

Features

- NFPA 496, ISA 12.4, and ATEX standards
- Optional alarm output indicates air lock failure
- Optional differential pressure switch for Class I, Group A-D, ATEX certified hazardous area locations
- Type Ex [pz] certification for Zone 2 hazardous locations
- Type Y system certified for Class I, 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)

Function

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.

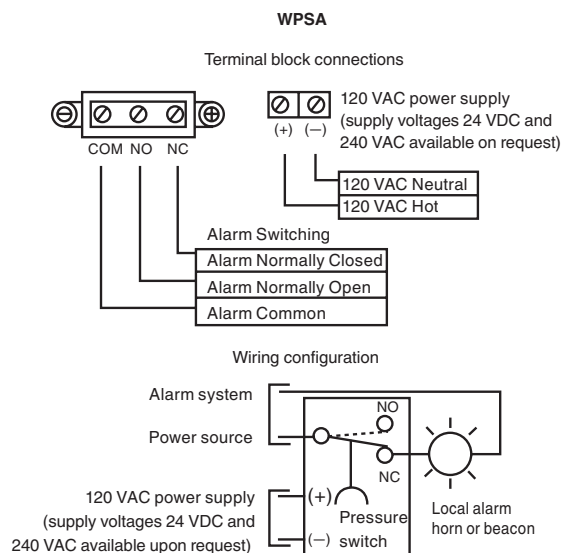
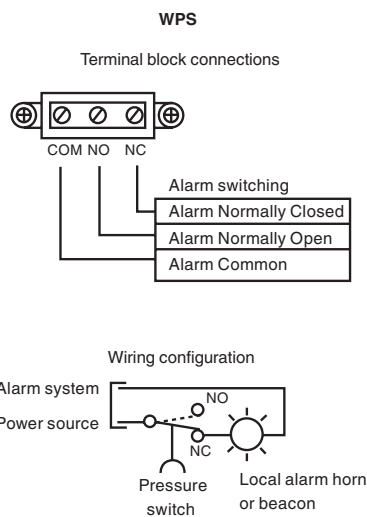
Model 3003 accomplishes the required volume exchanges and maintains a safe pressure. Pepperl+Fuchs Model EPV-3 enclosure protection vent is required for proper operation. This process reduces the hazardous (classified) area rating within protected enclosure(s), in accordance with the NEC-NFPA 70, NFPA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

Assembly



BEBCO EPS[®]

Connection



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General specifications	
Series	3003 Series
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)
Data for application in connection with hazardous areas	
EU-Type Examination Certificate	
Marking	LPS: ⊕ II 3G Ex [pz] IIC T4 WPSA: ⊕ II 3G Ex [pz] IIB+H2 T4
Directive conformity	
Directive 94/9/EC	*-LPS-*: EN 60079-2: 2004 EN 60079-0: 2006
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 and Ex [pz] 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	

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<p>cULus</p>	<p>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</p> <p>Type Z and Ex [pz] 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</p>
<p>General information</p> <p>Supplementary information</p>	<p>EC-Type Examination Certificate, Statement of Conformity, Declaration of Conformity, Attestation of Conformity and instructions have to be observed where applicable. For information see www.pepperl-fuchs.com.</p>

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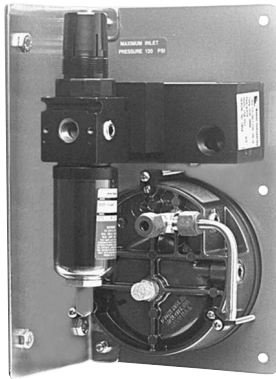
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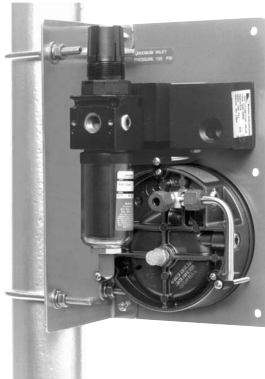
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VM configuration mounting options



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

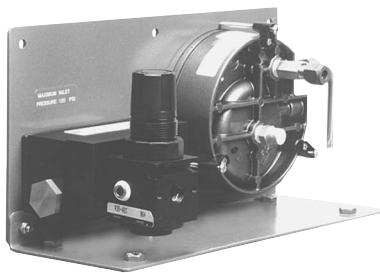


Model 3003-LPS-CI-YZ-VML
Flange mounted to vertical 2" pipe stand with Model PMK-1 fastener kit



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

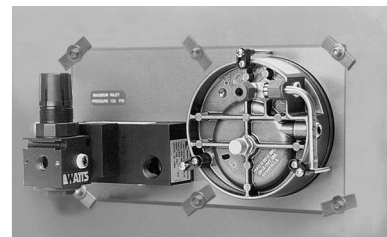
HM configuration mounting options



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

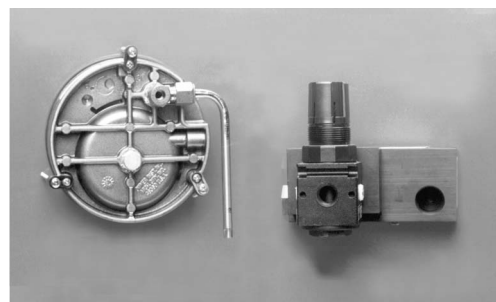


Model 3003-LPS-CI-YZ-HM
Frame or panel* mounted through cutout in suitable surface with Model SMK-6m fastener kit

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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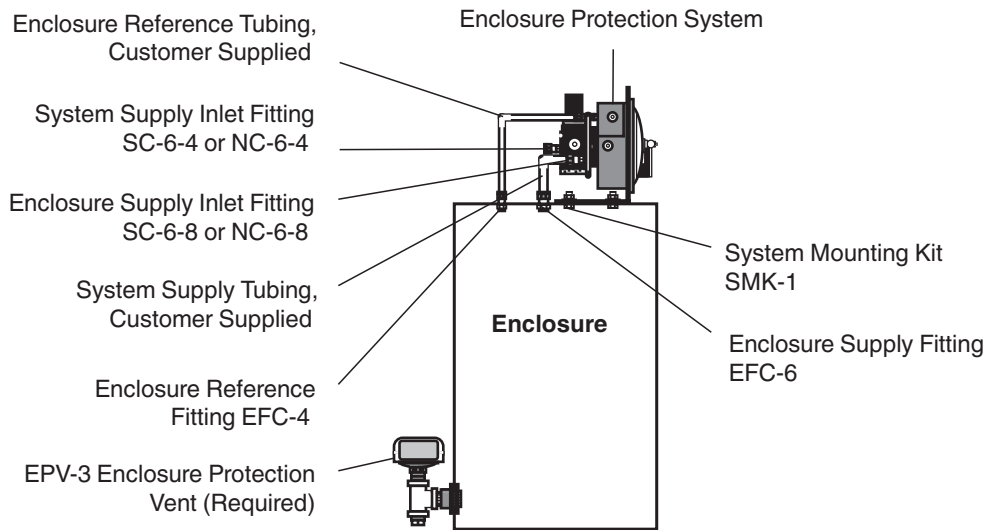
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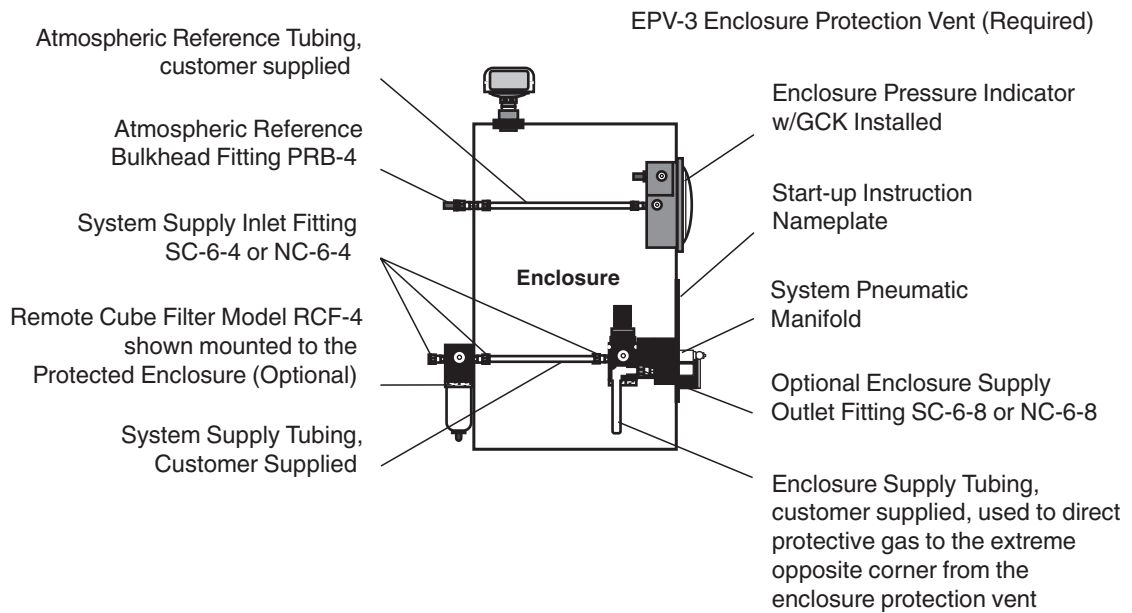
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Assembly

External Mount



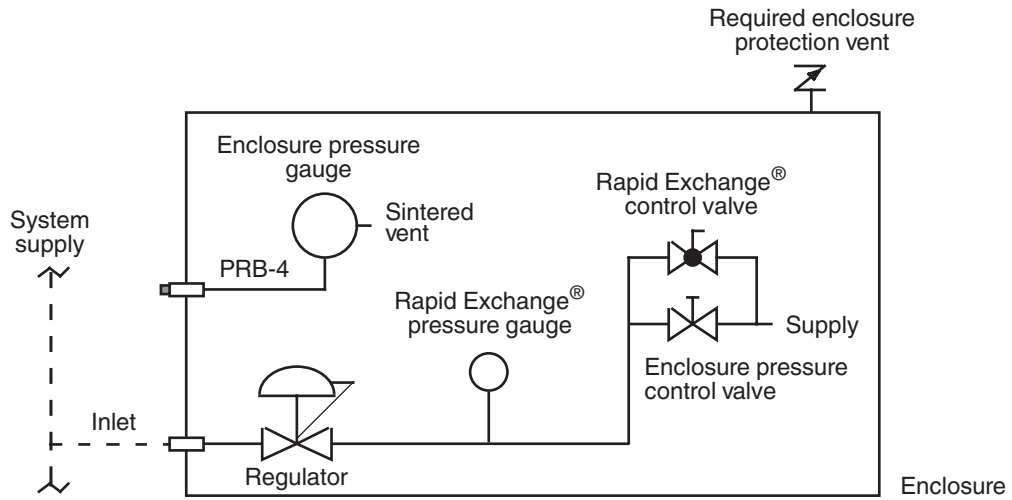
Internal Mount



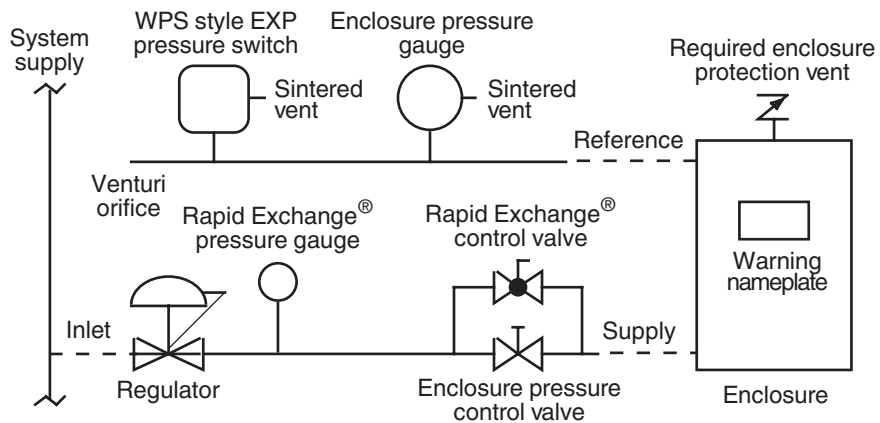
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Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

Standard Pneumatic Installation Diagram



Panel Mount Installation Diagram



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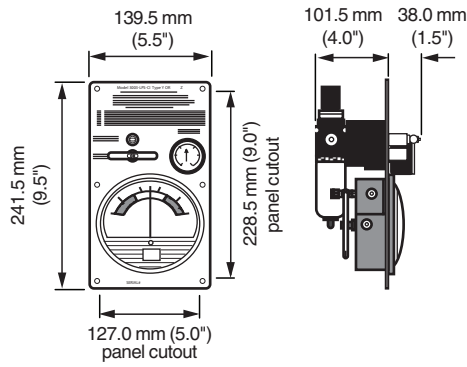
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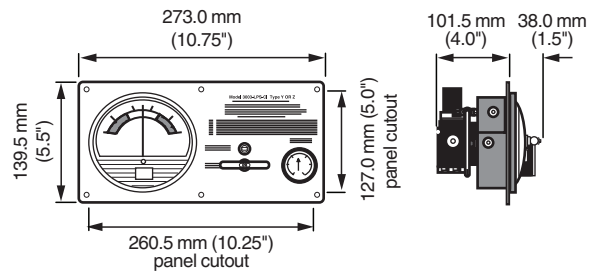
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Dimensions

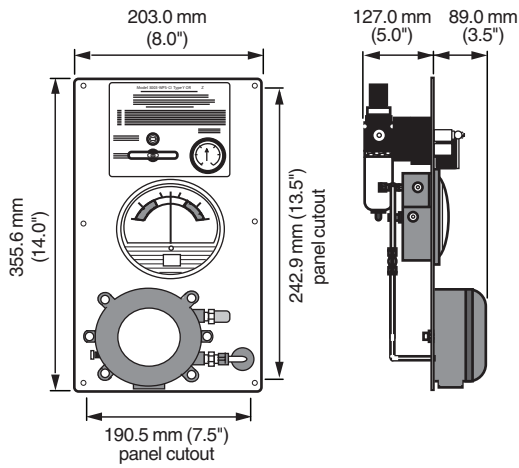
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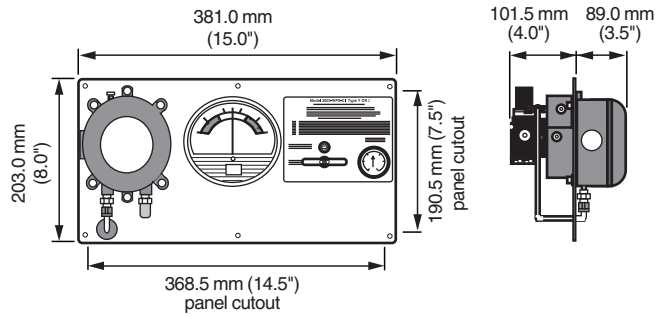
3003-LPS-CL-**-HM*-**-*****



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

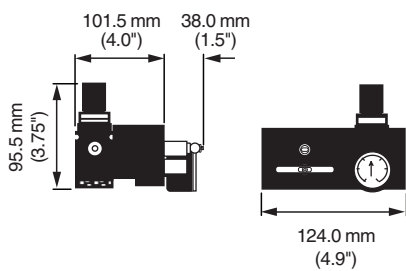


3003-WPS*-CL-**-HM*-**-*****

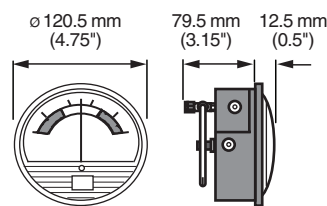


Component kit

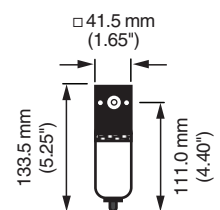
Pneumatic manifold



Enclosure pressure gauge



RCF-4



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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

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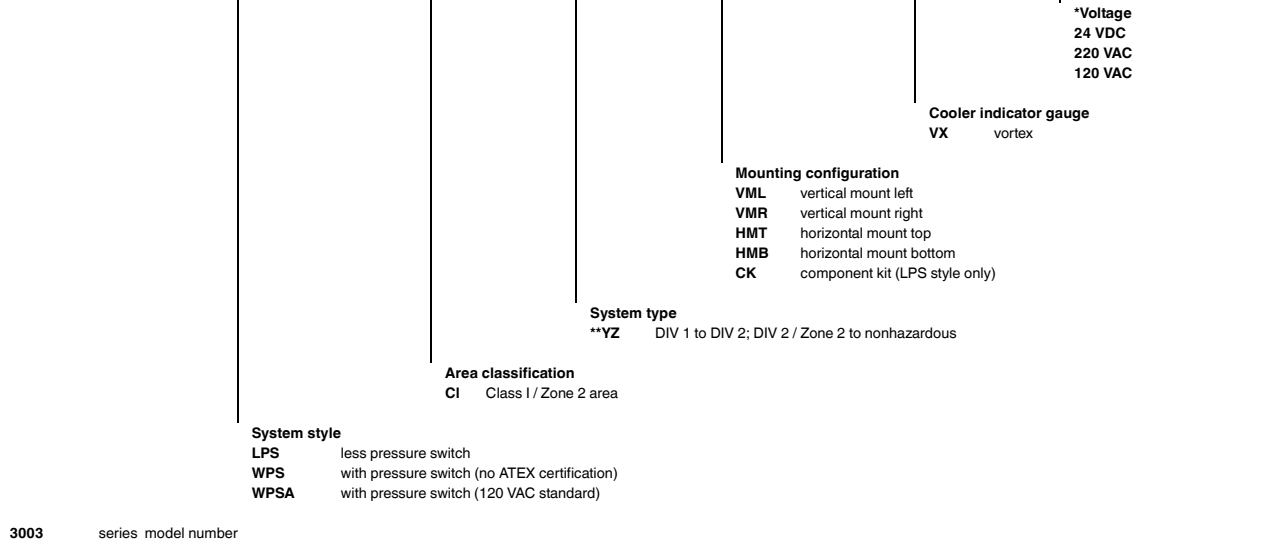
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Type code/model number

3 0 0 3 - L P S - C L - Y Z - V M L - V X - 2 4 V D C



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