

Description

Model 1001A is an enclosure pressurization or 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 prevent combustible dust accumulation or remove and prevent flammable gas or vapor accumulations. In Class II areas, the system maintains a "safe" (1.0") pressure. In Class I areas, the system accomplishes four air exchanges and maintains a "safe" (0.25") pressure. These processes reduce the hazardous (classified) area rating within the enclosure(s), in accordance with the NEC - NFPA 70, Article 500, NFPA 496 and ISA 12.4.

Operation

In accordance with system instructions, start-up requires air supply to be engaged and enclosure power to be deenergized. In Class II areas, all dust must be removed from the enclosure(s). The enclosure protection vent (if used) must be tested and enclosure(s) must be sealed. The enclosure pressure control regulator is then used to set a safe reading on the enclosure pressure gauge. In Class II areas, power can be energized when safe pressure is stable. In Class I areas, the user must perform an exchange cycle (determined by the safe pressure flow rate—five minutes minimum) before power can be energized. Loss of safe pressure in Class I or II areas 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 - 5 lb / WPS - 10 lb
Temp. Range:	-20°F to +120°F
Supply Pressure Range:	* 5 - 120 psi
Supply Requirements:	Clean air or inert gas
Safe Press. (CI/CII):	0.25"/1.0"
Safe Press. Flow Rate:	** 0.1 - 3.5 SCFH
System Supply Fitting:	1/4" tube fitting
Enclosure Supply Fitting:	1/4" tube fitting
Enclosure Reference Fitting:	1/4" tube fitting
Switch Setting (CI/CII, Decr):	0.15"/0.5" $\pm$ 0.02"
Switch Conduit Port Size:	1/2" FPT
Switch Contact Rating	
WPS Style:	120 VAC, 15 A
WPSA Style:	*** 120 VAC, 10 A, 28 - 125 VDC

* With EPV-1 Vent - 120 psi max. to 5 psi min.
Systems installed without Vent must be equipped with redundant regulator set to 5 psi max.

** Enclosure integrity determines actual flow rate

*** Supply voltages 24 VDC and 240 VAC available upon request.

Model 1001A



LPS Style
(Less Pressure Switch)



WPS/WPSA Style
(With Pressure Switch)

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SERIES

Type Y & Z

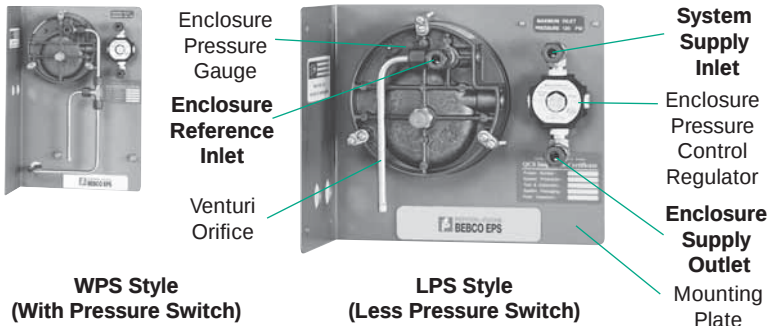
Standard Model Applications

Model Number: 1001A-CI Type Y Designation: Purging System Enclosure Volume: 2 ft ³ 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: 1001A-CI Type Z Designation: Purging System Enclosure Volume: 2 ft ³ 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
Model Number: 1001A-CII Type Y Designation: Pressurization System Enclosure Volume: 10 ft ³ max. LPS Style UL & FM Certified: Cl. II, Div. 1, Group F&G Rating Reduction: Div. 1 to Div. 2 WPS Style UL & FM Certified: Cl. II, Div. 1, Group F&G Rating Reduction: Div. 1 to Div. 2	Model Number: 1001A-CII Type Z Designation: Pressurization System Enclosure Volume: 10 ft ³ max. LPS Style UL & FM Certified: Cl. II, Div. 2, Group F&G Rating Reduction: Div. 2 to Nonhazardous WPS Style UL & FM Certified: Cl. II, Div. 2, Group F&G Rating Reduction: Div. 2 to Nonhazardous

Type Y & Z

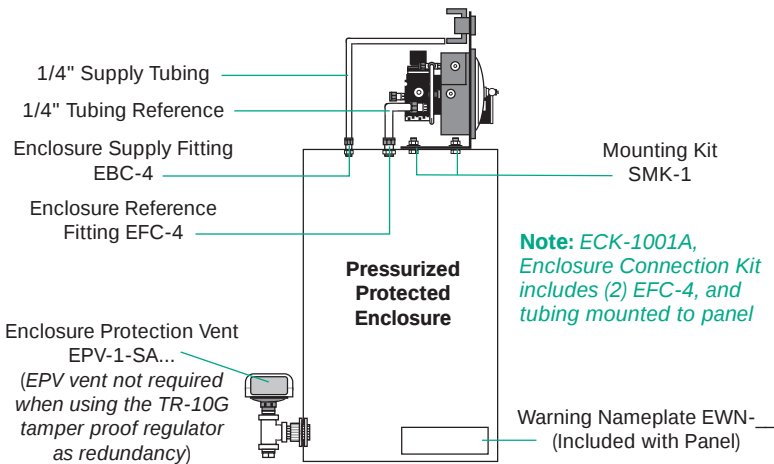
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SERIES

Type Y & Z



CONNECTION POINTS SHOWN ABOVE IN BOLD TEXT ON SYSTEM DIAGRAM

System Accessories Diagram



Material Specifications

Regulator Body:	Zinc w/Enamel Finish
Regulator Handle:	Polycarbonate
Enclosure Pressure Gauge:	Alum. w/Enamel Finish
Tube Fittings:	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	

Model Number Designations

1001A - 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
CII	- Class II 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 116 for additional factory installed accessories	

Model 1001A System Accessories (See accessories page for complete details)

FACTORY INSTALLED FITTINGS		OPTIONAL HEX KEY REGULATOR HANDLE	
ECK-1001A	Enclosure Connection Kit	TR-10G	Tamper Proof Regulator
CONNECTION FITTINGS		WARNING NAMEPLATES	
EFC-4	1/4" Flush Connector	EWN-1	Class I Enclosure Warning
EBC-4	1/4" Bulkhead Connector	EWN-2	Class II Enclosure Warning
EPC-10	1/2" Pipe Connector	ETW	Enclosure Temperature Warning
ADDITIONAL ITEMS		INSTALLATION & OPERATION MANUAL	
ILF-4	1/4" Filter	129-0197	Inst. & Operation Manual
SMK-1, -4 or -6	System Mounting Kit		
EPSK-1 or -2	Explosion Proof Switch Kit		
GPSK-1 or -2	General Purpose Switch Kit		
RAH	Div. 1 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		
OPTIONAL ENCLOSURE PROTECTION VENTS			
EPV-1-SA-00	Straight w/Spark Arrestor		
EPV-1-SA-90	Rt Angle w/Spark Arrestor		

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 & PM - surface
Height	7 / 12	7 / 12	7 / 8	7 / 8	7 / 12	9 / 14
Width	8 / 8	8 / 8	8 / 13.375	8 / 13.375	8 / 8	10 / 10
Depth	5.5 / 7.25	5.5 / 7.25	5.5 / 7.25	5.5 / 7.25	7.5 / 9.25	5 / 6.5
Dimensions in inches. Mounting dimensions available upon request. FM & PM panel cutout dimensions: LPS - 8h x 9w WPS - 13h x 9w Height & Width dimensions reflect mounting plate measurements. Depth dimension reflects overall measurement of system, including components.						

Protected under U.S. Patent #5,101,710

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.

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 16
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/ft ³
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" $\pm$ 0.02"
Switch Conduit Port Size:	1/2" FPT
Switch Contact Rating	
WPS Style:	120 VAC, 15 A
WPSA Style:	*** 120 VAC, 10 A, 28 - 125 VDC

* Enclosure integrity determines actual flow rate

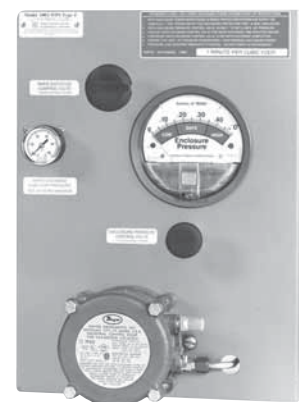
** With regulator set to 60 psi min. during exchange Rapid Exchange® is a Registered Trademark of Pepperl+Fuchs, Inc.

*** Supply voltages 24 VDC and 240 VAC available upon request.

Model 1002



LPS Style
(Less Pressure Switch)



WPS/WPSA Style
(With Pressure Switch)



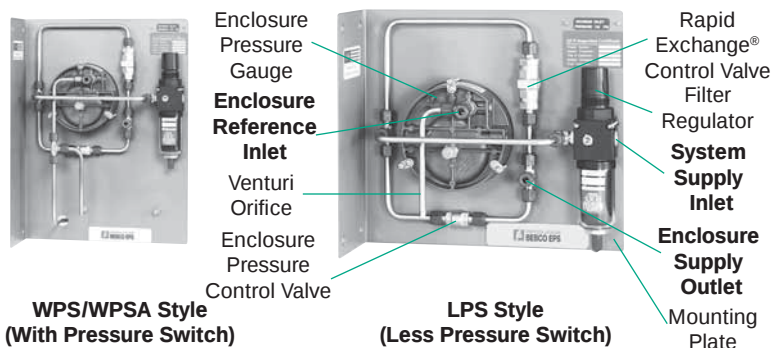
Standard Model Applications

Model Number:	1002 Type Y	Model Number:	1002 Type Z
Designation:	Purging System	Designation:	Purging System
Enclosure Volume:	15 ft ³ max.	Enclosure Volume:	15 ft ³ max.
LPS Style		LPS Style	
UL & FM Certified:	Cl. I, Div. 1, Group A-D	UL & FM Certified:	Cl. I, Div. 2, Group A-D
Rating Reduction:	Div.1 to Div. 2	Rating Reduction:	Div. 2 to Nonhazardous
WPS Style		WPS Style	
UL & FM Certified:	Cl. I, Div. 1, Group C&D	UL & FM Certified:	Cl. I, Div. 2, Group C&D
Rating Reduction:	Div. 1 to Div.2	Rating Reduction:	Div.2 to Nonhazardous
WPSA Style		WPSA Style	
UL & FM Certified:	Cl. I, Div. 1, Group A-D	UL & FM Certified:	Cl. I, Div. 2, Group A-D
Rating Reduction:	Div. 1 to Div. 2	Rating Reduction:	Div. 2 to Nonhazardous

Type Y & Z

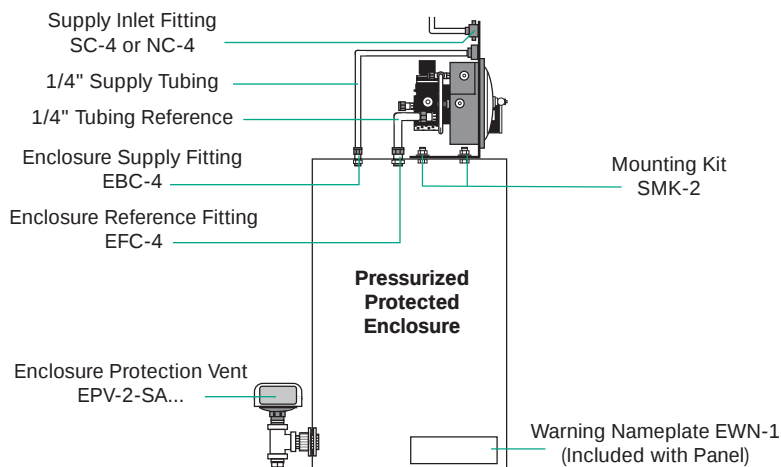
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SERIES

Type Y & Z



CONNECTION POINTS SHOWN ABOVE IN BOLD TEXT ON SYSTEM DIAGRAM

System Accessories 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

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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 116 for additional factory installed accessories	

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

CONNECTION FITTINGS		WARNING NAMEPLATES	
NC-4	1/4" Ninety Connector	EWN-1	Class I Enclosure Warning
SC-4	1/4" Straight Connector	ETW	Enclosure Temperature Warning
EFC-4	1/4" Flush Connector	INSTALLATION & OPERATION MANUAL	
EBC-4	1/4" Bulkhead Connector	129-0196	Inst. & Operation Manual
EPC-12	3/4" Pipe Connector		
ADDITIONAL ITEMS		ENCLOSURE PROTECTION VENTS	
SMK-2 or -8	System Mounting Kit	ONE VENT REQUIRED WITH EACH SYSTEM	
EPSK-1	Explosion Proof Switch Kit	EPV-2-SA-00	Straight w/Spark Arrestor
GPSK-1	General Purpose Switch Kit	EPV-2-SA-90	Rt Angle w/Spark Arrestor
		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

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.						

Protected under U.S. Patent #5,101,710

Description

Model 1003 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-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.

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 18
Shipping Weight:	LPS - 12 lb / WPS - 17 lb
Temp. Range:	-20°F to +120°F
Supply Pressure Range:	80 - 120 psi
Capacity & Filtration:	3.8 oz @ 40 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:	** 10 SCFM / 600 SCFH
Exchange Time:	1 min / 2.5 ft ³
System Supply Port:	3/8" FPT
Enclosure Supply Fitting:	3/8" tube fitting
Enclosure Reference Fitting:	1/4" tube fitting
Switch Setting (Decr):	0.15" $\pm$ 0.02"
Switch Conduit Port Size:	1/2" FPT
Switch Contact Rating	
WPS Style:	120 VAC, 15 A
WPSA Style:	*** 120 VAC, 10 A, 28 - 125 VDC

* Enclosure integrity determines actual flow rate

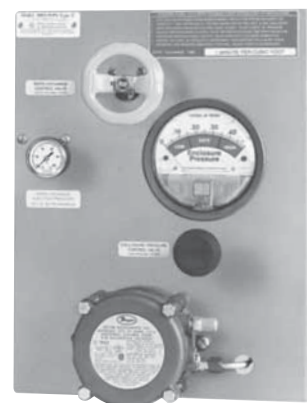
** With regulator set to 60 psi min. during exchange Rapid Exchange® is a Registered Trademark of Pepperl+Fuchs, Inc.

*** Supply voltages 24 VDC and 240 VAC available upon request.

Model 1003



LPS Style
(Less Pressure Switch)



WPS/WPSA Style
(With Pressure Switch)



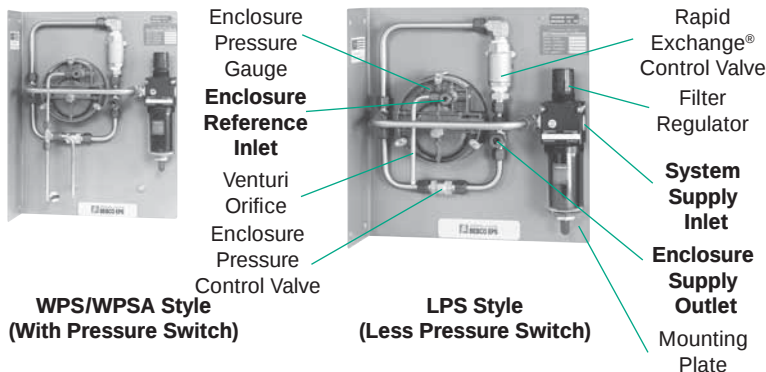
Standard Model Applications

Model Number:	1003 Type Y	Model Number:	1003 Type Z
Designation:	Purging System	Designation:	Purging System
Enclosure Volume:	75 ft ³ max.	Enclosure Volume:	75 ft ³ max.
LPS Style		LPS Style	
UL & FM Certified:	Cl. I, Div. 1, Group A-D	UL & FM Certified:	Cl. I, Div. 2, Group A-D
Rating Reduction:	Div. 1 to Div. 2	Rating Reduction:	Div. 2 to Nonhazardous
WPS Style		WPS Style	
UL & FM Certified:	Cl. I, Div. 1, Group C&D	UL & FM Certified:	Cl. I, Div. 2, Group C&D
Rating Reduction:	Div. 1 to Div. 2	Rating Reduction:	Div. 2 to Nonhazardous
WPSA Style		WPSA Style	
UL & FM Certified:	Cl. I, Div. 1, Group A-D	UL & FM Certified:	Cl. I, Div. 2, Group A-D
Rating Reduction:	Div. 1 to Div. 2	Rating Reduction:	Div. 2 to Nonhazardous

Type Y & Z

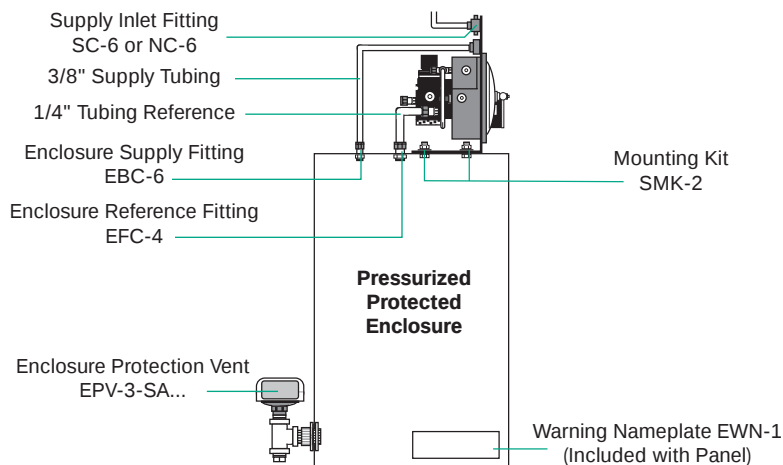
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SERIES

Type Y & Z



CONNECTION POINTS SHOWN ABOVE IN BOLD TEXT ON SYSTEM DIAGRAM

System Accessories 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" & 3/8" .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

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Model Number Designations

1003 - 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 116 for additional factory installed accessories	

Model 1003 System Accessories (See accessories page for complete details)

CONNECTION FITTINGS

NC-6	3/8" Ninety Connector
SC-6	3/8" 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

SMK-2 or -8	System Mounting Kit
EPSK-1	Explosion Proof Switch Kit

GPSK-1

RAH	General Purpose Switch Kit
RAB-1	Remote Alarm Horn
RAB-2	Div. 1 Remote Alarm Beacon
LCK	Div. 2 Remote Alarm Beacon
TCK	L Fitting Conduit Kit
	T Fitting Conduit Kit

ENCLOSURE PROTECTION VENTS

ONE VENT REQUIRED WITH EACH SYSTEM

EPV-3-SA-00	Straight w/Spark Arrestor
EPV-3-SA-90	Rt Angle w/Spark Arrestor

WARNING NAMEPLATES

EWN-1	Class I Enclosure Warning
ETW	Enclosure Temperature Warning
INSTALLATION & OPERATION MANUAL	
129-0195	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	12 / 15	12 / 15	12 / 12	12 / 12	12 / 15	14 / 17
Width	11.5 / 11.5	11.5 / 11.5	11.5 / 15.25	11.5 / 15.25	11.5 / 11.5	13.5 / 13.5
Depth	6 / 7.5	6 / 7.5	6 / 7.5	6 / 7.5	7.75 / 9.25	5.75 / 7.25
Dimensions in inches. Mounting dimensions available upon request. FM & PM panel cutout dimensions: LPS - 13h x 12.5w WPS - 16h x 12.5w Height & Width dimensions reflect mounting plate measurements. Depth dimension reflects overall measurement of system, including components.						

Protected under U.S. Patent #5,101,710

Description

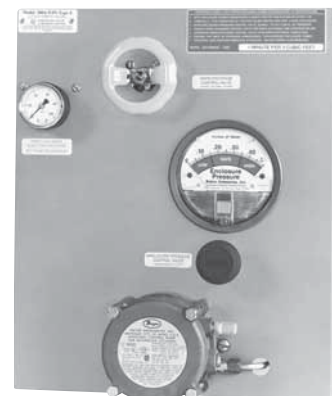
Model 1004 is a Rapid Exchange® purging system that operates on a supply of compressed instrument air or inert gas. It regulates and monitors pressure within sealed (protected) enclosure(s), in order to remove and prevent flammable gas or vapor accumulations. The system accomplishes four air exchanges and maintains a "safe" (0.25") pressure. A Pepperl+Fuchs Model EPV-4 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.

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.



LPS Style
(Less Pressure Switch)



WPS/WPSA Style
(With Pressure Switch)



System Specifications

System Dimensions:	See page 20
Shipping Weight:	LPS - 15 lb / WPS - 23 lb
Temp. Range:	-20°F to +120°F
Supply Pressure Range:	80 - 120 psi
Capacity & Filtration:	8.5oz @ 40 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:	** 30 SCFM /1800 SCFH
Exchange Time:	1 min / 7.5 ft ³
System Supply Port:	1/2" FPT
Enclosure Supply Fitting:	1/2" 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 VAC, 10 A, 28 - 125 VDC

* Enclosure integrity determines actual flow rate

** With regulator set to 80 psi min. during exchange Rapid Exchange® is a Registered Trademark of Pepperl+Fuchs, Inc.

*** Supply voltages 24 VDC and 240 VAC available upon request.

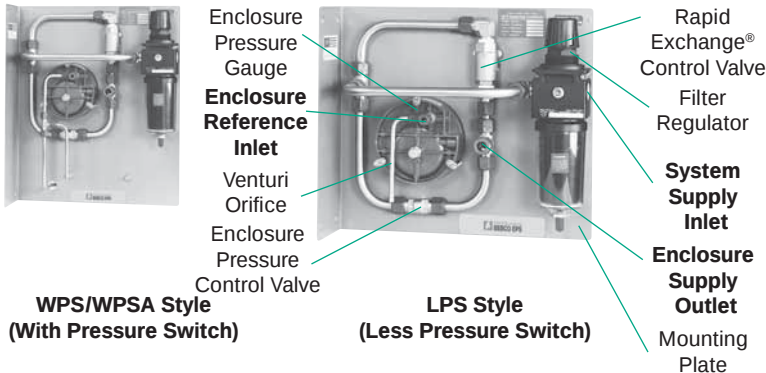
Standard Model Applications

Model Number: 1004 Type Y	Model Number: 1004 Type Z
Designation: Purging System	Designation: Purging System
Enclosure Volume: 200 ft ³ max.	Enclosure Volume: 200 ft ³ max.
LPS Style	LPS Style
UL & FM Certified: Cl. I, Div. 1, Group A-D	UL & FM Certified: Cl. I, Div. 2, Group A-D
Rating Reduction: Div. 1 to Div. 2	Rating Reduction: Div. 2 to Nonhazardous
WPS Style	WPS Style
UL & FM Certified: Cl. I, Div. 1, Group C&D	UL & FM Certified: Cl. I, Div. 2, Group C&D
Rating Reduction: Div. 1 to Div. 2	Rating Reduction: Div. 2 to Nonhazardous
WPSA Style	WPSA Style
UL & FM Certified: Cl. I, Div. 1, Group A-D	UL & FM Certified: Cl. I, Div. 2, Group A-D
Rating Reduction: Div. 1 to Div. 2	Rating Reduction: Div. 2 to Nonhazardous

Type Y & Z

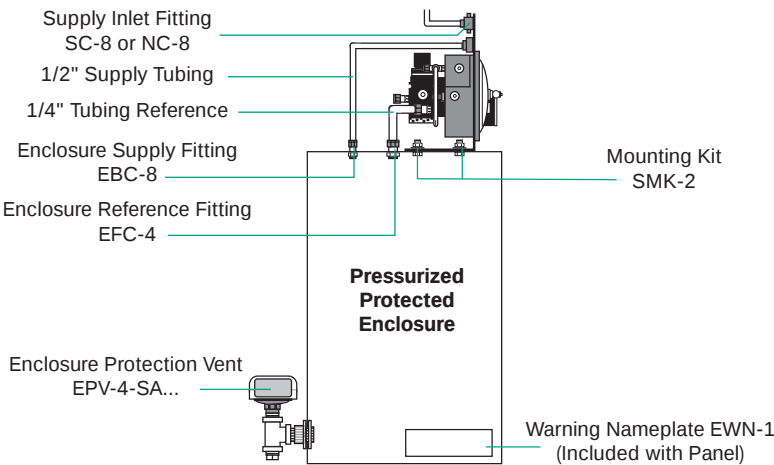
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SERIES

Type Y & Z



CONNECTION POINTS SHOWN ABOVE IN BOLD TEXT ON SYSTEM DIAGRAM

System Accessories 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" & 1/2" .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

Model Number Designations

	1004	- 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 116 for additional factory installed accessories					

Model 1004 System Accessories (See accessories page for complete details)

CONNECTION FITTINGS		GPSK-1 General Purpose Switch Kit		WARNING NAMEPLATES	
NC-8	1/2" Ninety Connector	RAH	Remote Alarm Horn	EWN-1	Class I Enclosure Warning
SC-8	1/2" Straight Connector	RAB-1	Div. 1 Remote Alarm Beacon	ETW	Enclosure Temperature Warning
EFC-4	1/4" Flush Connector	RAB-2	Div. 2 Remote Alarm Beacon	INSTALLATION & OPERATION MANUAL	
EFC-8	1/2" Flush Connector	LCK	L Fitting Conduit Kit	129-0203	Inst. & Operation Manual
EBC-8	1/2" Bulkhead Connector	TCK	T Fitting Conduit Kit		
EPC-14	1 1/2" Pipe Connector	ENCLOSURE PROTECTION VENTS			
ADDITIONAL ITEMS		ONE VENT REQUIRED WITH EACH SYSTEM			
SMK-2 or 8	System Mounting Kit	EPV-4-SA-00	Straight w/Spark Arrestor		
EPSK-1	Explosion Proof Switch Kit	EPV-4-SA-90	Rt Angle w/Spark Arrestor		

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	12 / 16.25	12 / 16.25	12 / 12	12 / 12	12 / 15	14 / 18.25
Width	13.5 / 13.5	13.5 / 13.5	13.5 / 16.75	13.5 / 16.75	13.5 / 13.5	15.5 / 15.5
Depth	6.75 / 8.25	6.75 / 8.25	6.75 / 8.25	6.75 / 8.25	7.75 / 9.25	6.75 / 8.25
Dimensions in inches. Mounting dimensions available upon request. FM & PM panel cutout dimensions: LPS - 13h x 14.5w WPS - 17.25h x 14.5w Height & Width dimensions reflect mounting plate measurements. Depth dimension reflects overall measurement of system, including components.						

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Description

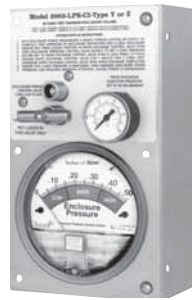
Model 3003 is a Rapid Exchange® purging system that operates on a supply of compressed instrument air or inert gas. It regulates and monitors pressure within sealed protected enclosure(s), in order to remove and prevent flammable gas or vapor accumulations. The Model 3003 consists of three major components: (1) a pneumatic manifold assembly, (2) a differential enclosure pressure indicator and (3) a stainless steel face plate with mounting flange, or a Lexan® system start up instruction nameplate. Model 3003 is offered in three distinct variations, identified as "VM" (Vertical Mount), "HM" (Horizontal Mount), both available in WPS & WPSA styles, and "CK" (Component Kit) mounting configurations. The VM configuration features a filter regulator and face plate with a flange for mounting to a vertical surface. The HM configuration features a regulator and face plate with a flange for mounting on a horizontal surface. Finally, the CK configuration is a kit of parts including the pneumatic manifold assembly, the enclosure pressure indicator and a start-up instruction nameplate. The VM and HM configurations are intended for flange or frame mounting to a solid surface on or near the protected enclosure(s), while the CK configuration is intended for frame mounting through cutouts in a panel on or near the enclosure(s). With the addition of a Model GCK gauge conversion kit, all configurations can be mounted through the surface of a protected enclosure. The CK configuration provides a seal that withstands type 4 hosedown testing. 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.

Operation

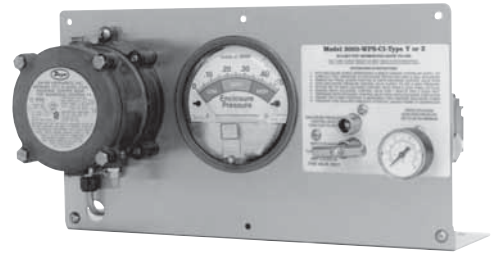
In accordance with system instructions, start-up requires air supply to be engaged and enclosure power to be deenergized. The enclosure protection vent must be tested and enclosure(s) must be sealed. After transferring the valve key, locked into the pneumatic manifold's Rapid Exchange® control valve stem, the enclosure pressure control valve is used to set a safe reading on the enclosure pressure indicator. When safe pressure is stable, the valve key is transferred and locked into the Rapid Exchange® control valve stem and the Rapid Exchange® control valve is then fully engaged. Upon completion of the Rapid Exchange® cycle, (five minutes minimum) the Rapid Exchange® control valve is 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 to the protected enclosure(s) is deenergized. WPS and WPSA style systems include an explosion proof differential pressure switch with form "C" contacts for audible or visual alarm systems.

Rapid Exchange® is a Registered Trademark of Pepperl+Fuchs, Inc.
Lexan® is a registered trademark of the General Electric Company

Model 3003



Model 3003-LPS-CI-YZ-VML
Vertical Mount Configuration



Model 3003-WPS-CI-YZ-HMT
Horizontal Mount Configuration



Model 3003-LPS-CI-YZ-CK
Component Kit Configuration



Standard Model Applications

Model Number:	3003	Model Number:	3003
	Type Y System		Type Z and Ex [nP] System
Designation:	Rapid Exchange® Purging	Designation:	Rapid Exchange® Purging
Enclosure Volume:	90 ft³ (2.54m³) max.	Enclosure Volume:	90 ft³ (2.54m³) max.
	LPS Style		LPS Style
UL & FM Certified:	Cl. I, Div. 1, Group A-D	UL & FM Certified:	Cl. I, Div. 2, Group A-D
Rating Reduction:	Div. 1 to Div. 2	ATEX 'nP' Certified:	Zone 2, Group IIC
	WPS Style	Rating Reduction:	Div. 2 to Nonhazardous
UL & FM Certified:	Cl. I, Div. 1, Group C-D		Zone 2 to Nonhazardous
Rating Reduction:	Div. 1 to Div. 2		
	WPSA Style		WPS Style
UL & FM Certified:	Cl. I, Div. 1, Group A-D	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
		ATEX 'nP' Certified:	Zone 2, Group IIB+H₂
		Rating Reduction:	Div. 2 to Nonhazardous
			Zone 2 to Nonhazardous
			Ex II 3G EEx [nP] II

3000
SERIES

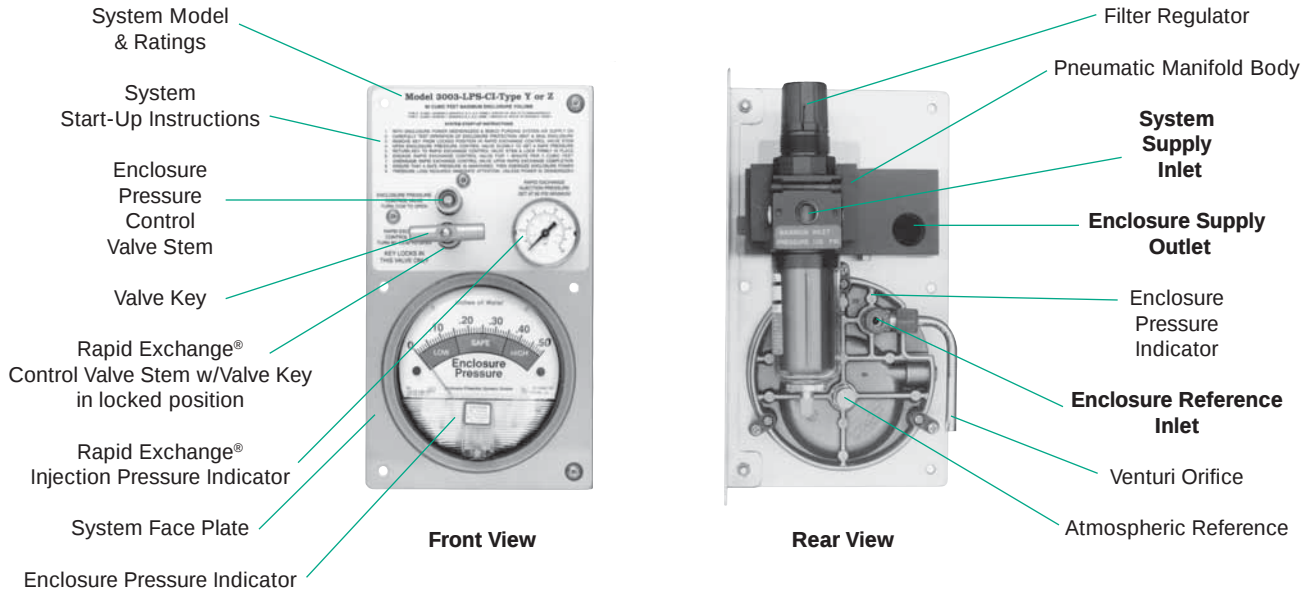
Type Y, Z & Ex [nP]

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Type Y, Z & Ex [nP]

Model 3003 VM Configuration - The Vertical Mount System

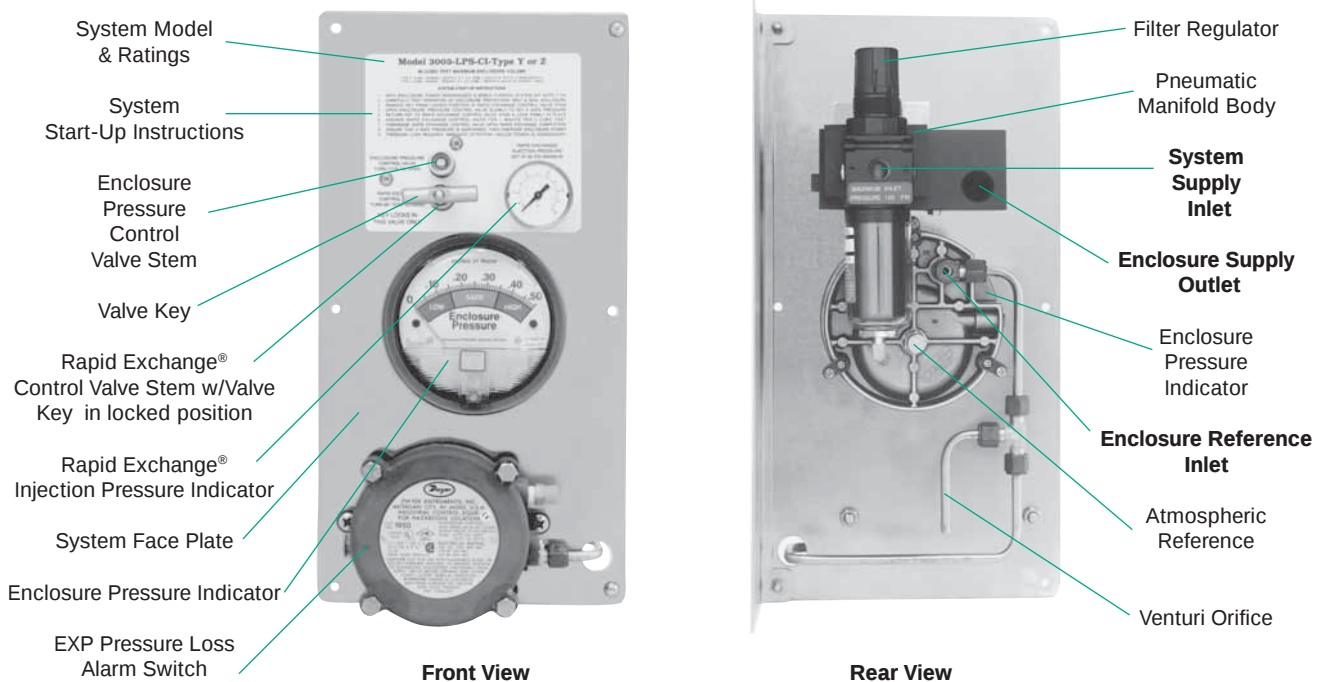
LPS (Less Pressure Switch)



Important Notes

- 1) The HM configuration is supplied with a mounting flange for right-angled attachment to a horizontal surface external to the protected enclosure.
- 2) The VM configuration can also be frame mounted external to the protected enclosure through a 5" (127mm) W x 9" (229mm) H cutout in a suitable mounting surface.
- 3) Model GCK gauge conversion kit is required to panel mount the VM configuration through a 5" (127mm) W x 9" (229mm) H cutout in the protected enclosure surface.
- 4) See page 36 for Model GCK kit description and conversion procedure.

WPS / WPSA (With Pressure Switch)

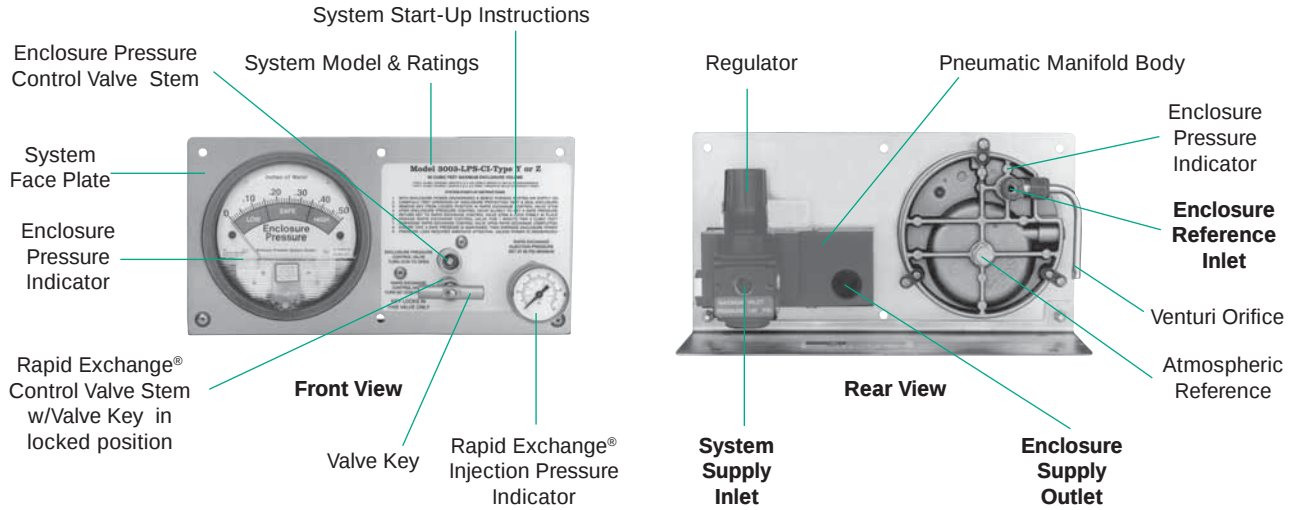


CONNECTION POINTS SHOWN ABOVE IN BOLD TEXT ON SYSTEM DIAGRAM

Protected under U.S. Patent #5,101,710

Model 3003 HM Configuration - The Horizontal Mount System

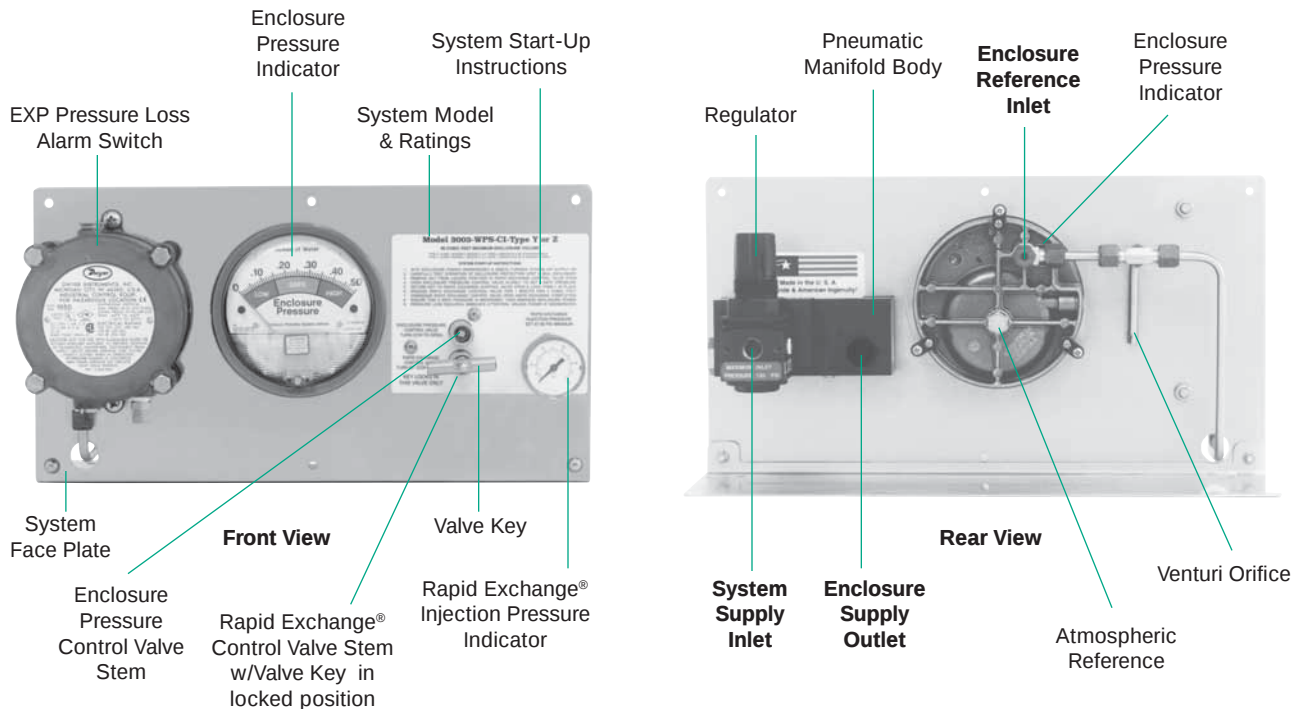
LPS (Less Pressure Switch)



Important Notes

- 1) The HM configuration is supplied with a mounting flange for right-angled attachment to a horizontal surface external to the protected enclosure.
- 2) The HM configuration can also be frame mounted external to the protected enclosure through a 10.25" (260mm) W x 5" (127mm) H cutout in a suitable mounting surface.
- 3) Model GCK gauge conversion kit is required to panel mount the HM configuration through a 10.25" (260mm) W x 5" (127mm) H cutout in the protected enclosure surface.
- 4) See page 36 for Model GCK kit description and conversion procedure.

WPS / WPSA (With Pressure Switch)



CONNECTION POINTS SHOWN ABOVE IN BOLD TEXT ON SYSTEM DIAGRAM

Protected under U.S. Patent #5,101,710

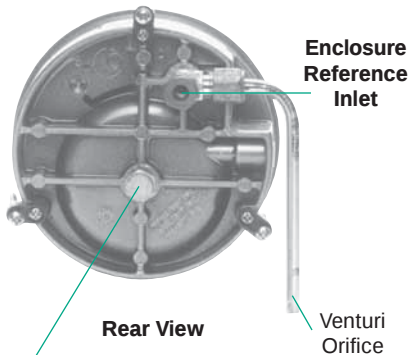
Type Y, Z & Ex [nP]

Model 3003 CK Configuration - The Component Kit System

Part #1
Enclosure Pressure Indicator



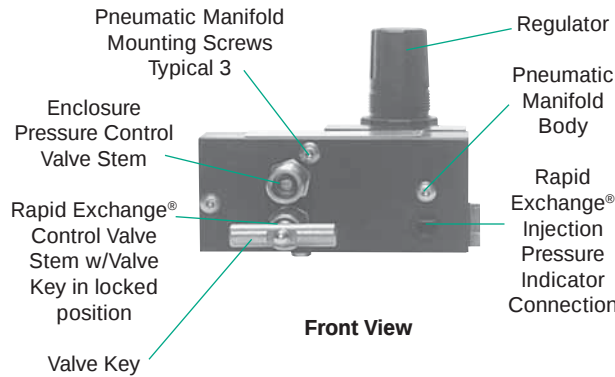
Front View



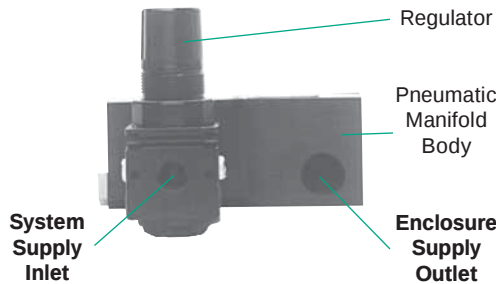
Rear View

Atmospheric Reference

Part #2
Pneumatic Manifold Assembly



Front View



Rear View

Part #3
Rapid Exchange® Injection Pressure Indicator



Front View



Side View



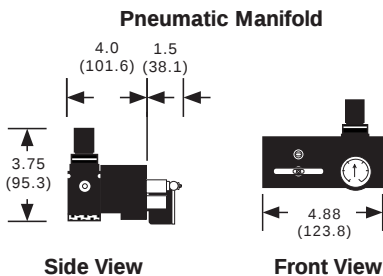
Part #4
Start Up Instruction Nameplate

CONNECTION POINTS SHOWN ABOVE IN BOLD TEXT ON SYSTEM DIAGRAM

Important Notes

- 1) The CK configuration is four discrete parts suitable for mounting through a set of cutouts in a vertical surface external to the protected enclosure.
- 2) A Model GCK gauge conversion kit is required to panel mount the CK configuration through a set of cutouts in the protected enclosure surface.
- 3) See page 36 for Model GCK kit description and conversion procedure.

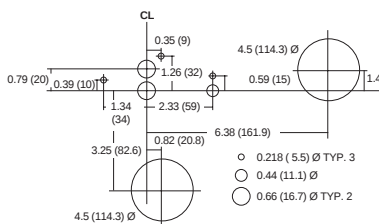
CK Configuration System & Optional Remote Cube Filter Dimensions in Inches (mm)



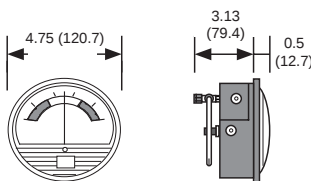
Side View

Front View

Model 3003 CK System
Panel Cutout Pattern



Enclosure Pressure Gauge

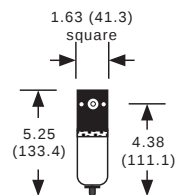


Panel Cutout
4.5 (114.3) Ø

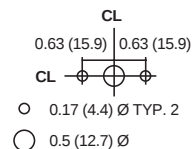
Front View

Side View

Side View
Model RCF-4



Model RCF-4
Panel Cutout Pattern

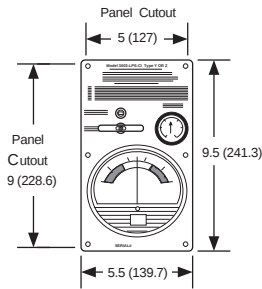


Helpful Hint

Note: Two optional Enclosure Pressure Gauge positions are shown on the Model 3003 CK System Panel Cutout Pattern to the left. The optional positions center gauge to the right or bottom side of System Nameplate.

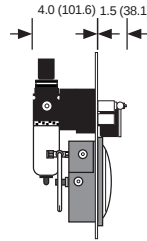
Cut only one 4.5" (114.3mm) Ø hole in panel.

Model 3003 WPS VM Configuration & Flange Dimensions in Inches (mm)

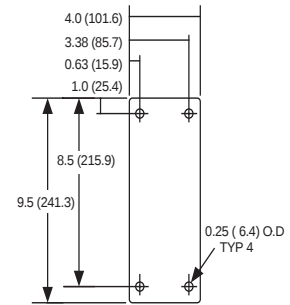


**VM Configuration
Front View**

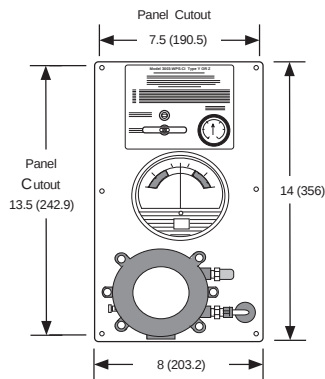
LPS (Less Pressure Switch)



**VM Configuration
Side View**

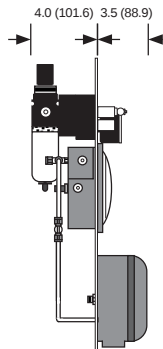


**Vertical Mount Flange
Front View**

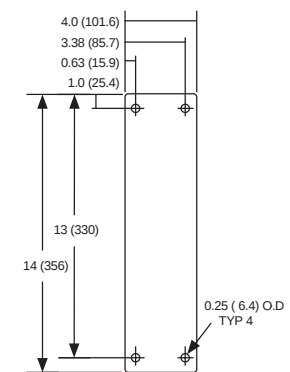


**WPS/WPSA VM Configuration
Front View**

WPS/WPSA (With Pressure Switch)

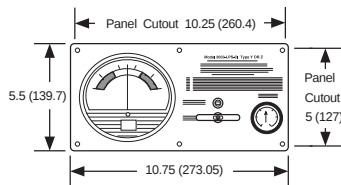


**WPS/WPSA VM Configuration
Side View**



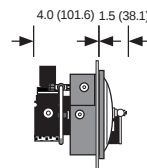
**WPS/WPSA Vertical Mount Flange
Front View**

Model 3003 HM Configuration & Flange Dimensions in Inches (mm)

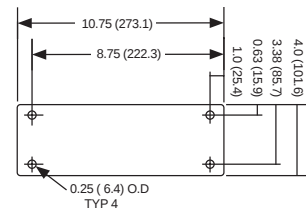


**LPS HM Configuration
Front View**

LPS (Less Pressure Switch)

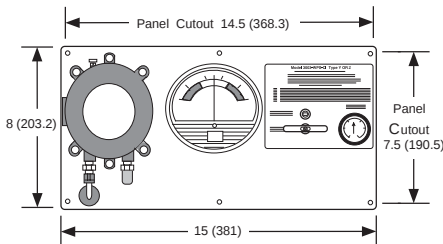


**LPS HM Configuration
Side View**

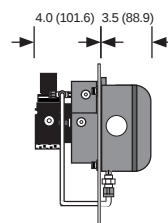


**LPS Horizontal Mount Flange
Front View**

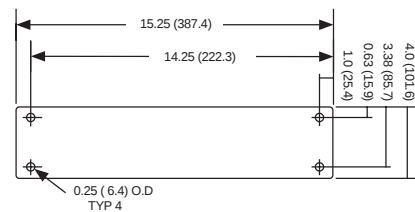
WPS/WPSA (With Pressure Switch)



**WPS/WPSA HM Configuration
Front View**



**WPS/WPSA HM Configuration
Side View**



**WPS/WPSA Horizontal Mount
Flange Front View**

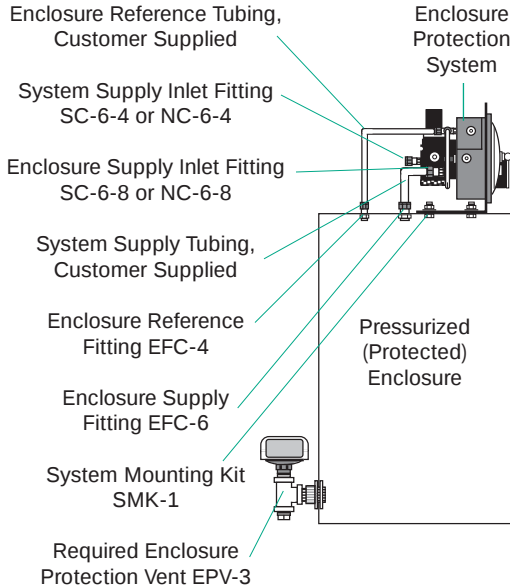
Protected under U.S. Patent #5,101,710

Type Y, Z & Ex [nP]

Typical Model 3003 System Installation Details

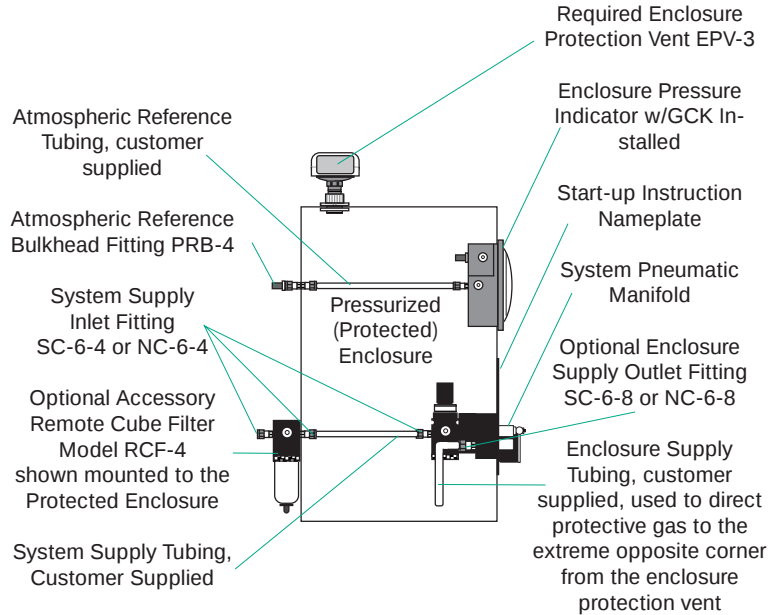
External to the Protected Enclosure

Flange Mount HM Configuration with Model SMK-1 Fastener Kit



Internal to the Protected Enclosure

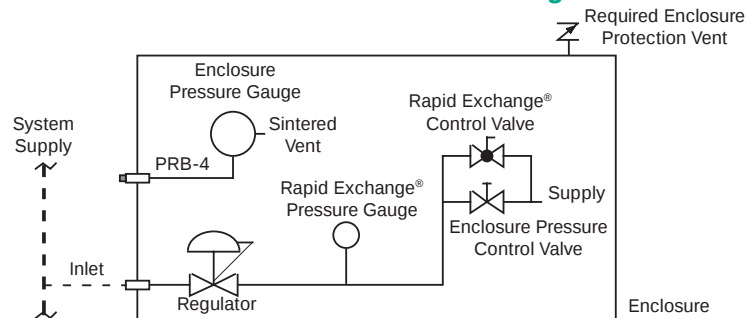
Panel Mount CK Configuration with Model RCF-4 Remote Cube Filter & Model GCK Gauge Conversion Kit



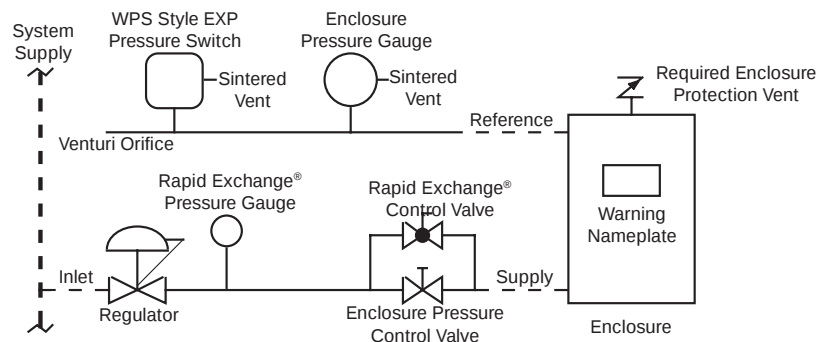
Standard and Panel Mount Pneumatic Installation Diagram

Standard Pneumatic Installation Diagram

See panel mounting conversion procedure on page 36



Panel Mount Installation Diagram



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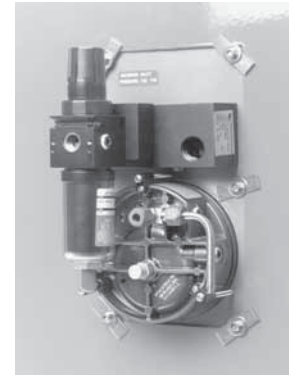
VM Configuration Mounting Options



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

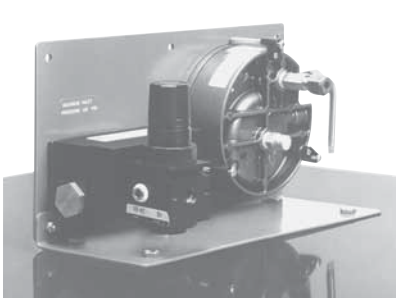


Model 3003-LPS-CI-YZ-VM
Frame or Panel* Mounted
Through Cutout in Suitable Surface
with Model SMK-6m Fastener Kit

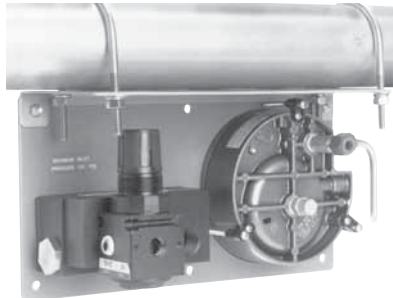
3000
SERIES

Type Y, Z & Ex [nP]

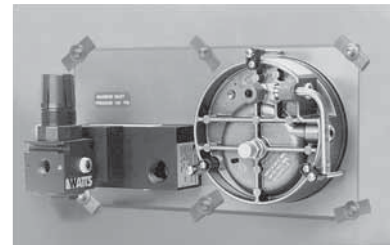
HM Configuration Mounting Options



Model 3003-LPS-CI-YZ-HMT
Flange Mounted to
Flat Horizontal Surface with
Model SMK-1 Fastener Kit

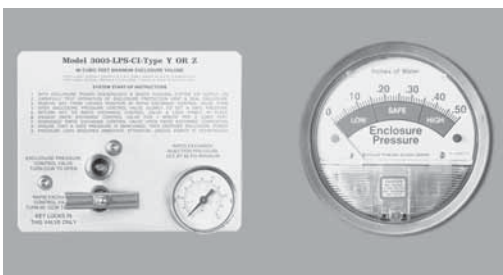


Model 3003-LPS-CI-YZ-HMB
Flange Mounted to
Horizontal 2" Pipe Stand with
Model PMK-1 Fastener Kit

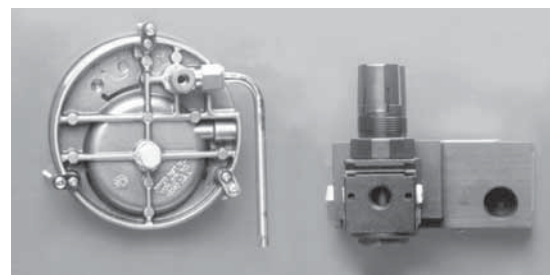


Model 3003-LPS-CI-YZ-HM
Frame or Panel* Mounted
Through Cutout in Suitable Surface
with Model SMK-6m Fastener Kit

CK Configuration Mounting Options



Front View



Rear View

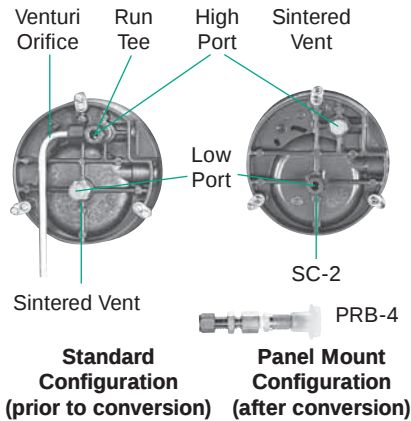
Model 3003-LPS-CI-YZ-CK
Rear View of Frame or Panel* Mount
Through Cutout in Suitable Surface with supplied fasteners

* PANEL MOUNTED SYSTEMS REQUIRE A PEPPERL+FUCHS MODEL GCK FOR PROPER OPERATION - SEE PAGE 36

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Type Y, Z & Ex [nP]

Model 3003 Panel Mount Conversion



1. Secure one Model GCK Conversion Kit. Kit includes a PRB-4 & SC-2 Fitting & Enclosure Pressure Gauge gasket.
2. Remove venturi orifice and run tee from the high port of the gauge and discard.
3. Remove sintered vent from low port.
4. Reinstall sintered vent into high port.
5. Install Model SC-2 fitting into low port.
6. Install Gauge gasket between gauge & mounting surface.
7. Install Model PRB-4 fitting through enclosure surface (vent end out) and connect tubing (customer supplied) between SC-2 & PRB-4.

System Specifications

System Dimensions:	See pages 32-33
Shipping Weight:	LPS - 10 lb (4.5 kg) / WPS - 15 lb (6.8 kg)
Temp. Range:	-20°F to +120°F (-29°C to +49°C)
Supply Pressure Range:	80 - 120 psi (5.5 - 8.3 bar)
Capacity & Filtration:	1.5 oz @ 20 Micron
Supply Requirements:	clean air or inert gas
Safe Press. Setpoint:	0.25" (6.35mm)
Safe Press. Flow Rate:	* 0.1 - 3.5 SCFH (2.8 - 99 l/hr)
Exchange Pressure:	* 3" - 5" (76.2 mm - 127 mm)
Exchange Flow Rate:	** 12 SCFM / 720 SCFH (340 l / m / 20390 l / hr)
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)
System Supply Port:	1/2" FPT
Enclosure Supply Port:	1/2" FPT
Enclosure Reference Fitting:	1/4" Tube
Switch Setting (WPS & WPSA Only):	0.15" ± 0.02" 3.81mm ± 0.51mm
Switch Conduit Port Size:	1/2" FPT
Switch Contact Ratings:	
WPS Style:	120 VAC, 15 A
WPSA Style:	*** 120 VAC, 10 A, 28 - 125 VDC

* Enclosure integrity determines actual flow rate
** With regulator set to 60 psi min. during exchange
*** Supply voltages 24 VDC and 240 VAC available upon request.

Material Specifications

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 Stainless Steel
Mfr. ID Nameplate:	Silkscreen Lexan®
Enclosure Warning Nameplate:	Silk screened SS
EXP Pressure Switch Body:	Anodized Cast Aluminum

* Refers to filter bowl supplied with VM mounting configuration.

Lexan® is a registered trademark of the General Electric Company

Model Number Designations

	3003	-	LPS	-	CI	-	YZ	-	VM	-	##
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 / Zone 2 to Nonhazardous										
Mounting Configuration											
VML	- vertical mount left left of enclosure										
VMR	- vertical mount right right of enclosure										
HMT	- horizontal mount top top of enclosure										
HMB	- horizontal mount bottom bottom of enclosure										
CK	- Component Kit - LPS style only										
##	- See Accessories Page 117 for additional factory installed accessories										
[†]	Does not have ATEX certification										

Model 3003 System Accessories (See accessories page for complete details)

CONNECTION FITTINGS	
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	
SMK-1	System Mounting Kit - Flange
SMK-6m	System 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
ENCLOSURE PROTECTION VENTS	
ONE VENT REQUIRED WITH EACH SYSTEM	
EPV-3-SA-00	Straight w/Spark Arrestor
EPV-3-SA-90	Rt Angle w/Spark Arrestor
WARNING NAMEPLATES	
EWN-1	Class I Enclosure Warning
ETW	Enclosure Temperature Warning
INSTALLATION & OPERATION MANUAL	
129-0198	Inst. & Operation Manual

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

Protected under U.S. Patent #5,101,710

Description

Model 3004 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 Model 3004 consists of three major components: (1) a pneumatic manifold assembly, (2) a differential enclosure pressure indicator and (3) a stainless steel face plate with mounting flange, or a Lexan® system start up instruction nameplate. Model 3003 is offered in three distinct variations, identified as "VM" (Vertical Mount), "HM" (Horizontal Mount), both available in WPS & WPSA styles, and "CK" (Component Kit) mounting configurations. The VM configuration features a filter regulator and face plate with a flange for mounting to a vertical surface. The HM configuration features a regulator and face plate with a flange for mounting on a horizontal surface. Finally, the CK configuration is a kit of parts including the pneumatic manifold assembly, the enclosure pressure indicator and a start-up instruction nameplate. The VM and HM configurations are intended for flange or frame mounting to a solid surface on or near the protected enclosure(s), while the CK configuration is intended for frame mounting through cutouts in a panel on or near the enclosure(s). With the addition of a Model GCK gauge conversion kit, all configurations can be mounted through the surface of a protected enclosure. The CK configuration provides a seal that withstands type 4 hosedown testing. Model 3004 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.

Operation

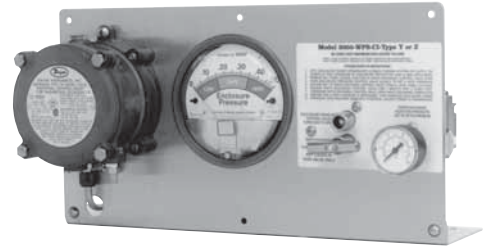
In accordance with system instructions, start-up requires air supply to be engaged and enclosure power to be deenergized. The enclosure protection vent must be tested and enclosure(s) must be sealed. After transferring the valve key, locked into the pneumatic manifold's Rapid Exchange® control valve stem, the enclosure pressure control valve is used to set a safe reading on the enclosure pressure indicator. When safe pressure is stable, the valve key is transferred and locked into the Rapid Exchange® control valve stem and the Rapid Exchange® control valve is then fully engaged. Upon completion of the Rapid Exchange® cycle, (five minutes minimum) the Rapid Exchange® control valve is 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 to the protected enclosure(s) is deenergized. WPS and WPSA style systems include an explosion proof differential pressure switch with form "C" contacts for audible or visual alarm systems.

Rapid Exchange® is a Registered Trademark of Pepperl+Fuchs, Inc.

Model 3004



Model 3004-LPS-CI-YZ-VML
Vertical Mount Configuration



Model 3004-WPS-CI-YZ-HMT
Horizontal Mount Configuration



Model 3004-LPS-CI-YZ-CK
Component Kit Configuration



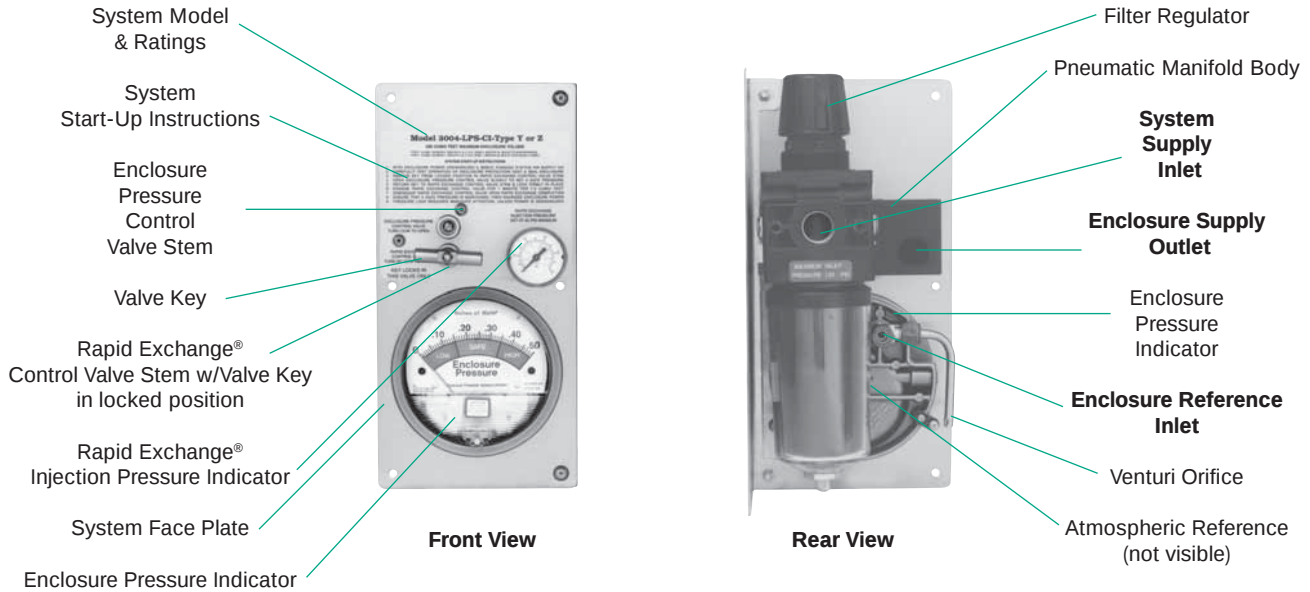
Standard Model Applications

Model Number: 3004	Model Number: 3004
Type Y System	Type Z and Ex [nP] System
Designation: Rapid Exchange®	Designation: Rapid Exchange®
Purging	Purging
Enclosure Volume: 250 ft³ (7.08m³) max.	Enclosure Volume: 250 ft³ (7.08m³) max.
LPS Style	LPS Style
UL & FM Certified: Cl. I, Div. 1, Group A-D	UL & FM Certified: Cl. I, Div. 2, Group A-D
Rating Reduction: Div. 1 to Div. 2	ATEX 'nP' Certified: Zone 2, Group IIC
WPS Style	Rating Reduction: Div. 2 to Nonhazardous
UL & FM Certified: Cl. I, Div. 1, Group C-D	Zone 2 to Nonhazardous
Rating Reduction: Div. 1 to Div. 2	WPS Style
WPSA Style	UL & FM Certified: Cl. I, Div. 2, Group C-D
UL & FM Certified: Cl. I, Div. 1, Group A-D	Rating Reduction: Div. 2 to Nonhazardous
Rating Reduction: Div. 1 to Div. 2	WPSA Style
	UL & FM Certified: Cl. I, Div. 2, Group A-D
	ATEX 'nP' Certified: Zone 2, Group IIB+H₂
	Rating Reduction: Div. 2 to Nonhazardous
	Zone 2 to Nonhazardous
	Ex II 3G EEx [nP] II

Type Y, Z & Ex [nP]

Model 3004 VM Configuration - The Vertical Mount System

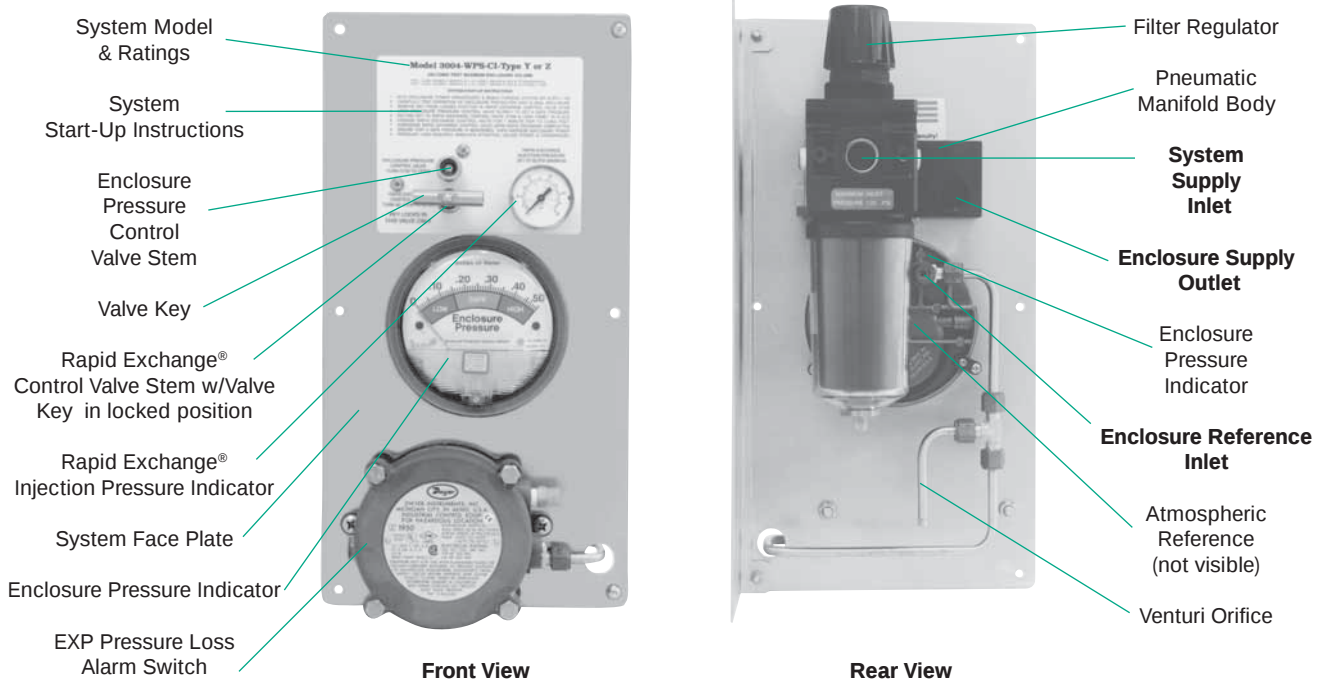
LPS (Less Pressure Switch)



Important Notes

- 1) The VM configuration is supplied with a mounting flange for right angle-attachment to a vertical surface external to the protected enclosure.
- 2) The VM configuration can also be frame mounted external to the protected enclosure through a 5" (127mm) W x 10.75" (273mm) H cutout in a suitable mounting surface.
- 3) Model GCK gauge conversion kit is required to panel mount the VM configuration through a 5" (127mm) W x 10.75" (273mm) H cutout in the protected enclosure surface.

WPS / WPSA (With Pressure Switch)

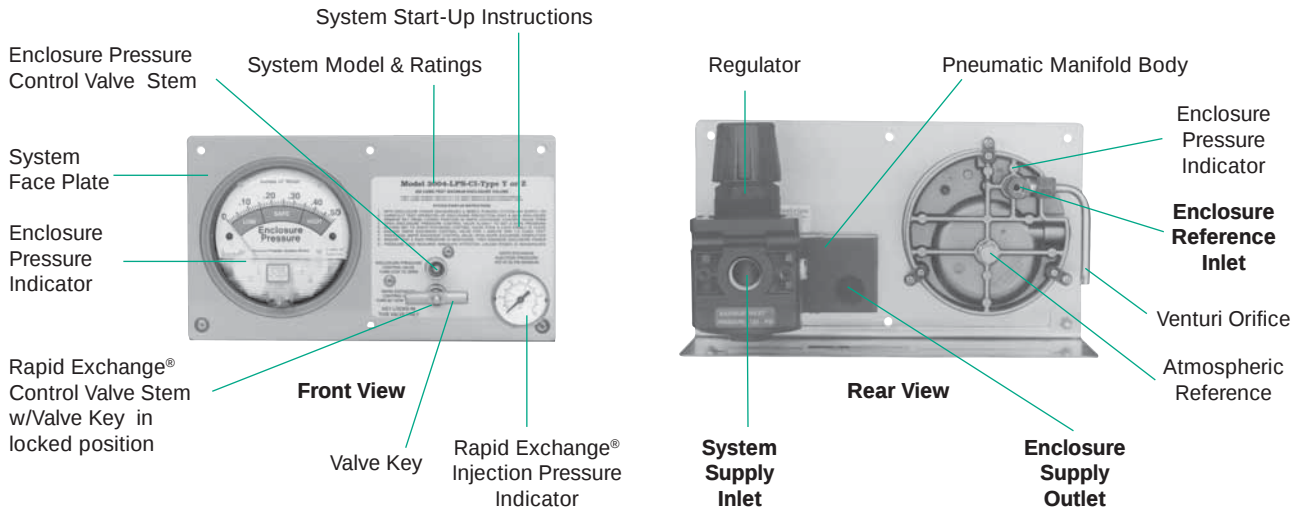


CONNECTION POINTS SHOWN ABOVE IN BOLD TEXT ON SYSTEM DIAGRAM

Protected under U.S. Patent #5,101,710

Model 3004 HM Configuration - The Horizontal Mount System

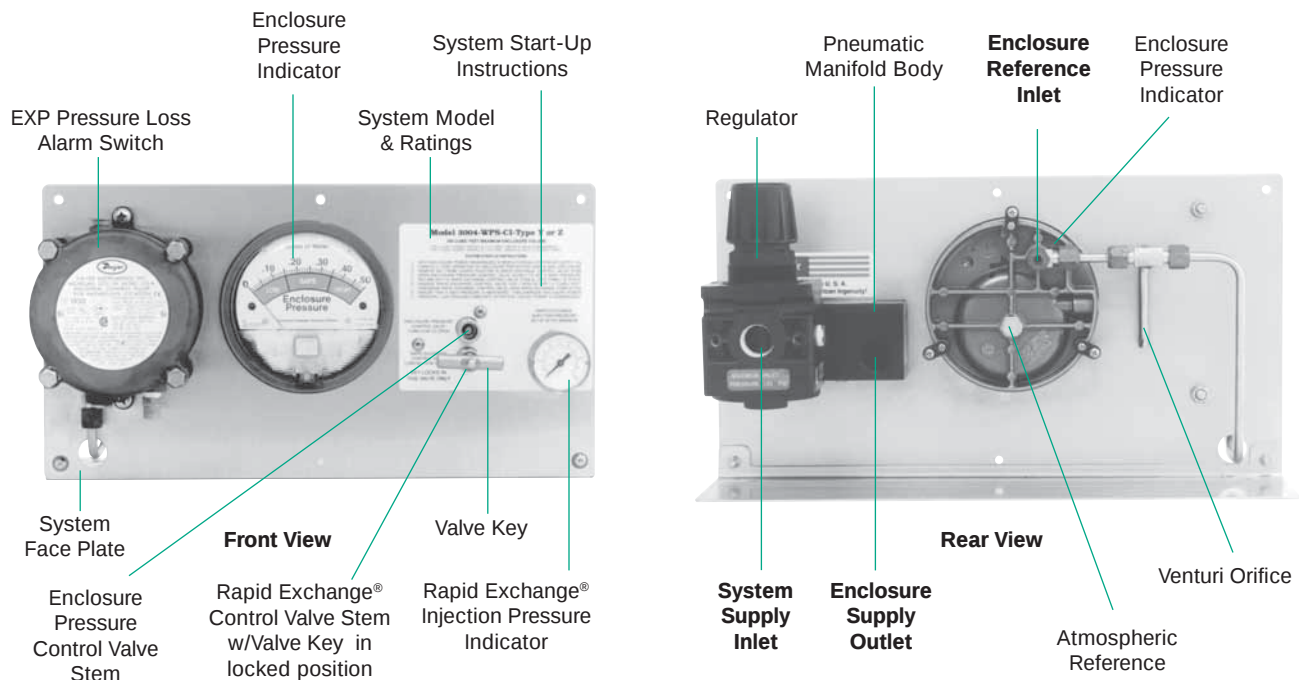
LPS (Less Pressure Switch)



Important Notes

- 1) The HM configuration is supplied with a mounting flange for right-angled attachment to a horizontal surface external to the protected enclosure.
- 2) The HM configuration can also be frame mounted external to the protected enclosure through a 10.25" (260mm) W x 5.5" (140mm) H cutout in a suitable mounting surface.
- 3) Model GCK gauge conversion kit is required to panel mount the HM configuration through a 10.25" (260mm) W x 5.5" (140mm) H cutout in the protected enclosure surface.
- 4) See page 44 for Model GCK kit description and conversion procedure.

WPS / WPSA (With Pressure Switch)



CONNECTION POINTS SHOWN ABOVE IN BOLD TEXT ON SYSTEM DIAGRAM

Protected under U.S. Patent #5,101,710

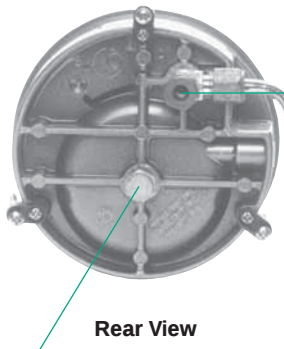
Type Y, Z & Ex [nP]

Model 3004 CK Configuration - The Component Kit System

Part #1
Enclosure Pressure Indicator



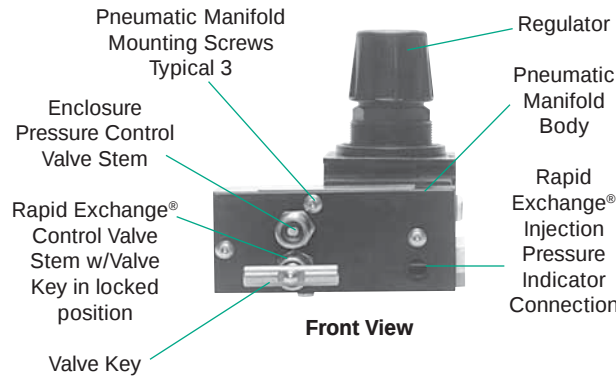
Front View



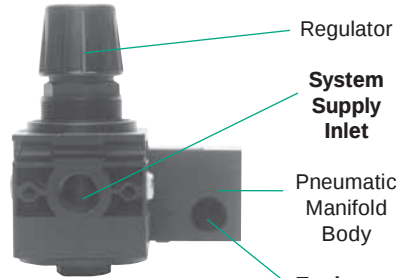
Rear View

Atmospheric Reference
Venturi Orifice

Part #2
Pneumatic Manifold Assembly



Front View



Rear View

Part #3
Rapid Exchange® Injection Pressure Indicator



Front View



Side View



Part #4
Start Up Instruction Nameplate

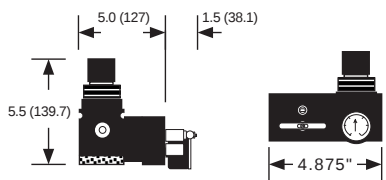
CONNECTION POINTS SHOWN ABOVE IN BOLD TEXT ON SYSTEM DIAGRAM

Important Notes

- 1) The CK Configuration is four discrete parts suitable for mounting through a set of cutouts in a vertical surface external to the protected enclosure.
- 2) A Model GCK gauge conversion kit is required to panel mount the CK configuration through a set of cutouts in the protected enclosure surface.
- 3) See page 44 for Model GCK kit description and conversion procedure.

CK Configuration System & Optional Remote Cube Filter Dimensions in Inches (mm)

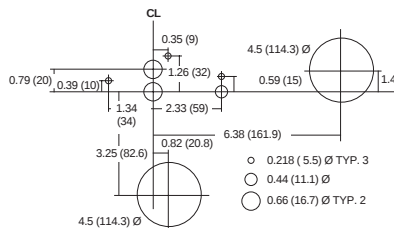
Pneumatic Manifold



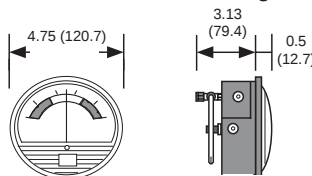
Side View

Front View

Model 3004 CK System
Panel Cutout Pattern



Enclosure Pressure Gauge

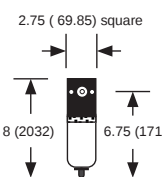


Panel Cutout
4.5 (114.3) Ø

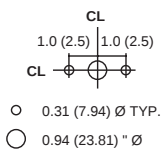
Front View

Side View

**Side View
Model RCF-8**



Model RCF-8
Panel Cutout Pattern

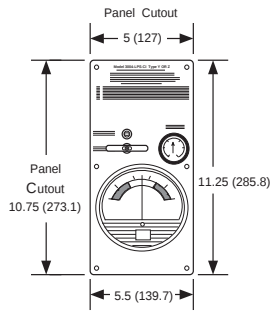


Helpful Hint

Note: Two optional Enclosure Pressure Gauge positions are shown on the Model 3004 CK System Panel Cutout Pattern to the left. The optional positions center gauge to the right or bottom side of System Nameplate.

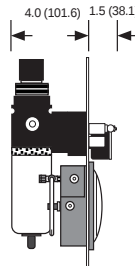
Cut only one 4.5" (114.3mm) Ø hole in panel.

Model 3004 WPS VM Configuration & Flange Dimensions in Inches (mm)

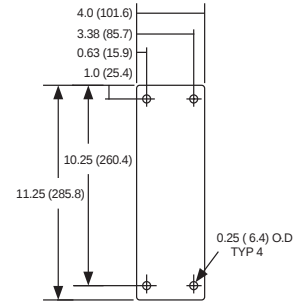


**VM Configuration
Front View**

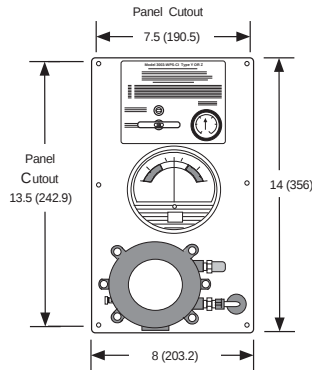
LPS (Less Pressure Switch)



**VM Configuration
Side View**

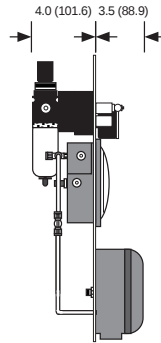


**Vertical Mount Flange
Front View**

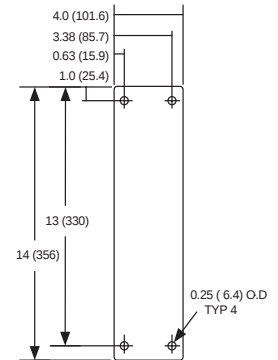


**WPS/WPSA VM Configuration
Front View**

WPS/WPSA (With Pressure Switch)

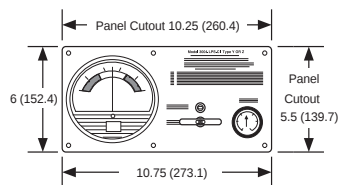


**WPS/WPSA VM Configuration
Side View**



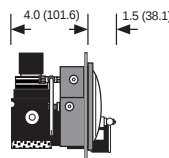
**WPS/WPSA Vertical Mount Flange
Front View**

Model 3004 HM Configuration & Flange Dimensions in Inches (mm)

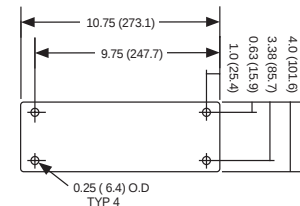


**LPS HM Configuration
Front View**

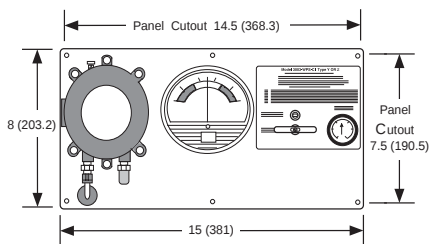
LPS (Less Pressure Switch)



**LPS HM Configuration
Side View**

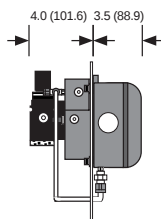


**LPS Horizontal Mount Flange
Front View**

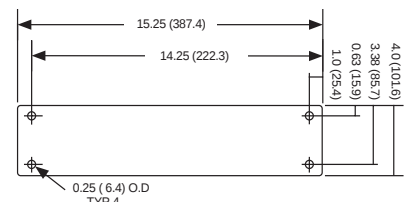


**WPS/WPSA HM Configuration
Front View**

WPS/WPSA (With Pressure Switch)



**WPS/WPSA HM Configuration
Side View**



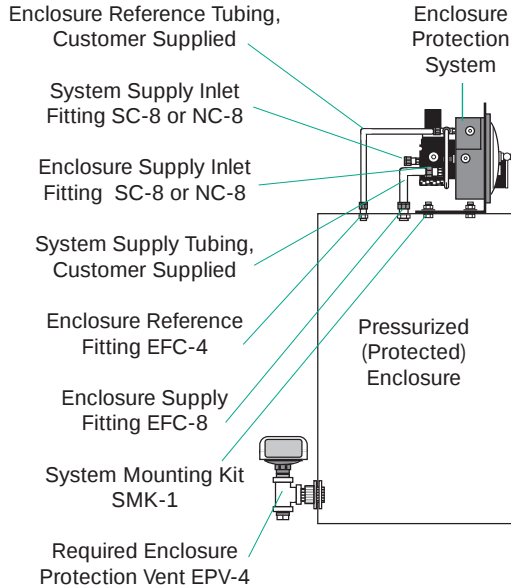
**WPS/WPSA Horizontal Mount
Flange Front View**

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Typical Model 3004 System Installation Details

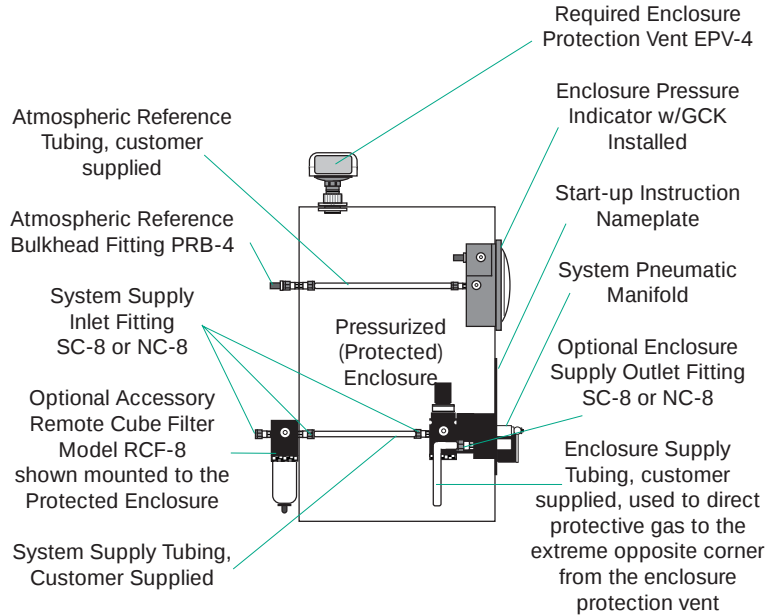
External to the Protected Enclosure

Flange Mount HM Configuration with Model SMK-1 Fastener Kit



Internal to the Protected Enclosure

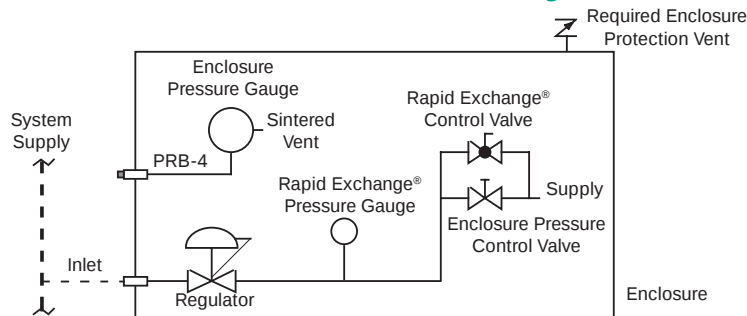
Panel Mount CK Configuration with Model RCF-8 Remote Cube Filter & Model GCK Gauge Conversion Kit



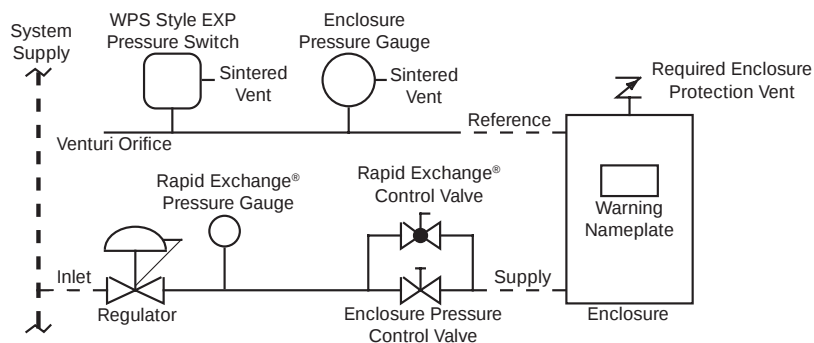
Standard and Panel Mount Pneumatic Installation Diagram

See panel mounting conversion procedure on page 44

Standard Pneumatic Installation Diagram



Panel Mount Installation Diagram

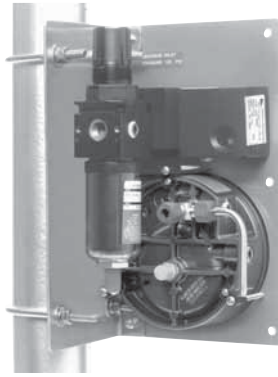


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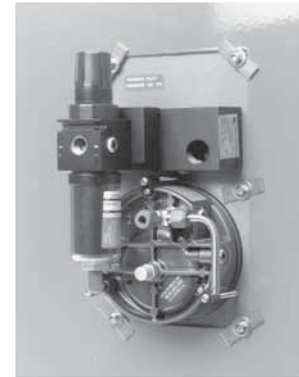
VM Configuration Mounting Options



Model 3004-LPS-CI-YZ-VML
Flange Mounted to
Flat Vertical Surface with
Model SMK-1 Fastener Kit



Model 3004-LPS-CI-YZ-VML
Flange Mounted to
Vertical 2" Pipe Stand with
Model PMK-1 Fastener Kit

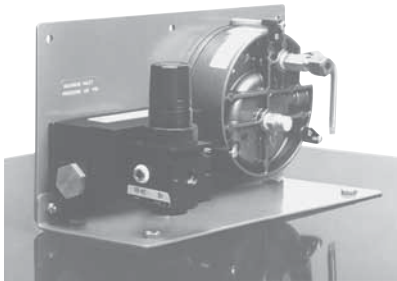


Model 3004-LPS-CI-YZ-VM
Frame or Panel* Mounted
Through Cutout in Suitable Surface
with Model SMK-6m Fastener Kit

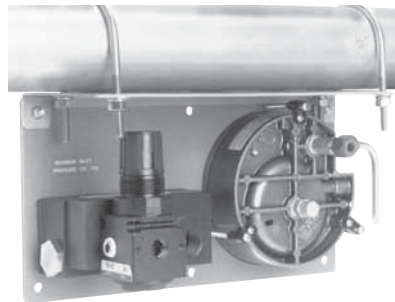
3000
SERIES

Type Y, Z & Ex [nP]

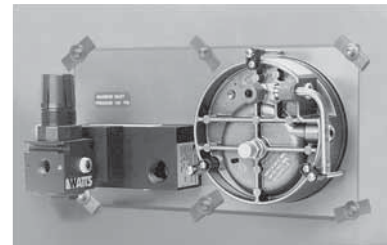
HM Configuration Mounting Options



Model 3004-LPS-CI-YZ-HMT
Flange Mounted to
Flat Horizontal Surface with
Model SMK-1 Fastener Kit

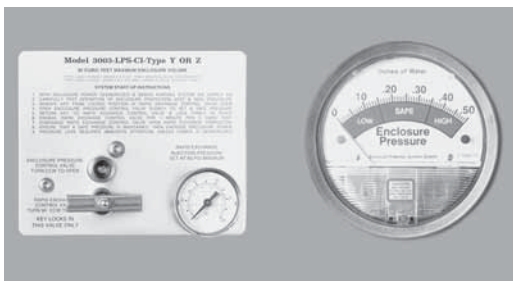


Model 3004-LPS-CI-YZ-HMB
Flange Mounted to
Horizontal 2" Pipe Stand with
Model PMK-1 Fastener Kit

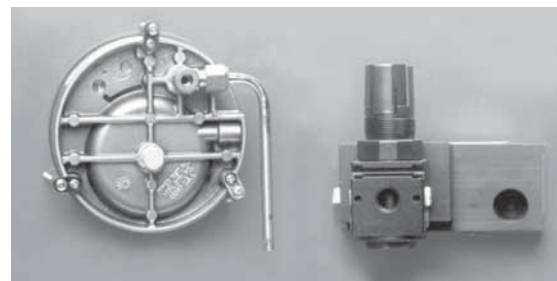


Model 3004-LPS-CI-YZ-HM
Frame or Panel* Mounted
Through Cutout in Suitable Surface
with Model SMK-6m Fastener Kit

CK Configuration Mounting Options



Front View



Rear View

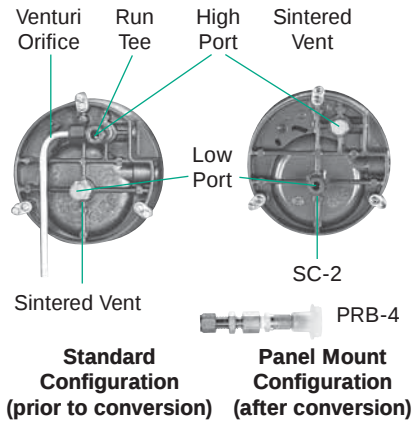
Model 3004-LPS-CI-YZ-CK
Rear View of Frame or Panel* Mount
Through Cutout in Suitable Surface with supplied fasteners

* PANEL MOUNTED SYSTEMS REQUIRE A PEPPERL+FUCHS MODEL GCK FOR PROPER OPERATION - SEE PAGE 44

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Type Y, Z & Ex [nP]

Model 3004 Panel Mount Conversion



1. Secure one Model GCK Conversion Kit, kit includes a PRB-4 & SC-2 Fitting & Enclosure Pressure Gauge gasket.
2. Remove venturi orifice and run tee from the high port of the gauge and discard.
3. Remove sintered vent from low port.
4. Reinstall sintered vent into high port.
5. Install Model SC-2 fitting into low port.
6. Install Gauge gasket between gauge & mounting surface.
7. Install Model PRB-4 fitting through enclosure surface (vent end out) and connect tubing (customer supplied) between SC-2 & PRB-4.

System Specifications

System Dimensions:	See pages 40-41
Shipping Weight:	LPS-12 lb (5.4 kg) WPS-17 lb (7.7 kg)
Temp. Range:	-20°F to +120°F (-29°C to +49°C)
Supply Pressure Range:	80 - 120 psi (5.5 - 8.3 bar)
Capacity & Filtration:	8.5 oz @ 40 Micron
Supply Requirements:	clean air or inert gas
Safe Press. Setpoint:	0.25" (6.35mm)
Safe Press. Flow Rate:	* 0.1 - 3.5 SCFH (2.8 - 99 l /hr)
Exchange Pressure:	* 3" - 5" (76.2mm - 127mm)
Exchange Flow Rate:	** 30 SCFM /1800 SCFH (850 l /m / 50976 l /hr)
Exchange Time:	
4 Volume Exchange Rate:	1 min / 7.5 ft ³ (212.4 l /m)
5 Volume Exchange Rate:	1 min / 6.0 ft ³ (169.9 l /m)
System Supply Port:	1/2" FPT
Enclosure Supply Port:	1/2" FPT
Enclosure Reference Fitting:	1/4" Tube
Switch Setting (WPS & WPSA Only):	0.15" ± 0.02" (3.81mm ± 0.51mm)

Material Specifications

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 Stainless Steel
Mfr. ID Nameplate:	Silkscreen Lexan®
Enclosure Warning Nameplate:	Silk screened SS
EXP Pressure Switch Body:	Anodized Cast Aluminum

* Refers to filter bowl supplied with VM mounting configuration.
Lexan® is a registered trademark of the General Electric Company

Model Number Designations

3004 - LPS - CI - YZ - VM - ##	
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 / Zone 2 to Nonhazardous
Mounting Configuration	
VML	- vertical mount left left of enclosure
VMR	- vertical mount right right of enclosure
HMT	- horizontal mount top top of enclosure
HMB	- horizontal mount bottom bottom of enclosure
CK	- Component Kit - LPS style only
## - See Accessories Page 117 for additional factory installed accessories	
†	Does not have ATEX certification

Model 3004 System Accessories (See accessories page for complete details)

CONNECTION FITTINGS	
NC-8	1/2" T x 1/2" P Ninety Connector
SC-8	1/2" T x 1/2" P Straight Connector
EFC-4	1/4" Flush Connector
EBC-4	1/4" Bulkhead Connector
EFC-8	1/2" Flush Connector
EBC-8	1/2" Bulkhead Connector
EPC-14	1 1/2" Pipe Connector

ADDITIONAL ITEMS	
SMK-1	System Mounting Kit - Flange
SMK-6m	System Mounting Kit - Frame/Panel

PMK-1	Pipe Mounting Kit
GCK	Gauge Conversion Kit
ILF-8	1/2" In-Line Filter Kit
RCF-8	1/2" 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

ENCLOSURE PROTECTION VENTS

ONE VENT REQUIRED WITH EACH SYSTEM	
EPV-4-SA-00	Straight w/Spark Arrestor
EPV-4-SA-90	Rt Angle w/Spark Arrestor

WARNING NAMEPLATES	
EWN-1	Class I Enclosure Warning
ETW	Enclosure Temperature Warning

INSTALLATION & OPERATION MANUAL	
129-0216	Inst. & Operation Manual

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

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