



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

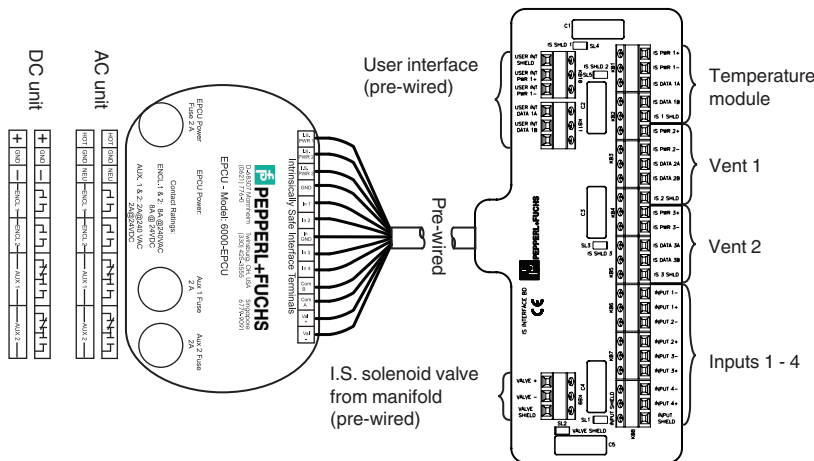
6000 Series Type X and Ex pxb purge and pressurization system control unit



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

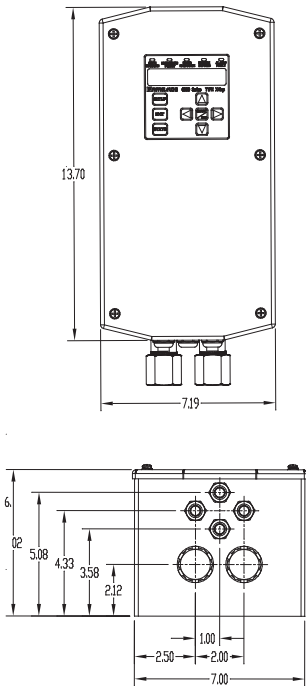


Release date: 2022-10-10 Date of issue: 2022-10-10 Filename: 514685_eng.pdf

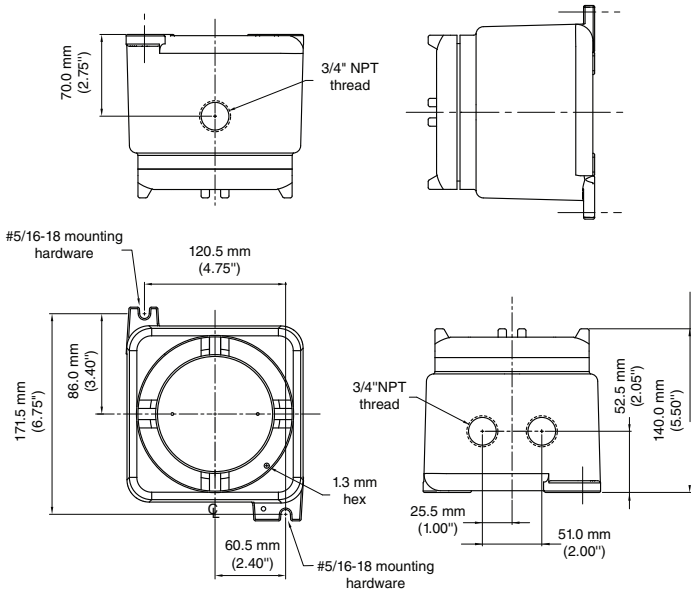
Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

Dimensions

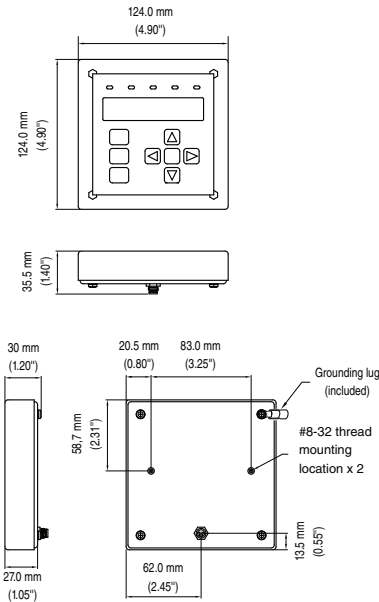
Main Control Unit



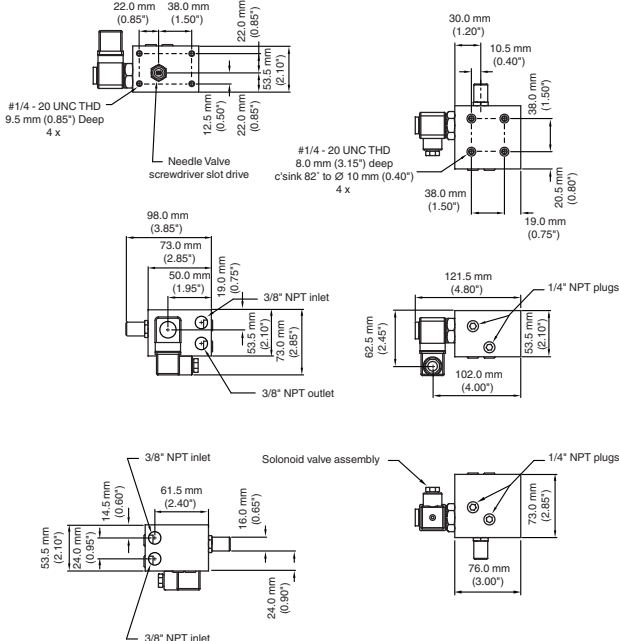
EPCU with Ex Enclosure for Component Kit



User Interface for Component Kit



Manifold for Component Kit



Technical Data

| General specifications | |
|----------------------------|---|
| Operating mode | manual, semi-automatic, or fully automatic - programmable |
| Series | 6000 Series |
| Number of volume exchanges | 4 to 19 |
| Hazardous environment | gas, dust, gas and dust |

Release date: 2022-10-10 Date of issue: 2022-10-10 Filename: 514685_eng.pdf

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

Technical Data

| | | |
|--|----------------|---|
| 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: 0.25" wc (6.4 mm wc) (0.625 mbar) (62 Pa) Dust: 0.65" wc (16.5 mm wc) (1.6 mbar) (162 Pa) Gas and Dust: 0.65" wc (16.5 mm wc) (1.6 mbar) (162 Pa) |
| 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 |
| Purge flow and enclosure pressure rate | | With EPV-6000-xx-01, EPV-6000-xx-02 5 SCFM @ 1.5" wc, (141 l/min @ 3.7 mbar) 12 SCFM @ 2.0" wc, (340 l/min @ 5.0 mbar) 20 SCFM @ 2.7" wc, (565 l/min @ 6.7 mbar) 30 SCFM @ 4.1" wc, (850 l/min @ 10.2 mbar) With EPV-6000-xx-03, EPV-6000-xx-04 5 SCFM @ 2.1" wc, (141 l/min @ 5.2 mbar) 12 SCFM @ 2.6" wc, (340 l/min @ 6.5 mbar) 20 SCFM @ 4.1" wc, (565 l/min @ 10.2 mbar) 30 SCFM @ 5.3" wc, (850 l/min @ 13.2 mbar) With EPV-6000-xx-05, 06 5 SCFM @ 1.8" wc, (141 l/min @ 4.5 mbar) 12 SCFM @ 2.9" wc, (340 l/min @ 7.3 mbar) 20 SCFM @ 7.4" wc, (565 l/min @ 18.5 mbar) |

Release date: 2022-10-10 Date of issue: 2022-10-10 Filename: 514685_eng.pdf

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

 Pepperl+Fuchs Group
www.pepperl-fuchs.com

 USA: +1 330 486 0002
pa-info@us.pepperl-fuchs.com

 Germany: +49 621 776 2222
pa-info@de.pepperl-fuchs.com

 Singapore: +65 6779 9091
pa-info@sg.pepperl-fuchs.com

 **PEPPERL+FUCHS**

Technical Data

| | |
|--|--|
| Flow rate for leakage compensation | Depends on enclosure seal. With EPV-6000-xx-01, EPV-6000-xx-02 0.35 SCFM @ 0.25" wc (10.0 l/min @ 6.3 mbar) 1.0 SCFM @ 0.75" wc (28.0 l/min @ 1.9 mbar) With EPV-6000-xx-03, EPV-6000-xx-04 0.22 SCFM @ 0.25" wc (6.2 l/min @ 6.3 mbar) 0.58 SCFM @ 0.75" wc (16.4 l/min @ 1.9 mbar) With EPV-6000-xx-05, EPV-6000-xx-06 0.15 SCFM @ 0.25" wc (4.2 l/min @ 6.3 mbar) 0.35 SCFM @ 0.75" wc (10.0 l/min @ 1.9 mbar) |
| 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" NPT (female) Outlet fitting from manifold: 3/8" bulkhead fitting (provided) |
| 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) |
| 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 | |

Release date: 2022-10-10 Date of issue: 2022-10-10 Filename: 514685_eng.pdf

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

Pepperl+Fuchs Group
www.pepperl-fuchs.comUSA: +1 330 486 0002
pa-info@us.pepperl-fuchs.comGermany: +49 621 776 2222
pa-info@de.pepperl-fuchs.comSingapore: +65 6779 9091
pa-info@sg.pepperl-fuchs.com

PEPPERL+FUCHS

Technical Data

| | |
|-----------------------------------|--|
| <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



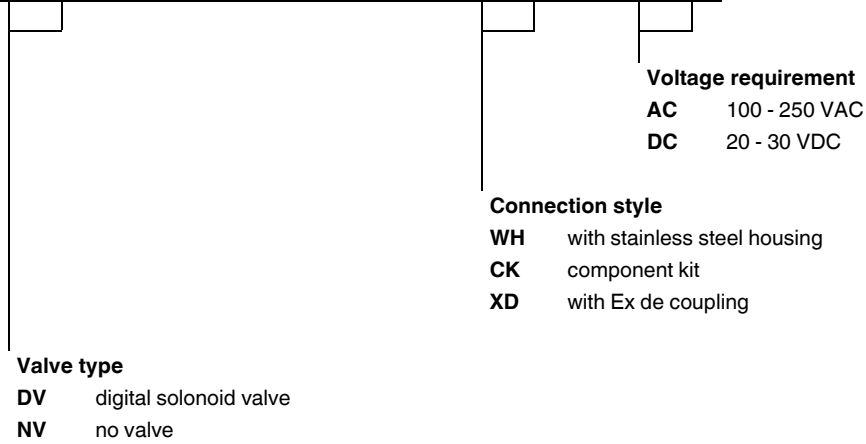
Accessories

| | | |
|--|---------------------------|---|
| | <p>6000-ISB-01</p> | <p>6000 Series intrinsically safe termination board</p> |
|--|---------------------------|---|

Release date: 2022-10-10 Date of issue: 2022-10-10 Filename: 514685_eng.pdf

Type Code

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



Release date: 2022-10-10 Date of issue: 2022-10-10 Filename: 514685_eng.pdf

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