Class I (≤ 15 ft³)

Model 1002

Description

Model 1002 is a Rapid Exchange® 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. The system accomplishes four air exchanges and maintains a "safe" (0.25") pressure. A Pepperl+Fuchs Model EPV-2 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.

LPS Style
(Less Pressure Switch)

WPS/WPSA Style
(With Pressure Switch)

Operation

In accordance with system instructions, start-up requires air supply to be engaged and enclosure power to be deenergized. The enclosure protection vent must be tested and the enclosure(s) must be sealed. The enclosure pressure control valve is then used to set a safe reading on the enclosure pressure indicator. When safe pressure is stable, the Rapid Exchange control valve must be fully engaged. Upon completion of the Rapid Exchange cycle, (five minutes minimum) the Rapid Exchange control valve must be disengaged to return to a safe enclosure pressure. Power can then be energized to the protected enclosure(s). Loss of safe pressure requires immediate attention, unless power is deenergized. WPS style systems include an explosion proof differential pressure switch with form "C" contacts for audible or visual alarm systems.

System Specifications

System Dimensions:	See page 10
Shipping Weight:	LPS - 10 lb / WPS - 15 lb
Temp. Range:	-20 °F to +120 °F
Supply Pressure Range:	80 - 120 psi
Capacity & Filtration:	1.5 oz @ 20 Micron
Supply Requirements:	clean air or inert gas
Safe Press. Setpoint:	0.25"
Safe Press. Flow Rate:	* 0.1 - 3.5 SCFH
Exchange Pressure:	3" - 5"
Exchange Flow Rate:	** 4 SCFM / 240 SCFH
Exchange Time:	1 min/ft³
System Supply Port:	1/4" FPT
Enclosure Supply Fitting:	1/4" tube fitting
Enclosure Reference Fitting:	1/4" tube fitting
Switch Setting (Decr):	0.15" ± 0.02"
Switch Conduit Port Size:	1/2" FPT
Switch Contact Rating	
WPS Style:	120 VAC @ 15 A
WPSA Style:	*** 120/220 VAC, 24 VDC @ 10 A; 125 VDC @ 50 mA

Switch (WPSA) Power Requirement: 24 / 120 / 240 VDC @ 3 /4 /11 watts

* Enclosure integrity determines actual flow rate

** With regulator set to 60 psi min. during exchange.
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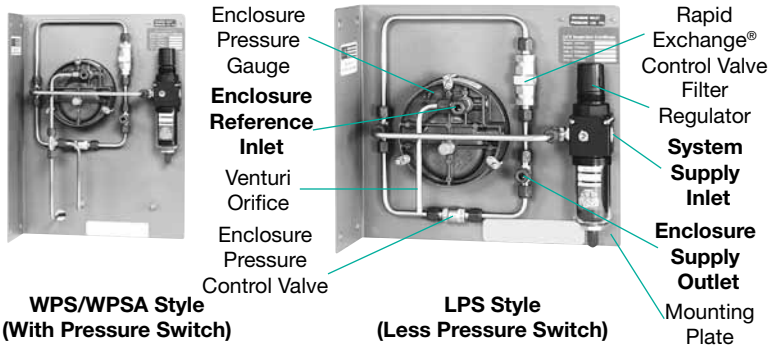
*** Supply voltages 24 VDC and 240 VAC available upon request.

Standard Model Applications

Model Number:	**1002 Type Y**
Designation:	Purging System
Enclosure Volume:	15 ft³ max.
LPS Style	
UL & FM Certified:	Cl. I, Div. 1, Group A-D
Rating Reduction:	Div.1 to Div. 2
WPS Style	
UL & FM Certified:	Cl. I, Div. 1, Group C&D
Rating Reduction:	Div. 1 to Div.2
WPSA Style	
UL & FM Certified:	Cl. I, Div. 1, Group A-D
Rating Reduction:	Div. 1 to Div. 2

Model Number:	**1002 Type Z**
Designation:	Purging System
Enclosure Volume:	15 ft³ max.
LPS Style	
UL & FM Certified:	Cl. I, Div. 2, Group A-D
Rating Reduction:	Div. 2 to Nonhazardous
WPS Style	
UL & FM Certified:	Cl. I, Div. 2, Group C&D
Rating Reduction:	Div.2 to Nonhazardous
WPSA Style	
UL & FM Certified:	Cl. I, Div. 2, Group A-D
Rating Reduction:	Div. 2 to Nonhazardous



WPS/WPSA Style (With Pressure Switch)

LPS Style (Less Pressure Switch)

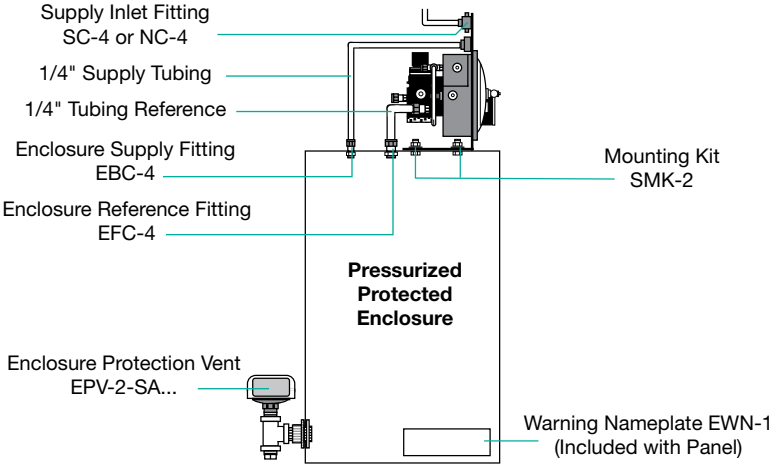
CONNECTION POINTS SHOWN ABOVE IN BOLD TEXT ON SYSTEM DIAGRAM

Material Specifications

Filter Regulator Body:	Zinc w/Enamel Finish
Regulator Handle & Bowl:	Polycarbonate
Enclosure Pressure Gauge:	Alum. w/Enamel Finish
Rapid Exchange Gauge:	Poly Case & Brass Tube
Tube Fittings & Valves:	316 SS Forged Body
Tubing:	316 SS 1/4" .035 Welded
System Nameplates:	Silk screened Lexan® & SS
Fastener Hardware:	Alum. & Stainless Steel
Mounting Plate:	316 14 Ga #3 Brush SS
EXP Pressure Switch Body:	Anodized Cast Alum.
Enclosure Warning Nameplate:	Silk screened SS

Lexan® is a registered trademark of the General Electric Company

System Accessories Diagram



Model Number Designations

1002 - LPS - CI - YZ - LH - ##

Series Model Number

System Style
- **LPS** - less pressure switch
- **WPS** - with pressure switch
- **WPSA** - with pressure switch

Area Classification
- **CI** - Class I Area

System Type
- **YZ** - Div. 1 to Div. 2, Div. 2 to Nonhazardous

Mounting Configuration

LH	- left hand	left side of enclosure
RH	- right hand	right side of enclosure
TM	- top mount	top of enclosure
BM	- bottom mount	bottom of enclosure
WM	- wall mount	wall surface
FM	- frame mount	external frame or rack
PM	- panel mount	enclosure surface cutout

(Not available in WPS Style)

- See Accessories Page 130 for additional factory installed accessories

Model 1002 System Accessories *(See accessories page for complete details)*

CONNECTION FITTINGS

NC-4	1/4" Ninety Connector
SC-4	1/4" Straight Connector
EFC-4	1/4" Flush Connector
EBC-4	1/4" Bulkhead Connector
EPC-12	3/4" Pipe Connector

ADDITIONAL ITEMS

SMK-2 or -8	System Mounting Kit
EPSK-1	Explosion Proof Switch Kit
GPSK-1	General-purpose Switch Kit
RAH	Remote Alarm Horn
RAB-1	Div. 1 Remote Alarm Beacon
RAB-2	Div. 2 Remote Alarm Beacon
LCK	L Fitting Conduit Kit
TCK	T Fitting Conduit Kit

ENCLOSURE PROTECTION VENTS

ONE VENT REQUIRED WITH EACH SYSTEM

EPV-2-SA-00	Straight w/Spark Arrestor
EPV-2-SA-90	Rt Angle w/Spark Arrestor

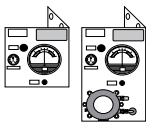
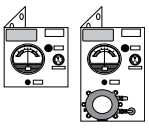
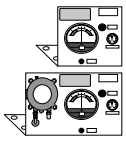
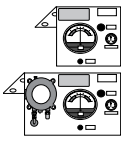
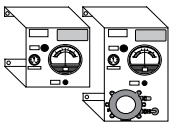
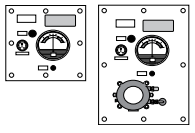
WARNING NAMEPLATES

EWN-1	Class I Enclosure Warning
ETW	Enclosure Temperature Warning

INSTALLATION & OPERATION MANUAL

129-0196	Inst. & Operation Manual

ONE (1) ENCLOSURE WARNING NAMEPLATE & ONE (1) INSTALLATION & OPERATION MANUAL ARE PROVIDED WITH EACH SYSTEM

Overall System Dimensions						
LPS / WPS	**LH** - left hand	**RH** - right hand	**TM** - top mount	**BM** - bottom mount	**WM** - wall mount	**FM or PM** - flat panel
Height	10 / 15	10 / 15	10 / 10	10 / 10	10 / 15	12 / 17
Width	11 / 11	11 / 11	11 / 16	11 / 16	11 / 11	13 / 13
Depth	6 / 7.5	6 / 7.5	6 / 7.5	6 / 7.5	7.75 / 9.25	5 / 6.5

Dimensions in inches. Mounting dimensions available upon request. FM & PM panel cutout dimensions: LPS - 11h x 12w WPS - 16h x 12w
Height & width dimensions reflect mounting plate measurements. Depth dimension reflects overall measurement of system, including components.

Subject to modifications without notice
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