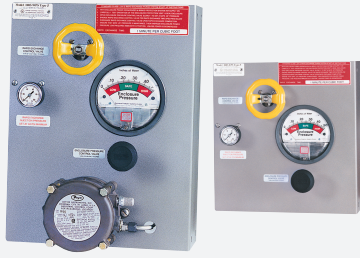


# Type Y & Z purge and pressurization system

## 1003



- NFPA 70, NFPA 496, ISA 12.4 standards
- Optional alarm output indicates air lock failure
- Type Y system certified for Class I, Division 1 to Division 2
- Type Z system certified for Class I, Division 2 to nonhazardous
- Enclosure volume up to 75 ft<sup>3</sup>

### 1003 Series purge and pressurization system



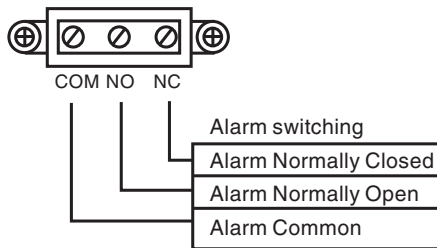
### Function

The model 1003 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 four air exchanges and maintains a "safe" (0.25") pressure. A Pepperl+Fuchs Model EPV-3 Enclosure Protection Vent is required for proper operation. This process reduces the hazardous (classified) area rating within the enclosure(s), in accordance with the NEC - NFPA 70, Article 500, NFPA 496 and ISA 12.4.

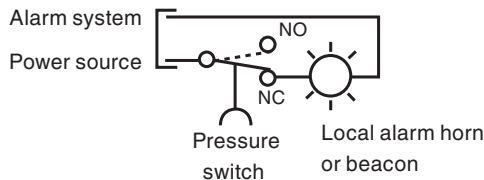
### Connection

#### WPS

Terminal block connections

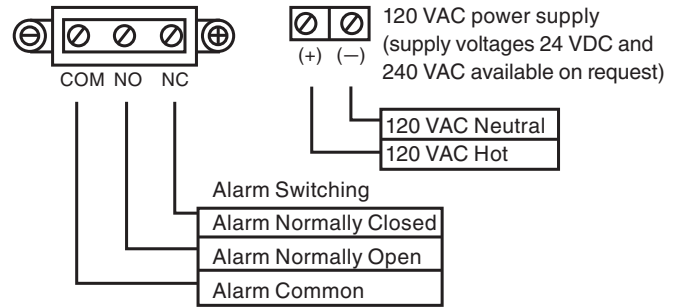


Wiring configuration

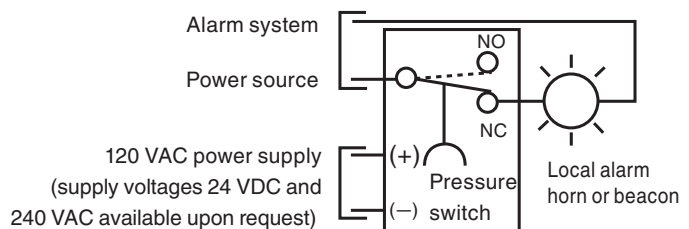


#### WPSA

Terminal block connections



Wiring configuration



### Technical Data

#### General specifications

Series	1003
System	Type Y Purge , Type Z Purge

Release date: 2024-07-09 Date of issue: 2024-07-09 Filename: t1156422\_eng.pdf

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

## Technical Data

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 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
Safe pressure	Setpoint: 0.25" (6.35 mm) Flow rate: 0.1 - 3.5 SCFH (2.8 - 99 l / hr)
<b>Operating conditions</b>	
Process conditions	
Capacity and filtration	3.8 oz @ 40 µ
Exchange pressure	3" - 5"
Exchange flow rate	10 SCFM / 600 SCFH (With regulator set to 60 psi min. during exchange)
Exchange time	1 min / 2.5 ft <sup>3</sup>
<b>Ambient conditions</b>	
Ambient temperature	-29 ... 49 °C (-20.2 ... 120.2 °F)
<b>Mechanical specifications</b>	
Connection type	System supply port: 3/8" FPT Enclosure supply fitting: 3/8" tube fitting Enclosure reference fitting: 1/4" tube fitting Switch conduit port size: 1/2" FPT
Material	Filter regulator body: zinc w/enamel finish Regulator handle & bowl: polycarbonate Enclosure pressure gauge: alum. w/enamel finish Rapid Exchange <sup>®</sup> gauge: poly case and brass tube Tube fittings & valves: 316 ss forged body Tubing: 316 ss 1/4" & 3/8" .035 welded System nameplate: silk screened Lexan <sup>®</sup> & ss Fastener hardware: alum. & stainless steel Mounting plate: 316 14 ga #3 brush ss EXP pressure switch body: anodized cast aluminum Enclosure warning nameplate: silk screened stainless steel
Mass	1003-LPS-* 5.4 kg (12 lb) 1003-WPS* 7.7 kg (17 lb)
<b>International approvals</b>	
FM approval	Type Y LPS: Class I, Division 1, Groups A, B, C, D WPS: Class I, 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 I, 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 I, 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 I, Division 2, Groups C, D WPSA: Class I, Division 2, Groups A, B, C, D

Release date: 2024-07-09 Date of issue: 2024-07-09 Filename: t156422\_eng.pdf

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

Pepperl+Fuchs Group  
www.pepperl-fuchs.comUSA: +1 330 486 0002  
pa-info@us.pepperl-fuchs.comGermany: +49 621 776 2222  
pa-info@de.pepperl-fuchs.comSingapore: +65 6779 9091  
pa-info@sg.pepperl-fuchs.com

**PEPPERL+FUCHS**

Assembly



Release date: 2024-07-09 Date of issue: 2024-07-09 Filename: t156422\_eng.pdf

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

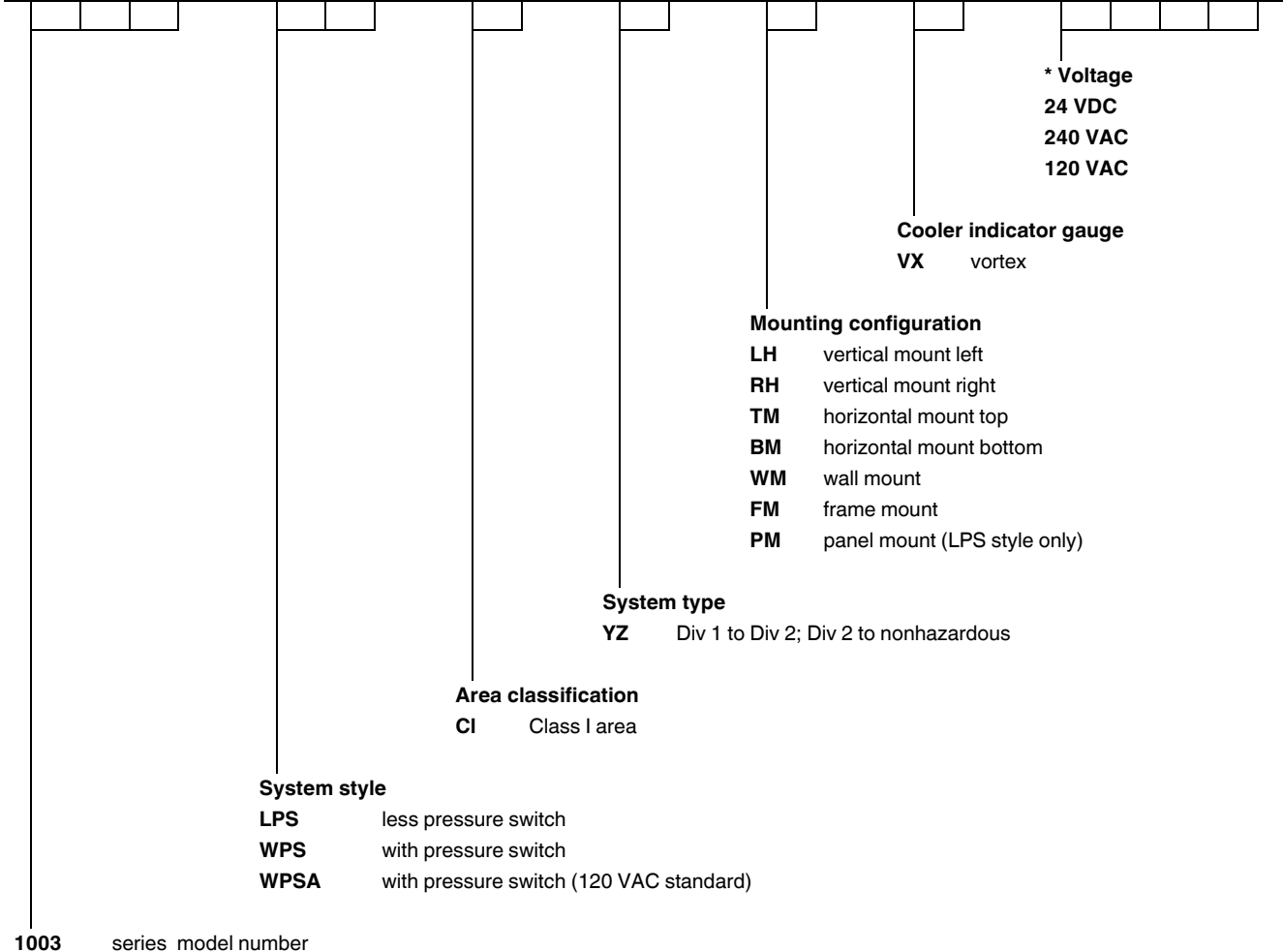
Germany: +49 621 776 2222  
pa-info@de.pepperl-fuchs.com

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

 **PEPPERL+FUCHS**

**Type Code**

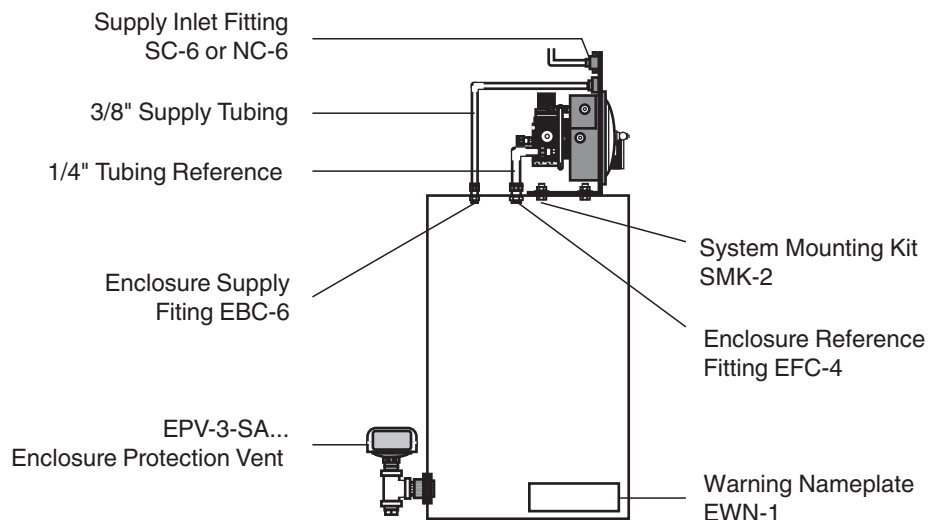
**1 0 0 3 - L P S - C I - Y Z - L H - V X - 2 4 V D C**



\* only for WPSA option

**Additional Information**

**Assembly**



Release date: 2024-07-09 Date of issue: 2024-07-09 Filename: t156422\_eng.pdf

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**

**Dimensions**

Overall system dimensions			
LPS / WPS	LH - left hand	RH - right hand	TM - top mount
Height	12 / 15	12 / 15	12 / 12
Width	11.5 / 11.5	11.5 / 11.5	11.5 / 16.25
Depth	6 / 7.5	6 / 7.5	6 / 7.5
LPS / WPS	BM - bottom mount	WM - wall mount	FM & PM - surface
Height	12 / 12	12 / 15	14 / 17
Width	11.5 / 15.25	11.5 / 15.25	13.5 / 13.5
Depth	6 / 7.5	7.75 / 9.25	5.75 / 7.25
<p>Dimensions in inches. Mounting dimensions available upon request.                      FM &amp; PM panel cutout dimensions: LPS - 13 h x 12.5 w WPS - 16 h x 12.5 w.</p> <p>Height &amp; Width dimensions reflect mounting plate measurements.                      Depth dimension reflects overall measurement of system, including components.</p>			

Release date: 2024-07-09 Date of issue: 2024-07-09 Filename: t156422\_eng.pdf

**System Accessories**

Connection fittings	
Part	Description
NC-6	1/4" ninety connector
SC-6	1/4" straight connector
EFC-4	1/4" flush connector
EFC-6	3/8" flush connector
EBC-6	3/8" bulkhead connector
EPC-13	1" pipe connector
Additional items	
Part	Description
SMK-2	Surface Mounting Kit (-LH-, -RH-, -TM-, -BM-, -WM- models)
SMK-8	Surface Mounting Kit (-FM-, -PM- models)
EPSK-1	Explosion Proof Switch Kit (Class I areas)
EPSK-1A	Explosion Proof Switch Kit (Class I areas)
GPSK-1	General-purpose Switch Kit (Class I areas)
RAH	Remote Alarm Horn
RAB-1	Div. 1 Remote Alarm Beacon
RAB-2	Div. 2 Remote Alarm Beacon
LCK	"L" style conduit fitting kit
TCK	"T" style conduit fitting kit
Warning nameplates	
Part	Description
EWN-1	Class I enclosure warning
ETW	Enclosure temperature warning
Installation & Operation Manual	
Part	Description
DOCT-1356	Installation and Operation Manual

Release date: 2024-07-09 Date of issue: 2024-07-09 Filename: t156422\_eng.pdf

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