

Features

- 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 (12.1 m³)
- Control Unit monitors system operation and controls enclosure power
- Universal mounting (brackets included)
- 316L stainless steel Type 4X enclosure

Application

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.

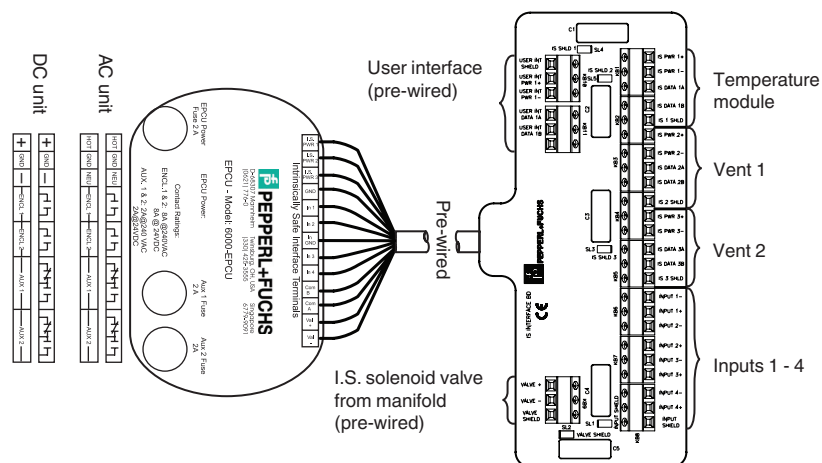
Among the additional features are inputs for system bypass, enclosure power on/off, temperature overload and activation of Rapid Exchange flow for cooling or auxiliary relay for separate cooling source, and delay power shutdown.

Component kits are available for custom installations.



BEBCO EPS®

Connection



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
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 8 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 indicator	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 (0.57m ³): 5, 12 SCFM (56, 141, 340 l/min), or dynamic 20 ... 30 ft ³ (0.57 ... 0.85 m ³): 5, 12, 20 SCFM (56, 141, 340, 565 l/min), or dynamic > 30 ft ³ (0.85m ³): 5, 12, 20, 30 SCFM (56, 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, EPV-6000-xx-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 2017-03-22 15:37 Date of issue 2017-03-22 514685_eng.xml

Flow rate for leakage compensation	<p>Depends on enclosure seal.</p> <p>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)</p> <p>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)</p> <p>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)</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	<p>Pneumatic :</p> <p>Inlet fitting to manifold: 3/8" NPT (female) Outlet fitting from manifold: 3/8" bulkhead fitting (provided)</p>
Cable gland	4 - M16 x 1.5 cable gland
Degree of protection	Type 4X , IP66
Material	<p>Enclosure: 316L (UNS S31603) stainless steel Manifold valve: anodized 6082 aluminum Fittings: 316L (UNS S31603) stainless steel</p>
Mass	<p>-WH- 11.4 kg (25 lb) -CK- 7.2 kg (16 lb)</p>
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	<p>6000 main control unit with housing 6000-xx-S2-UN-xx-xx: ATEX UL/Demko 07 ATEX 0705753X II 2 G Ex db [ib pxb] IIC T4 Gb (-20 °C ≤ Ta ≤ 60 °C) II 2 D Ex ib tb [ib pxb] IIIC T60°C Db (-20 °C ≤ Ta ≤ 50 °C)</p> <p>6000 main control unit kit version 6000-xx-S2-UN-CK-xx: ATEX UL/Demko 07 ATEX 0705753X II 2 G Ex db [ib pxb] IIC T4 Gb (-20 °C ≤ Ta ≤ 60 °C) II 2 D Ex tb [ib pxb] IIIC T80°C Db (-20 °C ≤ Ta ≤ 60 °C)</p> <p>User interface 6000-UIC-xx: ATEX UL/Demko 07 ATEX 0705753X II 2 G Ex ib [pxb] IIC T4 Gb</p>
Directive conformity	
Directive 94/9/EC	<p>IEC/EN 60079-0 IEC/EN 60079-1 IEC/EN 60079-2 IEC/EN 60079-7 IEC/EN 60079-11 IEC/EN 60079-31</p>
International approvals	

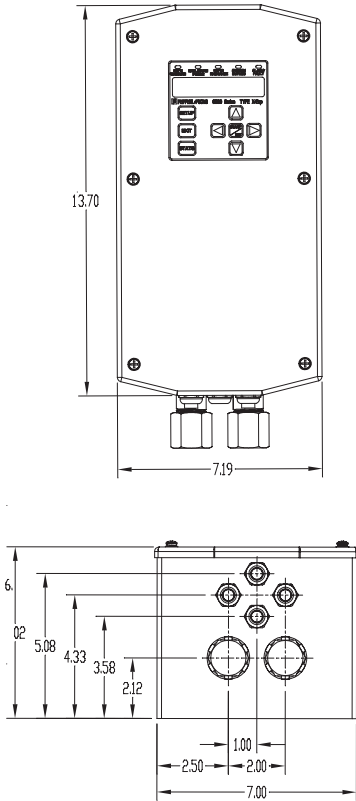
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<p>UL approval</p>	<p>6000 Main control unit with housing 6000-xx-S2-UN-xx-xx: cULus Class I, Division 1, Groups A,B,C,D T4 (-20 °C ≤ Ta ≤ 60 °C) Class II, Division 1, Groups E,F,G T4 (-20 °C ≤ Ta ≤ 50 °C) Class I, Zone 1, Group IIC T4 (-20 °C ≤ Ta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

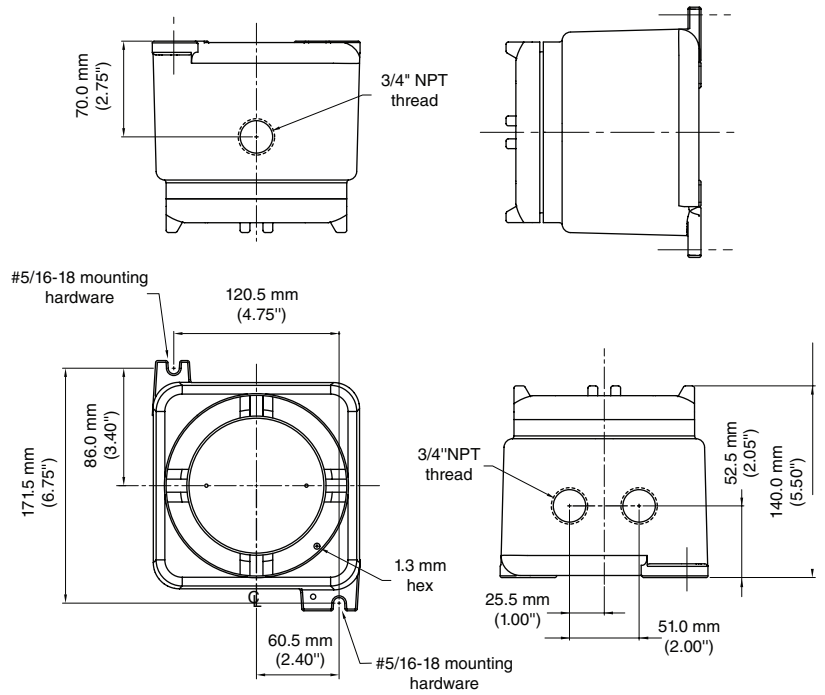
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Dimensions

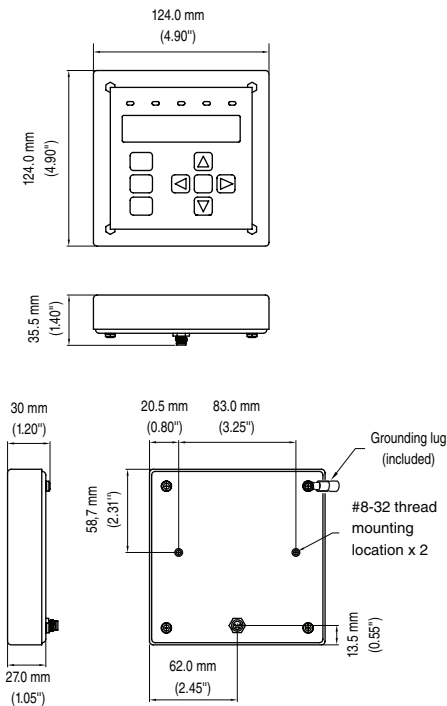
Main Control Unit



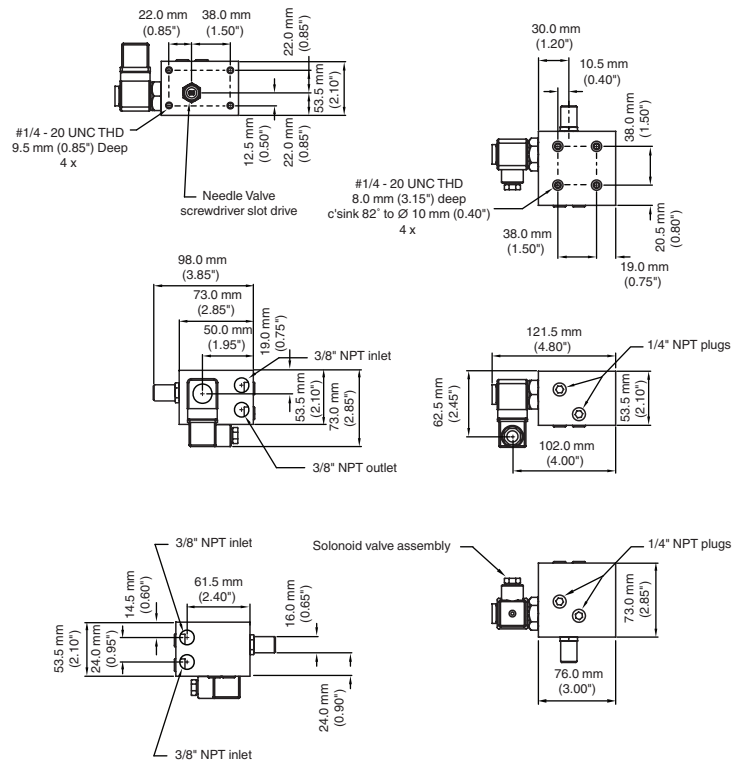
EPCU with Ex Enclosure for Component Kit



User Interface for Component Kit



Manifold for Component Kit



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Accessories

6000-CBLA-ISB-030

6000 Series intrinsically safe cable harness

6000-UIC-02

6000-CBLA-ISB-200

6000 Series intrinsically safe cable harness

6000-UIC-01

6000-CBLA-ISB-100

6000 Series intrinsically safe cable harness

6000-ACC-514483

6000-UIC-02

User interface for Series 6000 purge

6000-ACC-514479

6000-ACC-514480

6000-ACC-514481

6000-ACC-514482

6000-ACC-514484

6000-DCK-01

6000-DCK-02

6000-DCK-03

6000-DCK-04

6000-ISB-01

6000-JCK-01

6000-ACC-514478

Type code/model number

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

Valve type
 DV digital solenoid valve
 NV no valve

Voltage requirement
 AC 100 - 250 VAC
 DC 20 - 30 VDC

Connection style
 WH with stainless steel housing
 CK component kit
 XD with Ex de coupling