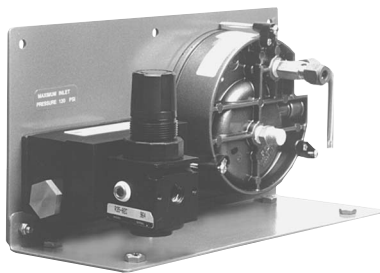


Model 3003-LPS-CI-YZ-VML
Flange mounted to vertical 2" pipe stand with Model PMK-1 fastener kit



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

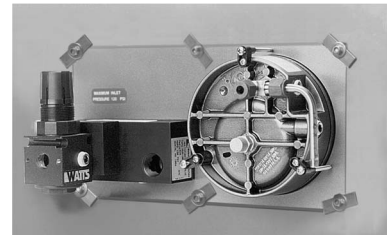
HM configuration mounting options



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

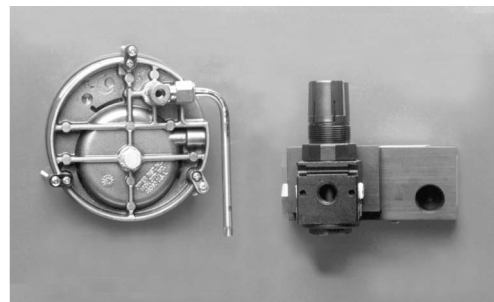


Model 3003-LPS-CI-YZ-HM
Frame or panel* mounted through cutout in suitable surface with Model SMK-6m fastener kit

CK configuration mounting options



Front view



Rear view

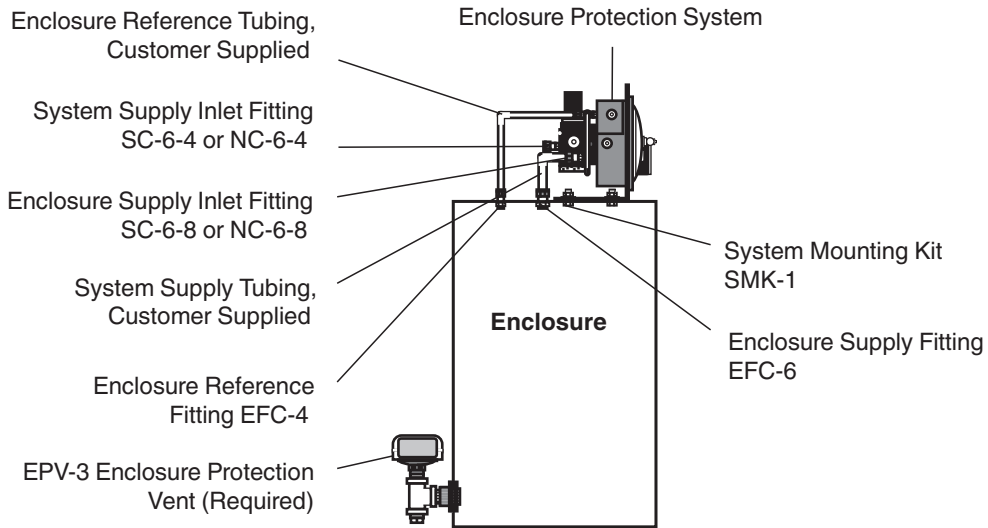
Model 3003-LPS-CI-YZ-CK
Rear view of frame or panel* mount through cutout in suitable surface with supplied fasteners

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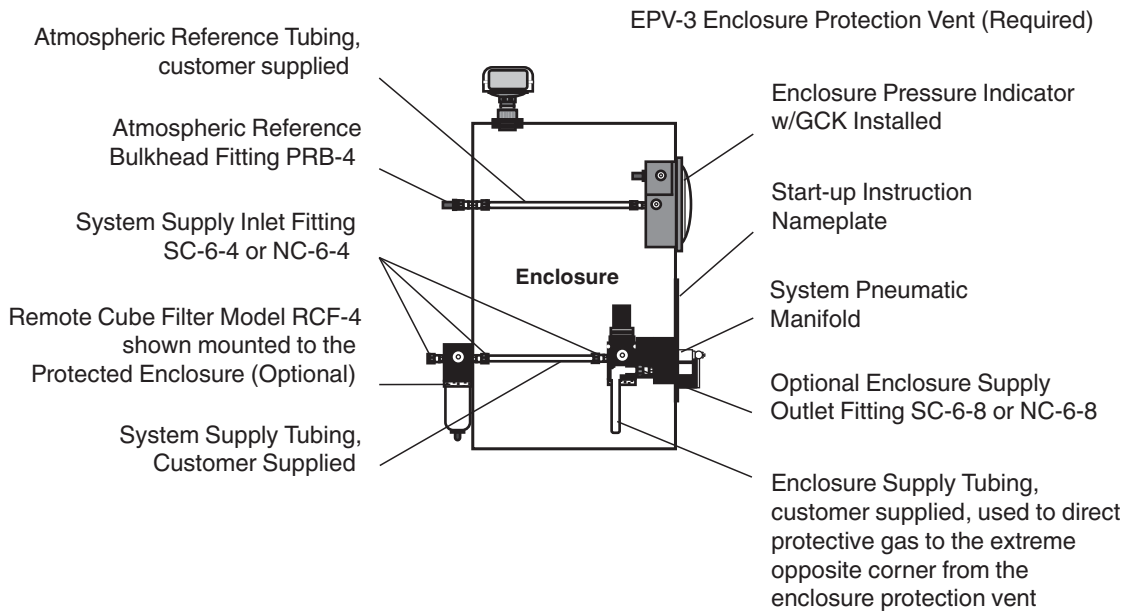
Additional Information

Assembly

External Mount



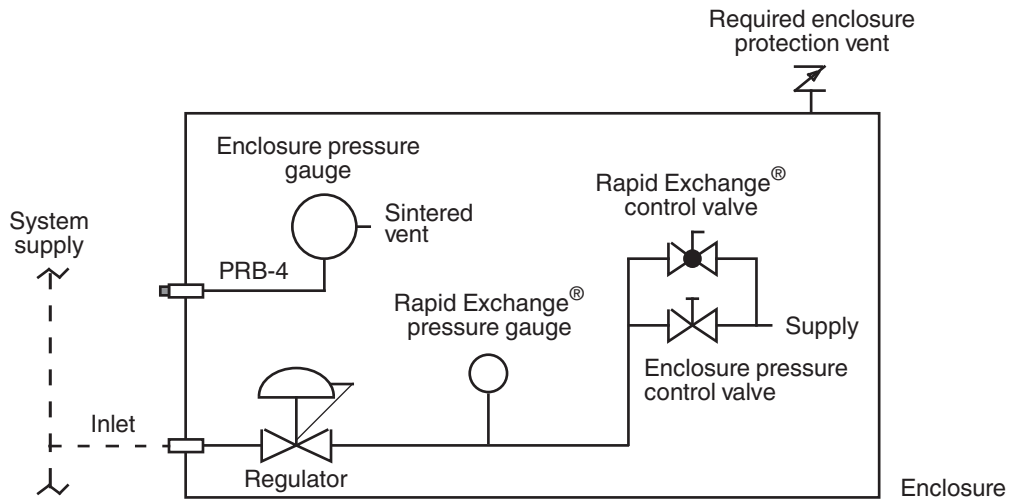
Internal Mount



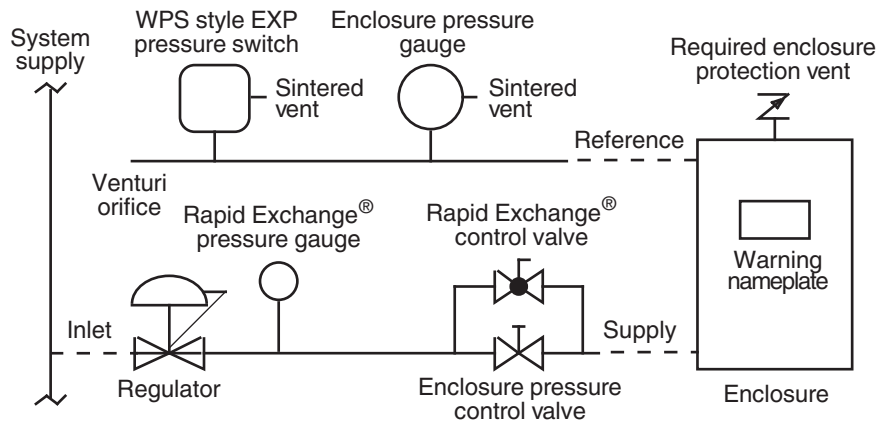
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Standard Pneumatic Installation Diagram



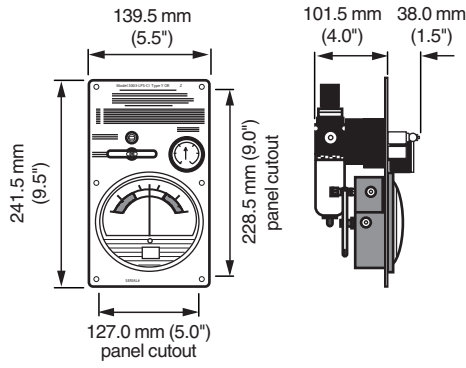
Panel Mount Installation Diagram



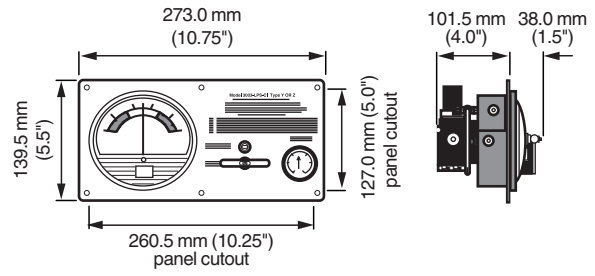
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Dimensions

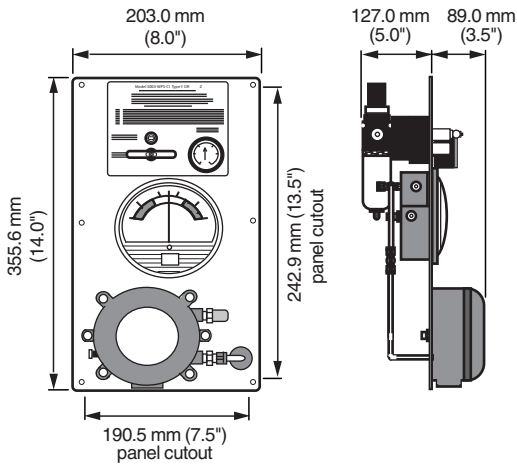
3003-LPS-CL-**-VM*-**-*****



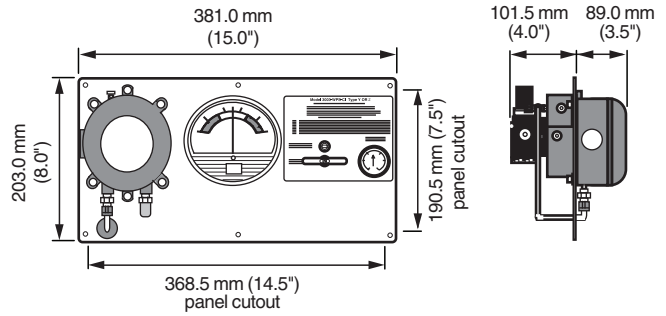
3003-LPS-CL-**-HM*-**-*****



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

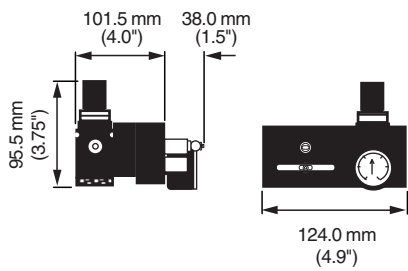


3003-WPS*-CL-**-HM*-**-*****

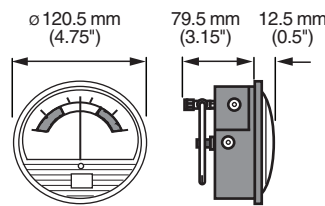


Component kit

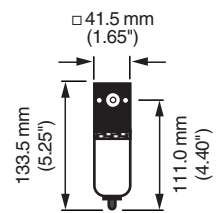
Pneumatic manifold



Enclosure pressure gauge



RCF-4



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Accessories

| 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



***Voltage**
24 VDC
220 VAC
120 VAC

Cooler indicator gauge
VX vortex

Mounting configuration

- VML** vertical mount left
- VMR** vertical mount right
- HMT** horizontal mount top
- HMB** horizontal mount bottom
- CK** component kit (LPS style only)

System type

YZ DIV 1 to DIV 2; DIV 2 to nonhazardous

Area classification

CI Class I

System style

- LPS** less pressure switch
- WPS** with pressure switch
- WPSA** with pressure switch (120 VAC standard)

3003 series model number

* only for WPSA option

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