



Type X and Ex pxb purge and pressurization control unit 6000 Control System

- Certified for Class I, Class II, Division I; Zone 1 / Zone 21 to nonhazardous
- Intrinsically safe electrical/pneumatic manifold assembly
- Intrinsically safe user interface for programming and monitoring the system
- Enclosure volume up to 450 ft³ (12.7 m³)
- Control Unit monitors system operation and controls enclosure power
- Universal mounting (brackets included)
- 316L stainless steel Type 4X enclosure

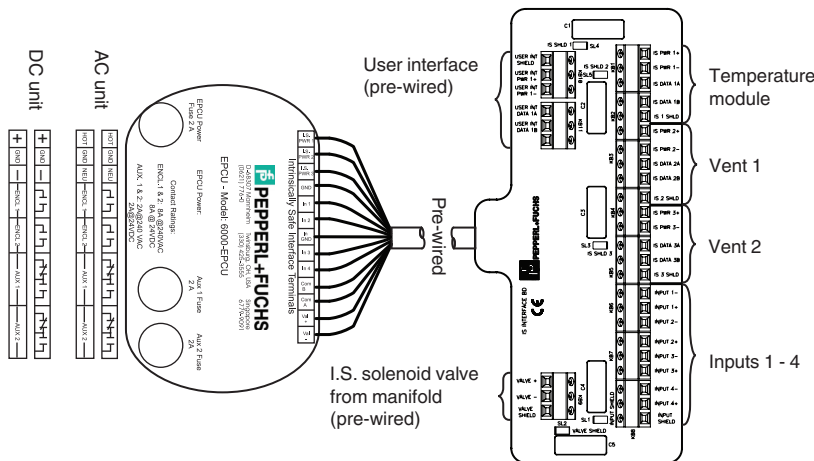
6000 Series Type X and Ex pxb purge and pressurization system control unit



Function

The 6000 series consists of the control unit (EPCU) and user interface (UIC) mounted in a 316L stainless steel Type 4X (IP66) enclosure with the pneumatic solenoid valve mounted on the unit. The EPV-6000 relief vent is separate and is mounted to the enclosure. The user interface allows programming of up to 4 switch inputs, temperature modules, enclosure power contacts, 2 auxiliary outputs, and various operational functions. Also, the user interface screen allows monitoring and easy configuration. Among the additional features are inputs for system bypass, enclosure power on/off, temperature overload and activation of Rapid Exchange flow for cooling or auxiliary relay for separate cooling source, and delay power shutdown. Component kits are available for custom installations.

Connection

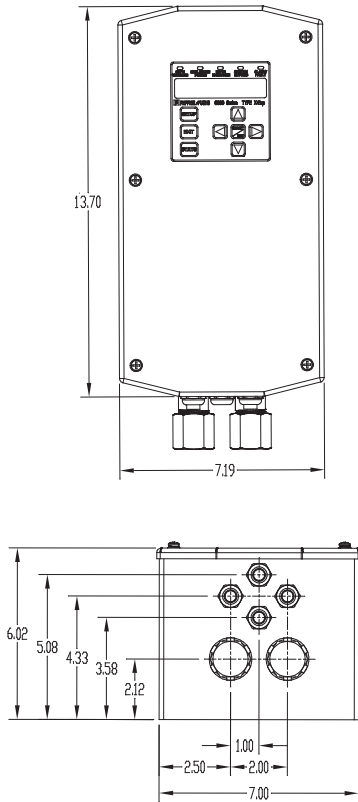


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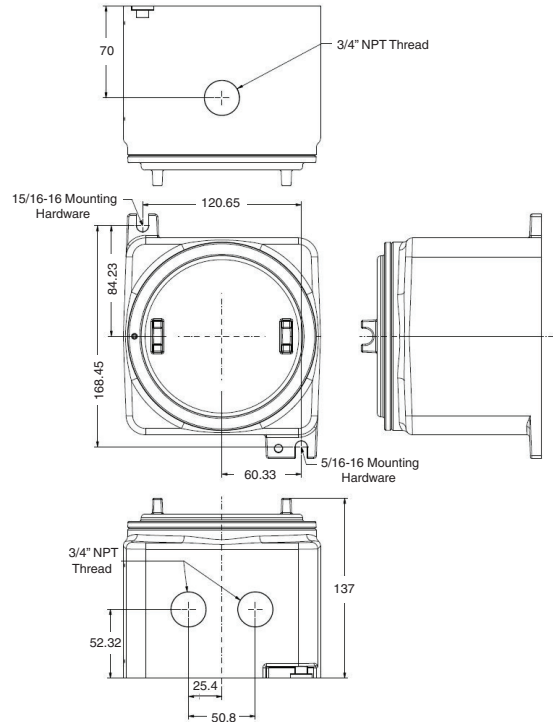
Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

Dimensions

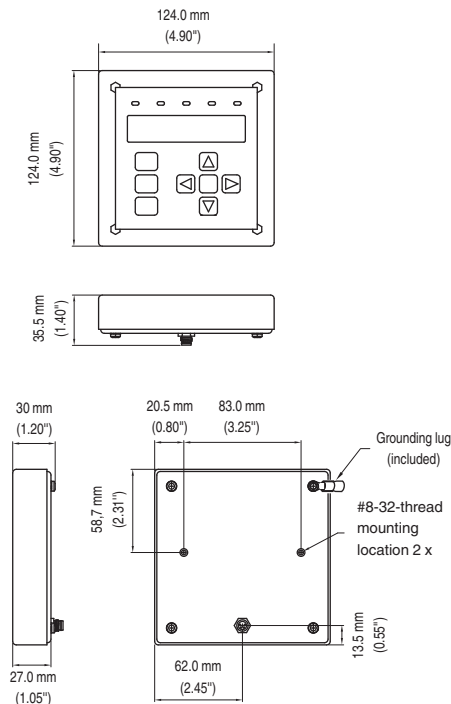
Main Control Unit



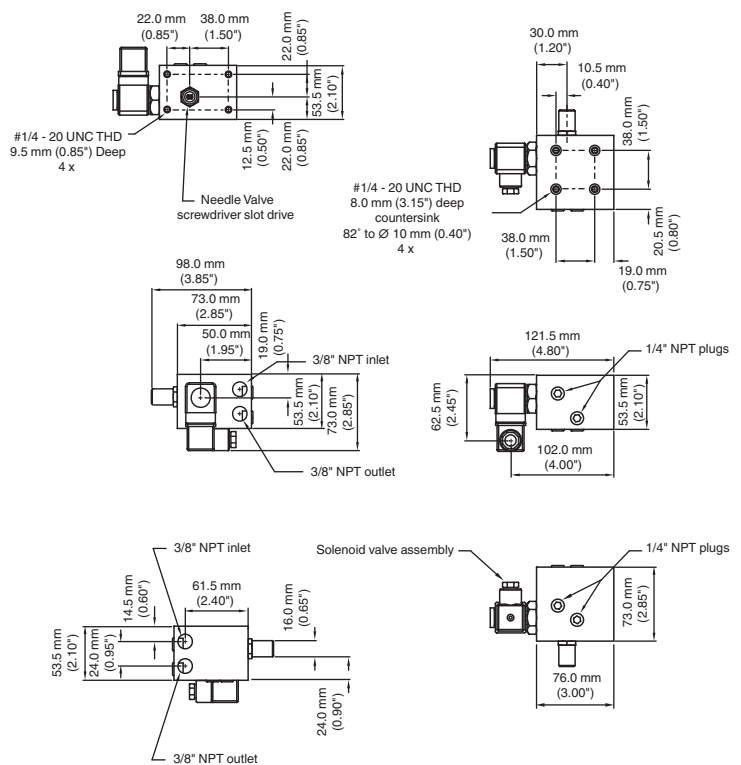
EPCU with Ex Enclosure for Component Kit



User Interface for Component Kit



Manifold for Component Kit



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Technical Data

| General specifications | | |
|----------------------------|----------------|---|
| Operating mode | | manual, semi-automatic, or fully automatic - programmable |
| Series | | 6000 Series |
| System | | Type X Purge ; Ex pxb Purge |
| Number of volume exchanges | | 4 to 19 |
| Hazardous environment | | gas, dust, gas and dust |
| Supply | | |
| Rated voltage | U _r | 90 ... 264 V AC, 48 ... 62 Hz / 0.2 A 20 ... 30 V DC |
| Electrical specifications | | |
| Connection | | Terminal blocks |
| Input | | |
| Input I | | Inputs 1, 2, 3, 4: contact input, 5 VDC @ 2 mA |
| Input type | | intrinsically safe |
| Input II | | Temperature inputs |
| Input type | | intrinsically safe |
| Sensor type | | 6000-TEMP |
| Input III | | EPV-6000 Vent |
| Input type | | intrinsically safe |
| Input IV | | User interface module |
| Connection | | M8 connector, 4-pin |
| Input type | | intrinsically safe |
| Output | | |
| Output I | | AUX 1 |
| Output type | | Dry contacts, SPDT |
| Inrush current | | 5 A |
| Contact loading | | 2 A @ 240 VAC resistive load 2 A @ 24 VDC |
| Output II | | AUX 2 |
| Output type | | Dry contacts, SPDT |
| Inrush current | | 5 A |
| Contact loading | | 2 A @ 240 VAC resistive load 2 A @ 24 VDC |
| Output III | | ENC_1, ENC_2 (protected enclosure contacts) |
| Output type | | Dry contacts (2) SPST, NO |
| Contact loading | | 8 A @ 240 VAC / 120 VAC resistive load 8 A @ 24 VDC |
| Indicators/settings | | |
| LED indication | | Safe pressure: Blue - safe pressure is achieved Enclosure power: Green - power on; Red - power off Rapid exchange: Blue - purging is running System bypass: Yellow - bypass is activated Alarm fault: Red (blinking) - any alarm input detected; Red (solid) - 6000 series system fault |
| Pneumatic parameters | | |
| Protective gas supply | | instrument grade air or inert gas |
| Pressure requirement | | 20 ... 120 psig (1.4 ... 8.3 bar) (138 ... 827 kPa) regulated |
| Safe pressure | | Gas: 0.625 mbar (0.25 in. w.c.) Dust: 1.6 mbar (0.65 in. w.c.) Gas and Dust: 1.6 mbar (0.65 in. w.c.) |
| Purge flow rate | | Maximum flow rate measurement for enclosure size (enclosure volume:flow rate): < 20 ft ³ (0.57 m ³): 5, 12 SCFM (141, 340 l/min), or dynamic 20 ... 30 ft ³ (0.57 ... 0.85 m ³): 5, 12, 20 SCFM (141, 340, 565 l/min), or dynamic > 30 ft ³ (0.85 m ³): 5, 12, 20, 30 SCFM (141, 340, 565, 850 l/min), or dynamic |

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|--|--|
| Purge flow and enclosure pressure rate | <p>With EPV-6000-xx-01, EPV-6000-xx-02 141 l/min @ 3.7 mbar, (5 scfm @ 1.5 in. w.c.) 340 l/min @ 5.0 mbar, (12 scfm @ 2.0 in. w.c.) 565 l/min @ 6.7 mbar, (20 scfm @ 2.7 in. w.c.) 850 l/min @ 10.2 mbar, (30 scfm @ 4.1 in. w.c.)</p> <p>With EPV-6000-xx-03, EPV-6000-xx-04 141 l/min @ 5.2 mbar, (5 scfm @ 2.1 in. w.c.) 340 l/min @ 6.5 mbar, (12 scfm @ 2.6 in. w.c.) 565 l/min @ 10.2 mbar, (20 scfm @ 4.1 in. w.c.) 850 l/min @ 13.2 mbar, (30 scfm @ 5.3 in. w.c.)</p> <p>With EPV-6000-xx-05, 06 141.6 l/min @ 4.1 mbar, (5 scfm @ 1.64 in. w.c.) 339.8 l/min @ 5.5 mbar, (12 scfm @ 2.20 in. w.c.) 566.3 l/min @ 14.9 mbar, (20 scfm @ 6.00 in. w.c.)</p> |
| Flow rate for leakage compensation | <p>Depends on enclosure seal.</p> <p>EPV-6000-xx-01, EPV-6000-xx-02 10.0 l/min (0.35 scfm) @ 0.63 mbar (0.25 in. w.c.) 28.0 l/min (1.0 scfm) @ 1.9 mbar (0.75 in. w.c.)</p> <p>EPV-6000-xx-03, EPV-6000-xx-04 6.2 l/min (0.22 scfm) @ 0.63 mbar (0.25 in. w.c.) 16.4 l/min (0.58 scfm) @ 1.9 mbar (0.75 in. w.c.)</p> <p>EPV-6000-xx-05, EPV-6000-xx-06 Less than 1 l/min (0.035 scfm) @ 0.63 mbar (0.25 in. w.c.) Less than 1 l/min (0.035 scfm) @ 1.9 mbar (0.75 in. w.c.)</p> |
| Ambient conditions | |
| Ambient temperature | -20 ... 60 °C (-4 ... 140 °F) |
| Storage temperature | -30 ... 80 °C (-22 ... 176 °F) |
| Relative humidity | 5 ... 95 %, noncondensing |
| Vibration resistance | 5 ... 100 Hz , 1 g, 12 m/s ² , all axes |
| Impact resistance | 30 g, 11 ms, all axes |
| Mechanical specifications | |
| Connection type | Pneumatic : Inlet fitting to manifold: 3/8" ferrule fitting Outlet fitting from manifold: 3/8" ferrule fitting Inlet fitting to enclosure: 3/8" bulkhead fitting |
| Cable gland | 4 - M16 x 1.5 cable gland |
| Degree of protection | Type 4X , IP66 |
| Material | Enclosure: 316L (UNS S31603) stainless steel Manifold valve: anodized 6082 aluminum Fittings: 316L (UNS S31603) stainless steel |
| Mass | -WH- 11.4 kg (25 lb) -CK- 7.2 kg (16 lb) |
| Dimensions | 183 x 367.5 x 152.5 mm (7.20 x 14.45 x 6.00 inch) |
| Height | 367.5 mm |
| Width | 183 mm |
| Depth | 152.5 mm |
| Data for application in connection with hazardous areas | |
| EU-type examination certificate | |
| Marking | 6000 main control unit with housing 6000-xx-S2-UN-xx-xx: ATEX UL/Demko 07 ATEX 0705753X II 2 G Ex db ib [ib Gb] [pxb Gb] IIC T4 Gb (-20 °C ≤ Ta ≤ 60 °C) II 2 D Ex ib tb [ib Db] [pxb Db] IIIC T60°C Db (-20 °C ≤ Ta ≤ 50 °C) 6000 main control unit kit version 6000-xx-S2-UN-CK-xx: ATEX UL/Demko 07 ATEX 0705753X II 2 G Ex db [ib Gb] [pxb Gb] IIC T4 Gb (-20 °C ≤ Ta ≤ 60 °C) II 2 D Ex tb [ib Db] [pxb Db] IIIC T80°C Db (-20 °C ≤ Ta ≤ 60 °C) User interface 6000-UIC-xx: ATEX UL/Demko 07 ATEX 0705753X II 2 G Ex ib [pxb Gb] IIC T4 Gb |
| Directive conformity | |
| Directive 2014/34/EU | IEC/EN 60079-0 IEC/EN 60079-1 IEC/EN 60079-2 IEC/EN 60079-11 IEC/EN 60079-31 |
| Directive 94/9/EC | |
| International approvals | |

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| <p>UL approval</p> | <p>6000 Main control unit with housing 6000-xx-S2-UN-xx-xx: cULus Class I, Division 1, Groups A,B,C,D T4 (-20 °C ≤ Ta ≤ 60 °C) Class II, Division 1, Groups E,F,G T4 (-20 °C ≤ Ta ≤ 50 °C) Class I, Zone 1, Group IIC T4 (-20 °C ≤ Ta ≤ 60 °C) Class II, Zone 21, Group IIIC T60 °C (-20 °C ≤ Ta ≤ 50 °C) [Ex i] Associated Equipment Ex db ib [ib Gb] [pxb Gb] IIC T4 (-20 °C ≤ Ta ≤ 60 °C) Ex ib tb [ib Db] [pxb Db] IIIC T4 (-20 °C ≤ Ta ≤ 50 °C)</p> <p>6000 Main control unit kit version 6000-xx-S2-UN-CK-xx: cULus Class I, Division 1, Groups A,B,C,D T4 (-20 °C ≤ Ta ≤ 60 °C) Class II, Division 1, Groups E,F,G T4 (-20 °C ≤ Ta ≤ 60 °C) Class I, Zone 1, Group IIC T4 Class II, Zone 21, Group IIIC T60 °C [Ex i] Associated Equipment Ex db [ib Gb] [pxb Gb] IIC T4 X (-20 °C ≤ Ta ≤ 60 °C) Ex tb [ib Db] [pxb Db] IIIC T4 X (-20 °C ≤ Ta ≤ 60 °C)</p> <p>User interface 6000-UIC-xx: cULus (-20 °C ≤ Ta ≤ 60 °C) Class I, Division 1, Groups A,B,C,D T4 Class I, Zone 1, Group IIC T4 Ex i Intrinsically safe</p> |
| <p>IECEx approval</p> | <p>6000 Main Control unit with housing 6000-xx-S2-UN-xx-xx: IECEx UL 08.0003X Ex db ib [ib Gb] [pxb Gb] IIC T4 Gb (-20 °C ≤ Ta ≤ 60 °C) Ex ib tb [ib Db] [pxb Db] IIIC T60 °C Db (-20 °C ≤ Ta ≤ 50 °C)</p> <p>6000 Main control unit kit version 6000-xx-S2-UN-CK-xx: IECEx UL 08.0003X Ex db [ib Gb] [pxb Gb] IIC T4 Gb (-20 °C ≤ Ta ≤ 60 °C) Ex tb [ib Db] [pxb Db] IIIC T80 °C Db (-20 °C ≤ Ta ≤ 60 °C)</p> <p>User interface 6000-UIC-xx: IECEx UL 08.0003X Ex ib [pxb Gb] IIC T4 Gb</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> |

Assembly



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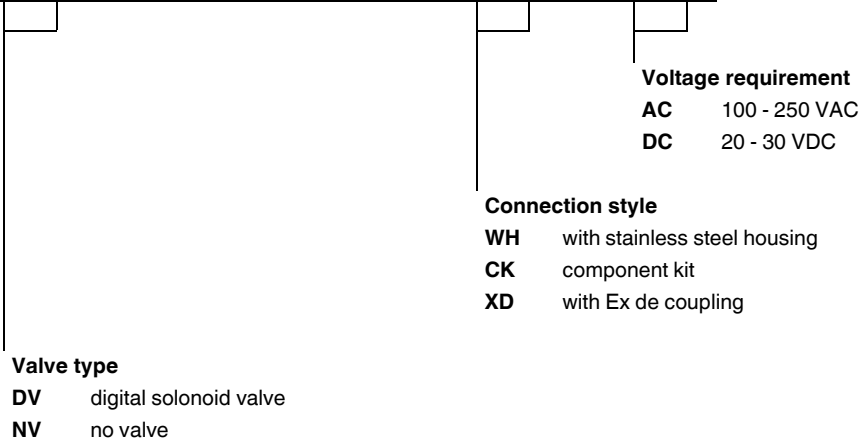
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Type Code

6 0 0 0 - D V - S 2 - U N - W H - A C



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