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Type Z Systems (1000 Series)

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**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**

<table>
<thead>
<tr>
<th>System Dimensions:</th>
<th>See page 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shipping Weight:</td>
<td>LPS - 5 lb / WPS - 10 lb</td>
</tr>
<tr>
<td>Temp. Range:</td>
<td>-20 °F to +120 °F</td>
</tr>
<tr>
<td>Supply Pressure Range:</td>
<td>* 5 - 120 psi</td>
</tr>
<tr>
<td>Supply Requirements:</td>
<td>Clean air or inert gas</td>
</tr>
<tr>
<td>Safe Press. (Cl/CII):</td>
<td>0.25&quot;/1.0”</td>
</tr>
<tr>
<td>Safe Press. Flow Rate:</td>
<td>** 0.1 - 3.5 SCFH</td>
</tr>
<tr>
<td>System Supply Fitting:</td>
<td>1/4” tube fitting</td>
</tr>
<tr>
<td>Enclosure Supply Fitting:</td>
<td>1/4” tube fitting</td>
</tr>
<tr>
<td>Enclosure Reference Fitting:</td>
<td>1/4” tube fitting</td>
</tr>
<tr>
<td>Switch Setting (Cl/CII, Decr):</td>
<td>0.15”/0.5” ± 0.02”</td>
</tr>
<tr>
<td>Switch Conduit Port Size:</td>
<td>1/2” FPT</td>
</tr>
<tr>
<td>Switch Contact Rating:</td>
<td>WPS: 120 VAC @ 15 A</td>
</tr>
<tr>
<td></td>
<td>WPSA Style: *** 120 VAC @ 10 A, 125 VDC @ 50 mA</td>
</tr>
<tr>
<td>Switch (WPSA) Power Requirement:</td>
<td>24 VDC @ 3 watts</td>
</tr>
<tr>
<td></td>
<td>120 VAC @ 4 watts</td>
</tr>
<tr>
<td></td>
<td>240 VAC @ 11 watts</td>
</tr>
</tbody>
</table>

* 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.

---

**Standard Model Applications**

<table>
<thead>
<tr>
<th>Model Number: 1001A-CI Type Y</th>
<th>Model Number: 1001A-CII Type Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>Designation: Purging System</td>
<td>Designation: Pressurization System</td>
</tr>
<tr>
<td>Enclosure Volume: 2 ft³ max.</td>
<td>Enclosure Volume: 10 ft³ max.</td>
</tr>
<tr>
<td>LPS Style UL &amp; FM Certified:</td>
<td>Cl. I, Div. 1, Group A-D</td>
</tr>
<tr>
<td>Rating Reduction: Div. 1 to Div. 1</td>
<td></td>
</tr>
<tr>
<td>WPS Style UL &amp; FM Certified:</td>
<td>Cl. I, Div. 1, Group C&amp;D</td>
</tr>
<tr>
<td>Rating Reduction: Div. 1 to Div. 1</td>
<td></td>
</tr>
<tr>
<td>WPSA Style UL &amp; FM Certified:</td>
<td>Cl. I, Div. 1, Group A-D</td>
</tr>
<tr>
<td>Rating Reduction: Div. 1 to Div. 1</td>
<td></td>
</tr>
<tr>
<td>Model Number: 1001A-CII Type Z</td>
<td>Model Number: 1001A-CII Type Z</td>
</tr>
<tr>
<td>Designation: Pressurization System</td>
<td>Designation: Pressurization System</td>
</tr>
<tr>
<td>Enclosure Volume: 10 ft³ max.</td>
<td>Enclosure Volume: 10 ft³ max.</td>
</tr>
<tr>
<td>LPS Style UL &amp; FM Certified:</td>
<td>Cl. I, Div. 2, Group A-D</td>
</tr>
<tr>
<td>Rating Reduction: Div. 2 to Nonhazardous</td>
<td></td>
</tr>
<tr>
<td>WPS Style UL &amp; FM Certified:</td>
<td>Cl. I, Div. 2, Group C&amp;D</td>
</tr>
<tr>
<td>Rating Reduction: Div. 2 to Nonhazardous</td>
<td></td>
</tr>
<tr>
<td>WPSA Style UL &amp; FM Certified:</td>
<td>Cl. I, Div. 2, Group A-D</td>
</tr>
<tr>
<td>Rating Reduction: Div. 2 to Nonhazardous</td>
<td></td>
</tr>
</tbody>
</table>

---

**Class I (≤ 2 ft³) and Class II (≤ 10 ft³)**
**Type Y & Z**

---

**System Accessories Diagram**

- **Enclosure Pressure Gauge**
- **Enclosure Reference Inlet**
- **System Supply Inlet**
- **Enclosure Pressure Control Regulator**
- **Enclosure Supply Outlet**

**LPS Style (Less Pressure Switch)**

- **Dimensions**
  - Height & width dimensions reflect mounting plate measurements.
  - Depth dimension reflects overall measurement of system, including components.

**WPS Style (With Pressure Switch)**

- **Overall Height**
- **Depth**
- **Width**

**Dimensions in inches.**

---

**Enclosure Protection Vent**

**Note:** ECK-1001A, Enclosure Connection Kit includes (2) EFC-4, and tubing mounted to panel.

---

**Material Specifications**

- **Regulator Body:** Zinc w/Enamel Finish
- **Regulator Handle:** Polycarbonate
- **Enclosure Pressure Gauge:** Alum. w/Enamel Finish
- **Tubing 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

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**Model Number Designations**

- **Series Model Number**
- **System Style**
- **Area Classification**
- **System Type**
- **Mounting Configuration**
- **WARNING NAMEPLATES**

---

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

- **FACTOR INSTALLED FITTINGS**
  - **ECK-1001A**
  - **EFC-4**
  - **EBC-4**
  - **EPC-10**
  - **ILF-4**
  - **SMK-1**
  - **EPSK-1**

- **ADDITIONAL ITEMS**
  - **GPSK-1 or -2**
  - **RAH**
  - **RAB-1**
  - **RAB-2**
  - **LCK**
  - **TOC**
  - **TPC**

- **OPTIONAL ENCLOSED PROTECTION VENTS**
  - **EPV-1-SA-00**
  - **EPV-1-SA-90**

- **OPTIONAL HEX KEY REGULATOR HANDLE**
  - **TR-10G**

<table>
<thead>
<tr>
<th>Overall System Dimensions</th>
<th>LPS / WPS</th>
<th>LH - left hand</th>
<th>RH - right hand</th>
<th>TM - top mount</th>
<th>BM - bottom mount</th>
<th>WM - wall mount</th>
<th>FM &amp; PM - surface</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Height</strong></td>
<td>7 / 12</td>
<td>7 / 12</td>
<td>7 / 8</td>
<td>7 / 8</td>
<td>7 / 12</td>
<td>9 / 14</td>
<td></td>
</tr>
<tr>
<td><strong>Width</strong></td>
<td>8 / 8</td>
<td>8 / 8</td>
<td>8 / 13.375</td>
<td>8 / 13.375</td>
<td>8 / 8</td>
<td>10 / 10</td>
<td></td>
</tr>
<tr>
<td><strong>Depth</strong></td>
<td>5.5 / 7.25</td>
<td>5.5 / 7.25</td>
<td>5.5 / 7.25</td>
<td>5.5 / 7.25</td>
<td>7.5 / 9.25</td>
<td>5 / 6.5</td>
<td></td>
</tr>
</tbody>
</table>

Dimensions in inches. Mounting dimensions available upon request. FM & PM panel cutout dimensions: LPS - 8x1 9w WMPS - 13h x 9w Height & width dimensions reflect mounting plate measurements. Depth dimension reflects overall measurement of system, including components.

---

**Installation & Operation Manual**

- **ETW**
- **Yearly Inspection & Maintenance**
- **Replacement Parts & Service**

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Java-based diagram rendering

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**Type Y & Z**

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**Type Y & Z**

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Java-based diagram rendering
### Description

Model 1001B is an enclosure pressurization 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 by maintaining a “safe” (1.0”) pressure. 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. Before start-up, 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. Power can be energized when safe pressure is stable. 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

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>System Dimensions:</td>
<td>See page 6</td>
</tr>
<tr>
<td>Shipping Weight:</td>
<td>LPS - 7 lb / WPS - 12 lb</td>
</tr>
<tr>
<td>Temp. Range:</td>
<td>-20 °F to +120 °F</td>
</tr>
<tr>
<td>Supply Pressure Range:</td>
<td>5 - 120 psi</td>
</tr>
<tr>
<td>Supply Requirements:</td>
<td>clean air or inert gas</td>
</tr>
<tr>
<td>Safe Press. Setpoint:</td>
<td>1.0”</td>
</tr>
<tr>
<td>Safe Press. Flow Rate:</td>
<td><strong>0.1 - 3.5 SCFH</strong></td>
</tr>
<tr>
<td>System Supply Fitting:</td>
<td>3/8” tube fitting</td>
</tr>
<tr>
<td>Enclosure Supply Fitting:</td>
<td>3/8” tube fitting</td>
</tr>
<tr>
<td>Enclosure Reference Fitting:</td>
<td>1/4” tube fitting</td>
</tr>
<tr>
<td>Switch Setting (Decr):</td>
<td>0.5” ± 0.02”</td>
</tr>
<tr>
<td>Switch Conduit Port Size:</td>
<td>1/2” FPT</td>
</tr>
<tr>
<td>Switch Contact Rating:</td>
<td>120 VAC @ 15 A</td>
</tr>
</tbody>
</table>

* With EPV-3 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

### Standard Model Applications

<table>
<thead>
<tr>
<th>Model Number: 1001B-CII Type Y</th>
<th>Designation: Pressurization System Enclosure Volume: 50 ft³ max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>UL &amp; FM Certified: Cl. II, Div. 1, Group F&amp;G</td>
<td>Rating Reduction: Div. 1 to Div. 2</td>
</tr>
<tr>
<td>LPS Style</td>
<td>WPS Style</td>
</tr>
<tr>
<td>UL &amp; FM Certified: Cl. II, Div. 2, Group F&amp;G</td>
<td>Rating Reduction: Div. 2 to Nonhazardous</td>
</tr>
<tr>
<td>Rating Reduction:</td>
<td></td>
</tr>
<tr>
<td>LPS Style</td>
<td>WPS Style</td>
</tr>
<tr>
<td>UL &amp; FM Certified: Cl. II, Div. 1, Group F&amp;G</td>
<td>Rating Reduction: Div. 1 to Div. 2</td>
</tr>
<tr>
<td>Rating Reduction:</td>
<td></td>
</tr>
</tbody>
</table>

* With EPV-3 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
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

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Model Number Designations

<table>
<thead>
<tr>
<th>Series Model Number</th>
<th>System Style</th>
<th>Area Classification</th>
<th>System Type</th>
<th>Mounting Configuration</th>
</tr>
</thead>
<tbody>
<tr>
<td>1001B - LPS - CII - YZ - LH - ##</td>
<td>LPS - less pressure switch</td>
<td>CII - Class II Area</td>
<td>YZ - Div. 1 to Div. 2, Div. 2 to Nonhazardous</td>
<td>LH - left hand, left side of enclosure</td>
</tr>
</tbody>
</table>

WPS Style
(With Pressure Switch)

LPS Style
(Less Pressure Switch)

CONNECTION POINTS SHOWN ABOVE IN BOLD TEXT ON SYSTEM DIAGRAM

System Accessories Diagram

System Accessories Diagram

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

<table>
<thead>
<tr>
<th>CONNECTION FITTINGS &amp; FILTER</th>
<th>EPSK-2</th>
<th>EXP-10G</th>
<th>OPTIONAL HEX KEY REGULATOR HANDLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>EFC-4 1/4&quot; Flush Connector</td>
<td></td>
<td></td>
<td>TR-10G Tamper Proof Regulator</td>
</tr>
<tr>
<td>EFC-6 3/8&quot; Flush Connector</td>
<td></td>
<td></td>
<td>WARNING NAMEPLATES</td>
</tr>
<tr>
<td>EBC-6 3/8&quot; Bulkhead Connector</td>
<td></td>
<td></td>
<td>EWN-2 Class II Enclosure Warning</td>
</tr>
<tr>
<td>EPC-13 1&quot; Pipe Connector</td>
<td></td>
<td></td>
<td>ETW Enclosure Temperature Warning</td>
</tr>
<tr>
<td>ILF-6 3/8&quot; Filter w/Clear Bowl</td>
<td></td>
<td></td>
<td>INSTALLATION &amp; OPERATION MANUAL</td>
</tr>
<tr>
<td>SMK-1, -4 or -6 System Mounting Kit</td>
<td></td>
<td>129-0201 Inst. &amp; Operation Manual</td>
<td></td>
</tr>
</tbody>
</table>

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

Overall System Dimensions

<table>
<thead>
<tr>
<th>LPS / WPS</th>
<th>LH - left hand</th>
<th>RH - right hand</th>
<th>TM - top mount</th>
<th>BM - bottom mount</th>
<th>WM - wall mount</th>
<th>FM &amp; PM - surface</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height</td>
<td>7 / 12</td>
<td>7 / 12</td>
<td>7 / 8</td>
<td>7 / 8</td>
<td>7 / 12</td>
<td>9 / 14</td>
</tr>
<tr>
<td>Depth</td>
<td>6 / 7.25</td>
<td>6 / 7.25</td>
<td>6 / 6.75</td>
<td>6 / 7.25</td>
<td>7.5 / 9.25</td>
<td>4.75 / 6.5</td>
</tr>
</tbody>
</table>

Dimensions in inches. Mounting dimensions available upon request. FM & PM panel cutout dimensions: LPS - 8h x 9.875w WPS - 13h x 9.875w

Height & width dimensions reflect mounting plate measurements. Depth dimension reflects overall measurement of system, including components.
Model 1001C

Description

Model 1001C is an enclosure pressurization 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 by maintaining a "safe" (1.0") pressure. 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. Before start-up, 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. Power can be energized when safe pressure is stable. 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 8
Shipping Weight: LPS - 7 lb / WPS - 12 lb
Temp. Range: -20 °F to +120 °F
Supply Pressure Range: * 5 - 120 psi
Supply Requirements: clean air or inert gas
Safe Press. Setpoint: 1.0"
Safe Press. Flow Rate: ** 0.1 - 3.5 SCFH
System Supply Fitting: 1/2" tube fitting
Enclosure Supply Fitting: 1/2" tube fitting
Enclosure Reference Fitting: 1/4" tube fitting
Switch Setting (Decr): 0.5" ± 0.02"
Switch Conduit Port Size: 1/2" FPT
Switch Contact Rating: 120 VAC @ 15 A

* With EPV-4 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

Standard Model Applications

| Model Number: 1001C-CII Type Y | Designation: Pressurization System
| Enclosure Volume: 250 ft³ 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: 1001C-CII Type Z | Designation: Pressurization System
| Enclosure Volume: 250 ft³ 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 |

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pa-info@de.pepperl-fuchs.com
pa-info@sg.pepperl-fuchs.com
Material Specifications

<table>
<thead>
<tr>
<th>Component</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regulator Body</td>
<td>Zinc w/Enamel Finish</td>
</tr>
<tr>
<td>Regulator Handle</td>
<td>Polycarbonate</td>
</tr>
<tr>
<td>Enclosure Pressure Gauge</td>
<td>Alum. w/Enamel Finish</td>
</tr>
<tr>
<td>Tube Fittings</td>
<td>316 SS Forged Body</td>
</tr>
<tr>
<td>Tubing</td>
<td>316 SS 1/4&quot; .035 Welded</td>
</tr>
<tr>
<td>System Nameplates</td>
<td>Silk screened Lexan® &amp; SS</td>
</tr>
<tr>
<td>Fastener Hardware</td>
<td>Alum. &amp; Stainless Steel</td>
</tr>
<tr>
<td>Mounting Plate</td>
<td>316 14 Ga #3 Brush SS</td>
</tr>
<tr>
<td>EXP Pressure Switch Body</td>
<td>Anodized Cast Alum.</td>
</tr>
<tr>
<td>Enclosure Warning Nameplate</td>
<td>Silk screened SS</td>
</tr>
</tbody>
</table>

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Model Number Designations

<table>
<thead>
<tr>
<th>Series Model Number</th>
<th>System Style</th>
<th>Area Classification</th>
<th>Mounting Configuration</th>
</tr>
</thead>
<tbody>
<tr>
<td>1001C</td>
<td>LP - less pressure switch</td>
<td>CII - Class II Area</td>
<td>LH - left hand</td>
</tr>
<tr>
<td></td>
<td>WP - with pressure switch</td>
<td></td>
<td>RH - right hand</td>
</tr>
</tbody>
</table>

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

**CONNECTION FITTINGS & FILTER**

- EFC-4: 1/4" Flush Connector
- EFC-8: 1/2" Flush Connector
- EBC-8: 1/2" Bulkhead Connector
- EPC-14: 1 1/2" Pipe Connector
- IFL-8: 1/2" Filter w/Clear Bowl

**ADDITIONAL ITEMS**

- ILF-8: 1/2" Filter
- SMK-1: -4 or -6 System Mounting Kit
- TR-30G: Tamper Proof Regulator
- EWN-2: Class II Enclosure Warning
- ETW: Enclosure Temperature Warning
- EPSK-2: Explosion Proof 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
- EPV-4-SA-00: Straight w/Spark Arrestor
- EPV-4-SA-90: Rt Angle w/Spark Arrestor

**OPTIONAL HEX KEY REGULATOR HANDLE**

- TR-30G: Tamper Proof Regulator

**WARNING NAMEPLATES**

- EWN-2: Class II Enclosure Warning
- ETW: Enclosure Temperature Warning

**INSTALLATION & OPERATION MANUAL**


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

**Overall System Dimensions**

<table>
<thead>
<tr>
<th>LPS / WPS</th>
<th>LH - left hand</th>
<th>RH - right hand</th>
<th>TM - top mount</th>
<th>BM - bottom mount</th>
<th>WM - wall mount</th>
<th>FM &amp; PM - surface</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height</td>
<td>7 / 12</td>
<td>7 / 12</td>
<td>7 / 8</td>
<td>7 / 8</td>
<td>7 / 12</td>
<td>9 / 14</td>
</tr>
<tr>
<td>Depth</td>
<td>6 / 7.25</td>
<td>6 / 7.25</td>
<td>6 / 7.25</td>
<td>6 / 7.25</td>
<td>7.5 / 9.25</td>
<td>4.75 / 6.5</td>
</tr>
</tbody>
</table>

Dimensions in inches. Mounting dimensions available upon request. FM & PM panel cutout dimensions: LPS - 8h x 9.875w WPS - 13h x 9.875w Height & width dimensions reflect mounting plate measurements. Depth dimension reflects overall measurement of system, including components.
**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 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 / 3 / 3 watts

* Enclosure integrity determines actual flow rate
** With regulator set to 60 psi min. during exchange.
*** Rapid Exchange® is a Registered Trademark of Pepperl+Fuchs.

**Standard Model Applications**

<table>
<thead>
<tr>
<th>Model Number: 1002 Type Y</th>
<th>Model Number: 1002 Type Z</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Designation:</strong> Purging System</td>
<td><strong>Designation:</strong> Purging System</td>
</tr>
<tr>
<td><strong>Enclosure Volume:</strong> 15 ft³ max.</td>
<td><strong>Enclosure Volume:</strong> 15 ft³ max.</td>
</tr>
<tr>
<td><strong>LPS</strong></td>
<td><strong>LPS</strong></td>
</tr>
<tr>
<td>UL &amp; FM Certified: Cl. I, Div. 1 Group A-D</td>
<td>UL &amp; FM Certified: Cl. I, Div. 1 Group A-D</td>
</tr>
<tr>
<td>Rating Reduction: Div. 1 to Div. 2</td>
<td>Rating Reduction: Div. 2 to Nonhazardous</td>
</tr>
<tr>
<td><strong>WPS</strong></td>
<td><strong>WPS</strong></td>
</tr>
<tr>
<td>UL &amp; FM Certified: Cl. I, Div. 1 Group C&amp;D</td>
<td>UL &amp; FM Certified: Cl. I, Div. 2 Group C&amp;D</td>
</tr>
<tr>
<td>Rating Reduction: Div. 1 to Div. 2</td>
<td>Rating Reduction: Div. 2 to Nonhazardous</td>
</tr>
<tr>
<td><strong>WPSA</strong></td>
<td><strong>WPSA</strong></td>
</tr>
<tr>
<td>UL &amp; FM Certified: Cl. I, Div. 1 Group A-D</td>
<td>UL &amp; FM Certified: Cl. I, Div. 2 Group A-D</td>
</tr>
<tr>
<td>Rating Reduction: Div. 1 to Div. 2</td>
<td>Rating Reduction: Div. 2 to Nonhazardous</td>
</tr>
</tbody>
</table>

WPS/WPSA Style

- UL & FM Certified: Cl. 1, Div. 2, Group A-D
- Rating Reduction: Div. 2 to Nonhazardous
**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
- **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 Lexan®

Lexan® is a registered trademark of the General Electric Company.

**Model Number Designations**

- **Series Model Number**
  - 1002 - LPS - CI - YZ - LH - ##
- **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
  - RH - right hand
  - TM - top mount
  - BM - bottom mount
  - WM - wall mount
  - FM - frame mount
  - PM - panel mount

## - 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**

- **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

---

**Overall System Dimensions**

<table>
<thead>
<tr>
<th>LPS / WPS</th>
<th>RH - right hand</th>
<th>TM - top mount</th>
<th>BM - bottom mount</th>
<th>WM - wall mount</th>
<th>FM or PM - flat panel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height</td>
<td>10 / 15</td>
<td>10 / 10</td>
<td>10 / 10</td>
<td>10 / 15</td>
<td>12 / 17</td>
</tr>
<tr>
<td>Depth</td>
<td>6 / 7.5</td>
<td>6 / 7.5</td>
<td>6 / 7.5</td>
<td>7.75 / 9.25</td>
<td>5 / 6.5</td>
</tr>
</tbody>
</table>

Dimensions in inches. Mounting dimensions available upon request. FM & PM panel cutout dimensions: LPS - 11h x 12w WPS - 16h x 16w.
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

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>System Dimensions:</td>
<td>See page 12</td>
</tr>
<tr>
<td>Shipping Weight:</td>
<td>LPS - 12 lb / WPS - 17 lb</td>
</tr>
<tr>
<td>Temp. Range:</td>
<td>-20 °F to +120 °F</td>
</tr>
<tr>
<td>Supply Pressure Range:</td>
<td>80 - 120 psi</td>
</tr>
<tr>
<td>Capacity &amp; Filtration:</td>
<td>3.8 oz @ 40 Micron</td>
</tr>
<tr>
<td>Supply Requirements:</td>
<td>clean air or inert gas</td>
</tr>
<tr>
<td>Safe Press. Setpoint:</td>
<td>0.25&quot;</td>
</tr>
<tr>
<td>Safe Press. Flow Rate:</td>
<td>*0.1 - 3.5 SCFH</td>
</tr>
<tr>
<td>Exchange Pressure:</td>
<td>3&quot; - 5&quot;</td>
</tr>
<tr>
<td>Exchange Flow Rate:</td>
<td>**10 SCFM / 600 SCFH</td>
</tr>
<tr>
<td>Exchange Time:</td>
<td>1 min / 2.5 ft²</td>
</tr>
<tr>
<td>System Supply Port:</td>
<td>3/8&quot; FPT</td>
</tr>
<tr>
<td>Enclosure Supply Fitting:</td>
<td>3/8&quot; tube fitting</td>
</tr>
<tr>
<td>Enclosure Reference Fitting:</td>
<td>1/4&quot; tube fitting</td>
</tr>
<tr>
<td>Switch Setting (Decr):</td>
<td>0.15&quot; ± 0.02&quot;</td>
</tr>
<tr>
<td>Switch Conduit Port Size:</td>
<td>1/2&quot; FPT</td>
</tr>
<tr>
<td>Switch Contact Rating:</td>
<td></td>
</tr>
<tr>
<td>WPS Style:</td>
<td>120 VAC @ 15 A</td>
</tr>
<tr>
<td>WPSA Style:</td>
<td>**120/220 VAC, 24 VDC @ 10 A; 125 VDC @ 50 mA</td>
</tr>
</tbody>
</table>

* Enclosure integrity determines actual flow rate
** With regulator set to 60 psi min. during exchange. Rapid Exchange® is a Registered Trademark of Pepperl+Fuchs.
*** Supply voltages 24 VDC and 240 VAC available upon request.

Standard Model Applications

<table>
<thead>
<tr>
<th>Model Number: 1003 Type Y</th>
<th>Model Number: 1003 Type Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>Designation:</td>
<td>Purging System</td>
</tr>
<tr>
<td>Volume:</td>
<td>75 ft³ max.</td>
</tr>
<tr>
<td>LPS Style</td>
<td></td>
</tr>
<tr>
<td>UL &amp; FM Certified:</td>
<td>Cl. I, Div. 1, Group A-D</td>
</tr>
<tr>
<td>Rating Reduction:</td>
<td>Div. 1 to Div. 2</td>
</tr>
<tr>
<td>WPS Style</td>
<td></td>
</tr>
<tr>
<td>UL &amp; FM Certified:</td>
<td>Cl. I, Div. 1, Group C&amp;D</td>
</tr>
<tr>
<td>Rating Reduction:</td>
<td>Div. 1 to Div. 2</td>
</tr>
</tbody>
</table>

WPSA Style

| UL & FM Certified:       | Cl. I, Div. 1, Group A-D |
| Rating Reduction:        | Div. 1 to Div. 2         |
**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**

**Series Model Number**

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

**Area Classification**

- **Cl** - Class I Area

**System Type**

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

**Mounting Configuration**

- **LH** - left hand
- **RH** - right hand
- **TM** - top mount
- **BM** - bottom mount
- **WM** - wall mount
- **FM** - frame mount
- **PM** - panel mount

---

**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

**GPUK-1** General-purpose Switch Kit

**RAH** Remote Alarm Horn

**RAB-1** Div. 1 Remote Alarm Beacon

**RAB-2** Div. 2 Remote Alarm Beacon

**LCK** Fitting Conduit Kit

**TCK** 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

---

**Model 1003 Overall System Dimensions**

<table>
<thead>
<tr>
<th>LPS / WPS</th>
<th>LH - left hand</th>
<th>RH - right hand</th>
<th>TM - top mount</th>
<th>BM - bottom mount</th>
<th>WM - wall mount</th>
<th>FM or PM - flat panel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height</td>
<td>12 / 15</td>
<td>12 / 15</td>
<td>12 / 12</td>
<td>12 / 12</td>
<td>12 / 15</td>
<td>14 / 17</td>
</tr>
<tr>
<td>Width</td>
<td>11.5 / 11.5</td>
<td>11.5 / 11.5</td>
<td>11.5 / 15.25</td>
<td>11.5 / 15.25</td>
<td>11.5 / 11.5</td>
<td>13.5 / 13.5</td>
</tr>
<tr>
<td>Depth</td>
<td>6 / 7.5</td>
<td>6 / 7.5</td>
<td>6 / 7.5</td>
<td>6 / 7.5</td>
<td>7.75 / 9.25</td>
<td>5.75 / 7.25</td>
</tr>
</tbody>
</table>

Dimensions in inches. Mounting dimensions available upon request. FM & PM panel cutout dimensions: LPS - 13xh 12.5w WPS - 16xh 12.5w Height & width dimensions reflect mounting plate measurements. Depth dimension reflects overall measurement of system, including components.
**Type Y & Z**

**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.

**System Specifications**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>System Dimensions:</td>
<td>See page 14</td>
</tr>
<tr>
<td>Shipping Weight:</td>
<td>LPS - 15 lb / WPS - 23 lb</td>
</tr>
<tr>
<td>Temp. Range:</td>
<td>-20 °F to +120 °F</td>
</tr>
<tr>
<td>Supply Pressure Range:</td>
<td>80 - 120 psi</td>
</tr>
<tr>
<td>Capacity &amp; Filtration:</td>
<td>8.5oz @ 40 Micron</td>
</tr>
<tr>
<td>Supply Requirements:</td>
<td>clean air or inert gas</td>
</tr>
<tr>
<td>Safe Press. Setpoint:</td>
<td>0.25&quot;</td>
</tr>
<tr>
<td>Safe Press. Flow Rate:</td>
<td>* 0.1 - 3.5 SCFH</td>
</tr>
<tr>
<td>Exchange Pressure:</td>
<td>3&quot; - 5&quot;</td>
</tr>
<tr>
<td>Exchange Flow Rate:</td>
<td>** 30 SCFM /1800 SCFH</td>
</tr>
<tr>
<td>Exchange Time:</td>
<td>1 min / 7.5 ft³</td>
</tr>
<tr>
<td>System Supply Port:</td>
<td>1/2&quot; FPT</td>
</tr>
<tr>
<td>Enclosure Supply Fitting:</td>
<td>1/2&quot; tube fitting</td>
</tr>
<tr>
<td>Enclosure Reference Fitting:</td>
<td>1/4&quot; tube fitting</td>
</tr>
<tr>
<td>Switch Setting (Decr):</td>
<td>0.15&quot; ± 0.02&quot;</td>
</tr>
<tr>
<td>Switch Contact Port Size:</td>
<td>1/2&quot; FPT</td>
</tr>
<tr>
<td>Switch Contact Rating:</td>
<td>WPS: 120 VAC @ 15 A</td>
</tr>
<tr>
<td></td>
<td>WPSA: *** 120/220 VAC, 24 VDC @ 10 A; 125 VDC @ 50 mA</td>
</tr>
</tbody>
</table>

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

* Enclosure integrity determines actual flow rate

** Standard Model Applications **

**Class I (≤ 200 ft³)**

**Model Number:** 1004 Type Y

- **Designation:** Purging System
- **Enclosure Volume:** 200 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:** 1004 Type Z

- **Designation:** Purging System
- **Enclosure Volume:** 200 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

---

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www.pepperl-fuchs.com

pa-info@us.pepperl-fuchs.com
**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 & Tube
- **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**

<table>
<thead>
<tr>
<th>Series Model Number</th>
<th>System Style</th>
<th>Area Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>1004 - LPS - CI - YZ - LH - ##</td>
<td>LPS - less pressure switch</td>
<td>CI - Class I Area</td>
</tr>
<tr>
<td></td>
<td>WPS - with pressure switch</td>
<td></td>
</tr>
<tr>
<td></td>
<td>WPSA - with pressure switch</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**System Accessories Diagram**

- **Supply Inlet Fitting:** SC-8 or NC-8
- **1/2" Supply Tubing:**
- **1/4" Tubing Reference:**
- **Enclosure Supply Fitting:** EBC-8
- **Enclosure Reference Fitting:** EFC-4
- **Enclosure Protection Vent:** EPV-4-SA...
- **Mounting Kit:** SMK-2
- **Pressurized Protected Enclosure:**
- **Warning Nameplate EWN-1:** (Included with Panel)

---

**Model 1004 System Accessories**

**CONNECTION FITTINGS**

- **NC-8**
- **SC-8**
- **EFC-4**
- **EFC-8**
- **EBC-8**
- **EPC-14**

**ADDITIONAL ITEMS**

- **SMK-2 or 8**
- **EPSK-1**

**GPSK-1**

**RAH**

**RAB-1**

**RAB-2**

**LCR**

**TCK**

**ENCLOSURE PROTECTION VENTS**

**ONE VENT REQUIRED WITH EACH SYSTEM**

- **EPV-4-SA-00**
- **EPV-4-SA-90**

**WARNINGS NAMEPLATES**

- **EWN-1**
- **ETW**

**INSTALLATION & OPERATION MANUAL**

129-0203

**1/4" Tubing Reference**

---

**Overall System Dimensions**

<table>
<thead>
<tr>
<th></th>
<th>LPS / WPS</th>
<th>LH - left hand</th>
<th>RH - right hand</th>
<th>TM - top mount</th>
<th>BM - bottom mount</th>
<th>WM - wall mount</th>
<th>FM or PM - flat panel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height</td>
<td>12 / 16.25</td>
<td>12 / 16.25</td>
<td>12 / 12</td>
<td>12 / 12</td>
<td>12 / 12</td>
<td>12 / 15</td>
<td>14 / 18.25</td>
</tr>
<tr>
<td>Width</td>
<td>13.5 / 13.5</td>
<td>13.5 / 13.5</td>
<td>13.5 / 16.75</td>
<td>13.5 / 16.75</td>
<td>13.5 / 13.5</td>
<td>13.5 / 13.5</td>
<td>15.5 / 15.5</td>
</tr>
</tbody>
</table>

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.
**Description**

Model 1005 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-5 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 - 15 lb / WPS - 25 lb
- **Temp. Range:** -20 °F to +120 °F
- **Supply Pressure Range:** 80 - 120 psi
- **Capacity & Filtration:** 8.5 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:** ** 60 SCFM / 3600 SCFH
- **Exchange Time:** 1 min / 15 ft³
- **System Supply Port:** 1/2" FPT
- **Enclosure Supply Fitting:** 1/2" FPT
- **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

** Standard Model Applications **

<table>
<thead>
<tr>
<th>Model Number: 1005 Type Y</th>
<th>Model Number: 1005 Type Z</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Designation:</strong> Purging System</td>
<td><strong>Designation:</strong> Purging System</td>
</tr>
<tr>
<td><strong>Enclosure Volume:</strong> 450 ft³ max.</td>
<td><strong>Enclosure Volume:</strong> 450 ft³ max.</td>
</tr>
<tr>
<td><strong>LPS Style</strong></td>
<td><strong>LPS Style</strong></td>
</tr>
<tr>
<td>UL &amp; FM Certified: Cl. I, Div. 1, Group A-D</td>
<td>UL &amp; FM Certified: Cl. I, Div. 2, Group A-D</td>
</tr>
<tr>
<td>Rating Reduction: Div. 1 to Div. 2</td>
<td>Rating Reduction: Div. 2 to Nonhazardous</td>
</tr>
<tr>
<td><strong>WPS Style</strong></td>
<td><strong>WPS Style</strong></td>
</tr>
<tr>
<td>UL &amp; FM Certified: Cl. I, Div. 1, Group C&amp;D</td>
<td>UL &amp; FM Certified: Cl. I, Div. 2, Group C&amp;D</td>
</tr>
<tr>
<td>Rating Reduction: Div. 1 to Div. 2</td>
<td>Rating Reduction: Div. 2 to Nonhazardous</td>
</tr>
<tr>
<td><strong>WPSA Style</strong></td>
<td><strong>WPSA Style</strong></td>
</tr>
<tr>
<td>UL &amp; FM Certified: Cl. I, Div. 1, Group A-D</td>
<td>UL &amp; FM Certified: Cl. I, Div. 2, Group A-D</td>
</tr>
<tr>
<td>Rating Reduction: Div. 1 to Div. 2</td>
<td>Rating Reduction: Div. 2 to Nonhazardous</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Series Model Number</th>
<th>System Type</th>
<th>System Style</th>
<th>System Accessories Diagram</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1005 - LPS - CI - YZ - LH - ##</strong></td>
<td><strong>YZ</strong></td>
<td><strong>LPS</strong></td>
<td><strong>With Pressure Switch</strong></td>
</tr>
</tbody>
</table>

**Model 1005 System Accessories (See accessories page for complete details)**

<table>
<thead>
<tr>
<th>CONNECTION FITTINGS</th>
<th>ADDITIONAL ITEMS</th>
<th>WARNING NAMEPLATES</th>
<th>INSTALLATION &amp; OPERATION MANUAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPC-10 (1/2&quot;) Pipe Connector</td>
<td>EPSK-1 Explosion Proof Switch Kit</td>
<td>ETW Enclosure Temperature Warning</td>
<td>129-0204 Inst. &amp; Operation Manual</td>
</tr>
<tr>
<td>EPC-15 (2&quot;) Pipe Connector</td>
<td>GPSK-1 General-purpose Switch Kit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RAH Remote Alarm Horn</td>
<td>RAH Remote Alarm Horn</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RAB-1 Div. 1 Remote Alarm Beacon</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RAB-2 Div. 2 Remote Alarm Beacon</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LCK L Fitting Conduit Kit</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TCK T Fitting Conduit Kit</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>ENCLOSURE PROTECTION VENTS</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EPV-5-SA-00 Straight w/Spark Arrester</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EPV-5-SA-90 R Angle w/Spark Arrester</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

**Overall System Dimensions**

<table>
<thead>
<tr>
<th>LPS / WPS</th>
<th>LH - left hand</th>
<th>RH - right hand</th>
<th>TM - top mount</th>
<th>BM - bottom mount</th>
<th>WM - wall mount</th>
<th>FM or PM - flat panel</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Height</strong></td>
<td>13.5 / 17.75</td>
<td>13.5 / 17.75</td>
<td>14 / 13</td>
<td>14 / 13</td>
<td>15 / 17.75</td>
<td>15.5 / 19.75</td>
</tr>
<tr>
<td><strong>Width</strong></td>
<td>13.5 / 13.5</td>
<td>13.5 / 13.5</td>
<td>13.5 / 16.125</td>
<td>13.5 / 16.125</td>
<td>13.5 / 13.5</td>
<td>15.5 / 15.5</td>
</tr>
<tr>
<td><strong>Depth</strong></td>
<td>6 / 7.5</td>
<td>6 / 7.5</td>
<td>6 / 7.5</td>
<td>6 / 7.5</td>
<td>7.75 / 9.25</td>
<td>5 / 6.5</td>
</tr>
</tbody>
</table>

Dimensions in inches. Mounting dimensions available upon request. FM & PM panel cutout dimensions: LPS - 14.5h x 14.5w WPS - 18.75h x 14.5w Height & width dimensions reflect mounting plate measurements. Depth dimension reflects overall measurement of system, including components.
**Type Y & Z**

**Class I (≤ 2 ft³) and Class II (≤ 10 ft³)**

### Description

Model 11 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.

### Specifications

<table>
<thead>
<tr>
<th>System Dimensions:</th>
<th>See page 18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shipping Weight:</td>
<td>LPS - 5 lb /WPS - 10 lb</td>
</tr>
<tr>
<td>Temp. Range:</td>
<td>40°F to +120°F</td>
</tr>
<tr>
<td>Supply Pressure Range:</td>
<td>* 5 - 120 psi</td>
</tr>
<tr>
<td>Supply Requirements:</td>
<td>clean air or inert gas</td>
</tr>
<tr>
<td>Safe Press. (Cl/CII):</td>
<td>0.25&quot; / 1.0&quot;</td>
</tr>
<tr>
<td>Safe Press. Flow Rate:</td>
<td>** 0.1 - 3.5 SCFH</td>
</tr>
<tr>
<td>System Supply Fitting:</td>
<td>1/4&quot; tube fitting</td>
</tr>
<tr>
<td>Enclosure Reference Fitting:</td>
<td>1/4&quot; tube fitting</td>
</tr>
<tr>
<td>Switch Setting (Cl/CII, Decr):</td>
<td>0.15&quot; / 0.5&quot; ± 0.02&quot;</td>
</tr>
<tr>
<td>Switch Conduit Port Size:</td>
<td>1/2&quot; FPT</td>
</tr>
<tr>
<td>Switch Contact Rating:</td>
<td>120 VAC @ 15 A</td>
</tr>
</tbody>
</table>

* 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

---

### Model 11

**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

---

### Standard Model Applications

<table>
<thead>
<tr>
<th>Model Number: 11-CI Type Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model Number: 11-CI Type Z</td>
</tr>
<tr>
<td>----------------------------</td>
</tr>
<tr>
<td>Model Number: 11-CII Type Y</td>
</tr>
<tr>
<td>Model Number: 11-CII Type Z</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Designation: Purging System</th>
<th>Pressurization System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enclosure Volume: 2 ft³ max.</td>
<td>Enclosure Volume: 10 ft³ max.</td>
</tr>
</tbody>
</table>

**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. 2, Group C&D
- Rating Reduction: Div. 2 to Nonhazardous

---

* 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
**Material Specifications**

- **Regulator Body:** Zinc w/Enamel Finish
- **Regulator Handle:** Polycarbonate
- **Enclosure Pressure Gauge:** ABS Plastic
- **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

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---

**Model Number Designations**

- **Series Model Number:**
  - 11 - LPS - CI - YZ - LH - ##

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

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

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

- **Mounting Configuration**
  - LH - left hand
  - RH - right hand
  - TM - top mount
  - BM - bottom mount
  - WM - wall mount
  - FM - frame mount
  - PM - panel mount

- **## - See Accessories Page 130 for additional factory installed accessories**

---

**System Accessories Diagram**

- **1/4" Supply Tubing**
- **1/4" Tubing Reference**
- **Enclosure Supply Fitting**
  - EBC-4
  - EFC-4
- **Enclosure Protection Vent**
  - EPV-1-SA...
  - (EPV vent not required when using the TR-10G tamper proof regulator as redundancy)

**Note:**
- **ECK-11, Enclosure Connection Kit includes (2) EFC-4, and tubing mounted to panel**

- **Warning Nameplate EWN-1** (Included with Panel)

---

**Model 11 System Accessories (See accessories page for complete details)**

- **FACTORY INSTALLED FITTINGS & FILTER**
  - ECK-11 Enclosure Connection Kit
  - EFC-4 1/4" Flush Connector
  - EBC-4 1/4" Bulkhead Connector
  - EPC-10 1/2" Pipe Connector
  - ILF-4 1/4" Filter
  - SMK-1, -4 or -6 System Mounting Kit

- **OPTIONAL HEX KEY REGULATOR HANDLE**
  - TR-10G Tamper Proof Regulator

- **WARNING NAMEPLATES**
  - EWN-1 Class I Enclosure Warning
  - EWN-2 Class II Enclosure Warning
  - ETW Enclosure Temperature Warning

**INSTALLATION & OPERATION MANUAL**

- 129-0207 Inst. & Operation Manual

---

**Overall System Dimensions**

<table>
<thead>
<tr>
<th></th>
<th>LPS / WPS</th>
<th>LH - left hand</th>
<th>RH - right hand</th>
<th>TM - top mount</th>
<th>BM - bottom mount</th>
<th>WM - wall mount</th>
<th>FM &amp; PM - surface</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Height</strong></td>
<td>6.25 / 10.75</td>
<td>6.25 / 10.75</td>
<td>6.25 / 8.5</td>
<td>6.25 / 8.5</td>
<td>6.25 / 10.75</td>
<td>8.25 / 12.75</td>
<td></td>
</tr>
<tr>
<td><strong>Width</strong></td>
<td>6 / 7.5</td>
<td>6 / 7.5</td>
<td>7.5 / 13.375</td>
<td>7.5 / 13.375</td>
<td>6 / 7.5</td>
<td>8 / 9.5</td>
<td></td>
</tr>
<tr>
<td><strong>Depth</strong></td>
<td>5.5 / 7.25</td>
<td>5.5 / 7.25</td>
<td>5.5 / 7.25</td>
<td>5.5 / 7.25</td>
<td>5.5 / 7.25</td>
<td>4.5 / 7</td>
<td></td>
</tr>
</tbody>
</table>

Dimensions in inches. Mounting dimensions available upon request. FM & PM panel cutout dimensions: LPS - 7.25h x 7w; WPS - 11.75h x 8.5w. Height & width dimensions reflect mounting plate measurements. Depth dimension reflects overall measurement of system, including components.

---

**CONNECTION POINTS SHOWN ABOVE IN BOLD TEXT ON SYSTEM DIAGRAM**

---

**Warning Nameplate**

- **Enclosure**
- **Reference**
- **Fitting**

- **System Accessories Diagram**

- **Connection Fittings**
  - EFK-4
  - EFC-4

- **Additional Items**
  - ILF-4
  - SMK-1, -4 or -6

---

**Factory Installed Accessories**

- **System Nameplates**
  - Silk screened Lexan® & SS
  - System Nameplates: Silk screened Lexan® & SS

- **Tubing**
  - 316 SS 1/4" .035 Welded

- **Tube Fittings**
  - 316 SS 1/4" .035 Welded

- **Regulator Handle**
  - Polycarbonate

- **Regulator Body**
  - Zinc w/Enamel Finish

- **Pressure Switch Body**
  - Anodized Cast Alum.

- **Fastener Hardware**
  - Alum. & Stainless Steel

- **Mounting Plate**
  - 316 14 Ga #3 Brush SS

---

**Installation & Operation Manual**

- 129-0207 Inst. & Operation Manual

---

**Dimensions in inches. Mounting dimensions available upon request. FM & PM panel cutout dimensions:**

- **LPS - 7.25h x 7w:**
  - **WPS - 11.75h x 8.5w:**

- **Height & width dimensions reflect mounting plate measurements. Depth dimension reflects overall measurement of system, including components.**
**Description**

Model 1011 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) enclosures, 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. System installation may be enhanced with a stand-alone Pepperl+Fuchs Model EPSK explosion proof switch kit to provide form “C” contacts for audible or visual alarm systems.

**System Specifications**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>System Dimensions:</td>
<td>See page 20</td>
</tr>
<tr>
<td>Shipping Weight:</td>
<td>7 lb</td>
</tr>
<tr>
<td>Temp. Range:</td>
<td>-20 °F to +120 °F</td>
</tr>
<tr>
<td>Supply Pressure Range:</td>
<td>* 5 - 120 psi</td>
</tr>
<tr>
<td>Supply Requirements:</td>
<td>clean air or inert gas</td>
</tr>
<tr>
<td>Safe Press. (Cl/ClI):</td>
<td>0.25&quot; / 1.0&quot;</td>
</tr>
<tr>
<td>Safe Press. Flow Rate:</td>
<td>** 0.1 - 3.5 SCFH</td>
</tr>
<tr>
<td>System Supply Fitting:</td>
<td>1/4&quot; tube fitting</td>
</tr>
<tr>
<td>Enclosure Supply Fitting:</td>
<td>1/4&quot; tube fitting</td>
</tr>
<tr>
<td>Enclosure Reference Fitting:</td>
<td>1/4&quot; tube fitting</td>
</tr>
</tbody>
</table>

* 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.

**Standard Model Applications**

<table>
<thead>
<tr>
<th>Model Number:</th>
<th>1011-CI Type Z</th>
<th>1011-CII Type Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>Designation</td>
<td>Purging System</td>
<td>Pressurization System</td>
</tr>
<tr>
<td>Enclosure Volume:</td>
<td>2 ft³ max.</td>
<td>10 ft³ max.</td>
</tr>
<tr>
<td>UL Certified:</td>
<td>Cl. I, Div. 2, Group A-D</td>
<td>Cl. II, Div. 2, Group F&amp;G</td>
</tr>
<tr>
<td>Rating Reduction:</td>
<td>Div. 2to Nonhazardous</td>
<td>Div 2 to Nonhazardous</td>
</tr>
</tbody>
</table>

Subject to modifications without notice
**Material Specifications**

- **Regulator Body**: Brass, 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**: Silkscreen & Lexan®
- **Fastener Hardware**: Alum. & Stainless Steel
- **Mounting Plate & Bracket**: Anodized Aluminum
- **Enclosure Warning Nameplate**: Silk screened SS

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---

**Model Number Designations**

- **Series Model Number**
- **Area Classification**
  - CI - Class I Area
  - CII - Class II Area
- **System Type**
  - Z - Div. 2 to Nonhazardous
- **Mounting Configuration**
  - UM - universal mount external surface
  - FM - frame mount external frame or rack
  - PM - panel mount enclosure surface cutout
- **## - See Accessories Page 130 for additional factory installed accessories**

FM & PM configuration mounting plates include four (4) 1/4" mounting holes at each corner, on 5/16" centers.

---

**Model 1011 System Accessories (See accessories page for complete details)**

**CONNECTION FITTINGS**
- EFC-4 1/4" Flush Connector
- EBC-4 1/4" Bulkhead Connector
- EPC-10 1/2" Pipe Connector

**ADDITIONAL ITEMS**
- ILF-4 1/4" Filter
- SMK-1 or -4 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-2 Div. 2 Remote Alarm Beacon

**OPTIONAL ENCLOSURE PROTECTION VENTS**
- EPV-1-SA-00 Straight w/Spark Arrester
- EPV-1-SA-90 Rt Angle w/Spark Arrester

**OPTIONAL HEX KEY REGULATOR HANDLE**
- TR-10G Tamper Proof Regulator

**WARNING NAMEPLATES**
- EWN-1 Class I Enclosure Warning
- EWN-2 Class II Enclosure Warning
- ETW Enclosure Temperature Warning

**INSTALLATION & OPERATION MANUAL**
- 129-0205 Inst. & Operation Manual

---

**One (1) Enclosure Warning Nameplate & One (1) Installation & Operation Manual Are Provided With Each System**

---

**Overall System Dimensions**

<table>
<thead>
<tr>
<th>Configuration</th>
<th>UM - left hand</th>
<th>UM - right hand</th>
<th>UM - top mount</th>
<th>UM - bottom mount</th>
<th>FM - frame mount</th>
<th>PM - panel mount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height</td>
<td>8</td>
<td>8</td>
<td>8.25</td>
<td>8.25</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Width</td>
<td>8.25</td>
<td>8.25</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Depth</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

Dimensions in inches. Mounting dimensions available upon request. FM & PM panel cutout dimensions: 7.625h x 7.625w

Height & width dimensions reflect mounting plate measurements. Depth dimension reflects overall measurement of system, including components.
Description

Model 1012 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. System installation may be enhanced with a stand-alone Pepperl+Fuchs Model EPSK explosion proof switch kit to provide form “C” contacts for audible or visual alarm systems.

System Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>System Dimensions:</td>
<td>See page 22</td>
</tr>
<tr>
<td>Shipping Weight:</td>
<td>10 lb</td>
</tr>
<tr>
<td>Temp. Range:</td>
<td>-20 °F to +120 °F</td>
</tr>
<tr>
<td>Supply Pressure Range:</td>
<td>80 - 120 psi</td>
</tr>
<tr>
<td>Capacity &amp; Filtration:</td>
<td>1.5 oz @ 20 Micron</td>
</tr>
<tr>
<td>Supply Requirements:</td>
<td>clean air or inert gas</td>
</tr>
<tr>
<td>Safe Press. Setpoint:</td>
<td>0.25”</td>
</tr>
<tr>
<td>Safe Press. Flow Rate:</td>
<td>* 0.1 - 3.5 SCFH</td>
</tr>
<tr>
<td>Exchange Pressure:</td>
<td>3” - 5”</td>
</tr>
<tr>
<td>Exchange Flow Rate:</td>
<td>** 4 SCFM/240 SCFH</td>
</tr>
<tr>
<td>Exchange Time:</td>
<td>1 min/ft³</td>
</tr>
<tr>
<td>System Supply Port:</td>
<td>1/4” FPT</td>
</tr>
<tr>
<td>Enclosure Supply Fitting:</td>
<td>1/4” tube fitting</td>
</tr>
<tr>
<td>Enclosure Reference Fitting:</td>
<td>1/4” tube fitting</td>
</tr>
</tbody>
</table>

* Enclosure integrity determines actual flow rate
** With regulator set to 60 psi min. during exchange. Rapid Exchange® is a Registered Trademark of Pepperl+Fuchs.
**Type Z**

**System Accessories Diagram**

- **Pressurized Protected Enclosure**
- **Warning Nameplate EWN-1** (Included with Panel)

**Model Number Designations**

- **1012 - CI - Z - UM - ##**
- Series Model Number
- Area Classification: CI - Class I Area
- System Type: Z - Div. 2 to Nonhazardous
- Mounting Configuration: UM - universal mount (external surface)
- FM - frame mount (external frame or rack)
- PM - panel mount (enclosure surface cutout)
- ## - See Accessories Page 130 for additional factory-installed accessories

**Dimensions**

- **Overall System Dimensions**

<table>
<thead>
<tr>
<th>Configuration</th>
<th>UM - left hand</th>
<th>UM - right hand</th>
<th>UM - top mount</th>
<th>UM - bottom mount</th>
<th>FM - frame mount</th>
<th>PM - panel mount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height</td>
<td>12</td>
<td>12</td>
<td>12.25</td>
<td>12.25</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Width</td>
<td>12.25</td>
<td>12.25</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Depth</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

**Notes:** Dimensions in inches. Mounting dimensions available upon request. FM & PM panel cutout dimensions: 11.625h x 11.625w

**WARNING NAMEPLATES**

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

**INSTALLATION & OPERATION MANUAL**

- 129-0206 - Inst. & Operation Manual

**CONNECTION FITTINGS**

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

**ADDITIONAL ITEMS**

- SMK-1 or -4 - System Mounting Kit
- EPSK-1 - Explosion Proof Switch Kit
- GPSK-1 - General-purpose Switch Kit
- RAH - Remote Alarm Horn
- RAB-2 - Div. 2 Remote Alarm Beacon
- EPV-2-SA-00 - Straight w/Spark Arrester
- EPV-2-SA-90 - Rt Angle w/Spark Arrester

**Model 1012 System Accessories**

- See accessories page for complete details

- ONE VENT REQUIRED WITH EACH SYSTEM

- **ENCLOSURE PROTECTION VENTS**
  - EPV-2-SA-00 - Straight w/Spark Arrester
  - EPV-2-SA-90 - Rt Angle w/Spark Arrester

**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:** Silkscreen & Lexan®
- **Fastener Hardware:** Alum. & Stainless Steel
- **Mounting Plate & Bracket:** Anodized Aluminum
- **Enclosure Warning Nameplate:** Silk screened SS

Lexan® is a registered trademark of the General Electric Company
Pepperl+Fuchs supplies purge/pressurization systems custom built to your specifications. To ensure the integrity of your system, certain accessory items must be factory installed.

The Model Number and Accessories Guide identifies those parts that must be included on your purge/pressurization system order.

11/1000 Series — Model Number Designations and Accessories Guide

11/1000 - - - - - - -

Series Model Number
11, 1001A, 1001B, 1001C, 1002, 1003, 1004, 1005, 1011, 1012

System Style
LPS - Less pressure switch
WPS - With pressure switch
WPSA - With pressure switch (120 VAC Standard)

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 or WPSA Style)

Enclosure Connection Kit
ECK - Enclosure connection kit

Cooler Indicator Gauge (see page 97)
VX - Vortex

Voltage (for WPSA switch only)
24 VDC - Voltage Direct Currents
240 VAC - Voltage Alternating Currents
**Description**

The cooler indicator gauge, sometimes called the Vortex indicator gauge, is used on systems where there is cooling required after purging. Normally after the purging cycle, there is a small flow of protective gas required to compensate for leakages, and to keep a constant pressure within the enclosure so that the ingress of hazardous atmosphere cannot get inside the enclosure. This is known as pressurization. If the equipment inside the pressurized enclosure requires cooling, either a higher flow rate of protective gas is required through the pressurization valve, or a second source of cooling gas is introduced into the enclosure. The standard differential pressure gauge will indicate pressurization only up to 0.5 inches (13 mm) water, which may not be enough for cooling indication. The cooler indicator gauge is installed onto the pressurization/purge panel, and allows monitoring of the system during normal operation of the purge/pressurization system.

**Special Note**

TO ORDER PURGE/PRESSURIZATION UNITS EQUIPPED WITH A COOLER INDICATION GAUGE, SPECIFY ‘VX’ IN THE MODEL NUMBER DESIGNATION.

**Specifications**

**OPERATING RANGE**

- Full range: 0 to 5 " (0 to 127 mm) water
- Low range red: 0 to 0.5 " (0 to 13 mm) water
- Safe range green: 0.5 to 1.5 " (13 to 38 mm) water
- Cooler/Rapid exchange range yellow: 1.5 to 4.5 " (38 to 114 mm) water
- High range red: 4.5 to 5 " (114 to 127 mm) water

**BODY COMPONENTS**

- Cover: acrylic
- Housing: die cast aluminum coated to withstand 168 hour salt spray corrosion test

**TECHNICAL DATA**

- Maximum overload pressure: 15 psig
- Accuracy: ± 2% of full scale
- Weight: 1.2 lb (510 g)
- Process connection: 1/8" Female NPT duplicate high and low pressure taps, one pair side, one pair back
For over a half century, Pepperl+Fuchs has provided new concepts for the world of process automation. Our company sets standards in quality and innovative technology. We develop, produce and distribute electronic interface modules, Human-Machine Interfaces and hazardous location protection equipment on a global scale, meeting the most demanding needs of industry. Resulting from our world-wide presence and our high flexibility in production and customer service, we are able to offer complete individual solutions – wherever and whenever you need us. We are the recognized experts in our technologies – Pepperl+Fuchs has earned a strong reputation by supplying the world’s largest process industry companies with the broadest line of proven components for a diverse range of applications.