

6000 Series Control Unit, Type X & Ex pxb

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

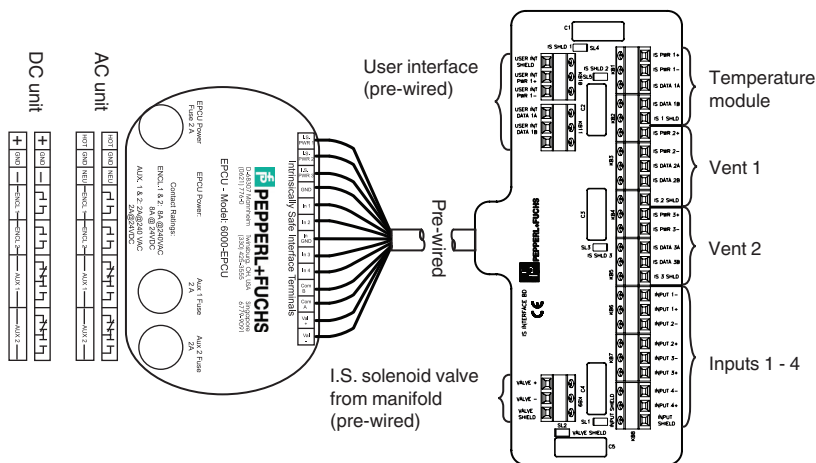
6000 Series Type X and Ex pxb purge and pressurization system control unit



Function

The 6000 series consists of the control unit (EPCU) and user interface (UI) 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

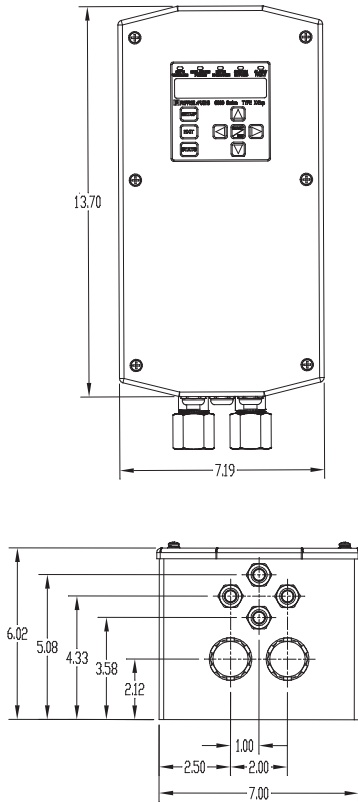


Release date: 2026-05-01 Date of issue: 2026-05-01 Filename: t232326_eng.pdf

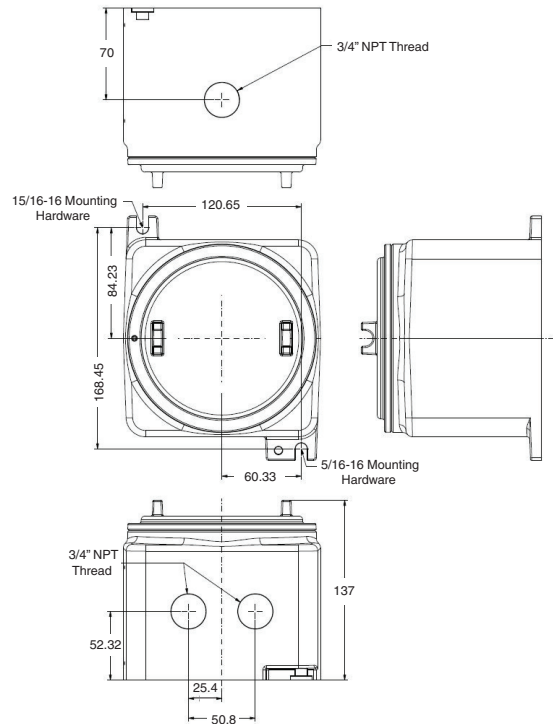
Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

Dimensions

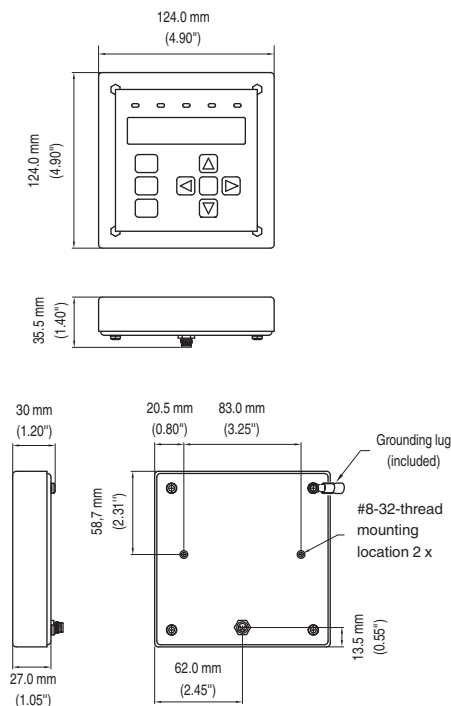
Main Control Unit



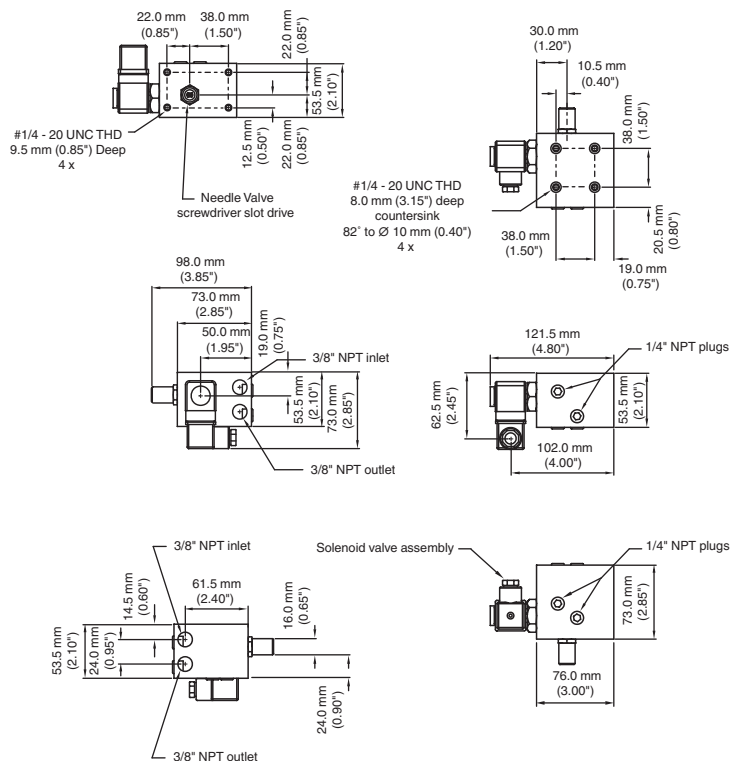
EPCU with Ex Enclosure for Component Kit



User Interface for Component Kit



Manifold for Component Kit



Release date: 2026-05-01 Date of issue: 2026-05-01 Filename: t232326_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

PF PEPPERL+FUCHS

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 100 ... 250 V AC, 50 ... 60 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	AC/DC versions: 8 A @ 240 VAC 8 A @ 24 VDC AH/DH versions: 12 A @ 240 VAC, resistive load up to an ambient of 55 °C, then 8 A up to 60 °C 12 A @ 24 VDC up to an ambient of 55 °C, then 8 A up to 60 °C. See derating curve for details.
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

Release date: 2026-05-01 Date of issue: 2026-05-01 Filename: t232326_eng.pdf

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

Technical Data

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. 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	<p>-20 ... 50 °C (-4 ... 122 °F) for WH dust applications -20 ... 60 °C (-4 ... 140 °F) for WH gas applications and CK gas or dust applications</p>
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 : Inlet fitting to manifold: 3/8" ferrule fitting Outlet fitting from manifold: 3/8" ferrule fitting Inlet fitting to enclosure: 3/8" bulkhead fitting</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)
Height	367.5 mm
Width	183 mm
Depth	152.5 mm
Data for application in connection with hazardous areas	
EU-type examination certificate	
Marking	<p>6000 main control unit with housing 6000-xx-S2-UN-WH-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 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: 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)</p> <p>User interface 6000-UIC-xx: ATEX UL/Demko 07 ATEX 0705753X II 2 G Ex ib [pxb Gb] IIC T4 Gb</p>
Directive conformity	
Directive 2014/34/EU	<p>IEC/EN 60079-0 IEC/EN 60079-1 IEC/EN 60079-2 IEC/EN 60079-11 IEC/EN 60079-31</p>
Directive 94/9/EC	
International approvals	

Release date: 2026-05-01 Date of issue: 2026-05-01 Filename: t232326_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

<p>UL approval</p>	<p>6000 Main control unit with housing 6000-xx-S2-UN-WH-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-WH-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>

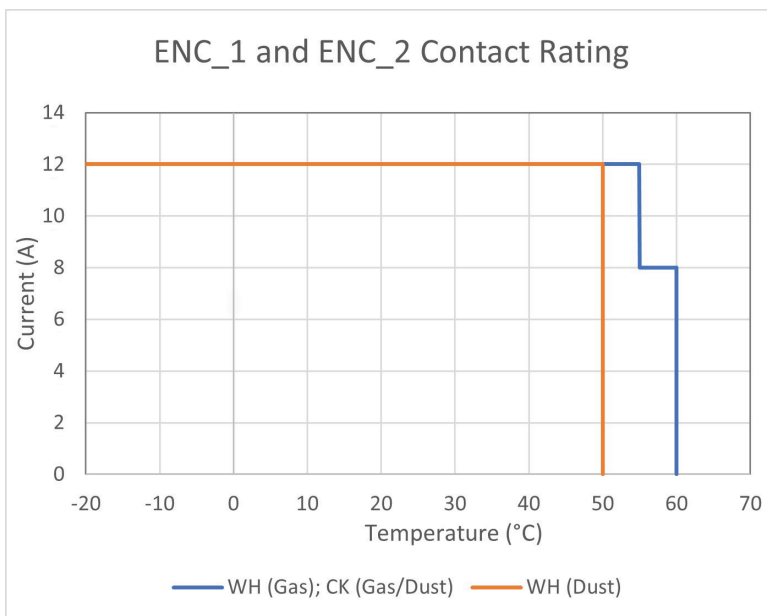
Release date: 2026-05-01 Date of issue: 2026-05-01 Filename: t232326_eng.pdf

Assembly



Characteristic Curve

Derating Curve for High-Current Models



Release date: 2026-05-01 Date of issue: 2026-05-01 Filename: t232326_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

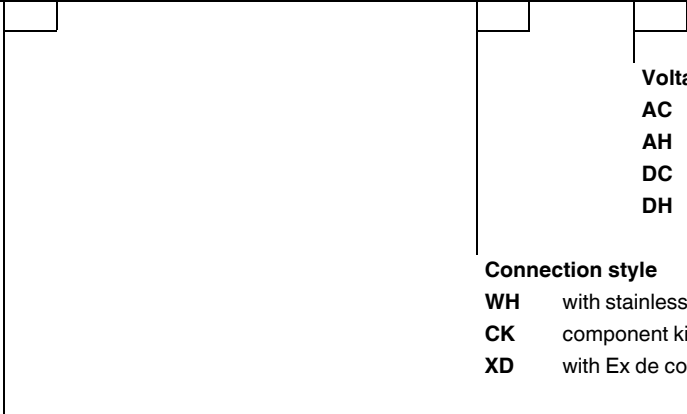
Germany: +49 621 776 2222
pa-info@de.pepperl-fuchs.com

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

PEPPERL+FUCHS

Type Code

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 (standard current)
AH 100 - 250 VAC (high current)
DC 20 - 30 VDC (standard current)
DH 20 - 30 VDC (high current)

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

Release date: 2026-05-01 Date of issue: 2026-05-01 Filename: t232326_eng.pdf

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