



7500 Series Control Unit, Type Z and Ex pzc

BEBCO EPS*

7500-01-AA-STD-UNV-PNO

- Global third-party approvals for Class I, II, Div. 2 and Zone 2/22
- Must be used in conjunction with an EPV-7500-* vent
- Low cost, compact design, easy to use
- Universal power: AC or DC
- Touch screen display with LEDs for easy visual indication
- Easy setup with pre-set purge programs for your application
- Automatic pressure compensation with digital manifold
- Rugged, corrosion-resistant housing

7500 series type Z & Ex pzc purge and pressurization control unit



Function

The 7500 series purge and pressurization system consists of a control unit, an enclosure protection vent, and a manual or automatic manifold. The control unit's menu-driven touch screen display makes it easy to select pre-programmed and user-selected variables. The display has 4 LED indicators that allow users to determine system condition from a distance.

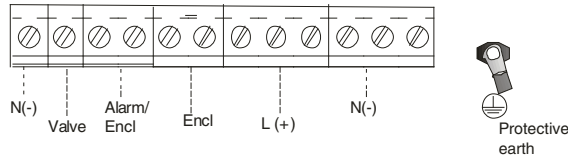
A digital manifold system such as the 5500-MAN-... can be used to make the 7500 a fully automatic system. Enclosure pressure and leakage are monitored. If a loss in enclosure pressure occurs, the solenoid valve engages to restore the defined pressure settings and/or trigger a pressure drop alarm.

The 7500 series system has NEC, CE Code, ATEX, CCC, and IECEx third-party certifications for Class I, II/Div. 2 Type Z and Zone 2/22 Ex Ppc.

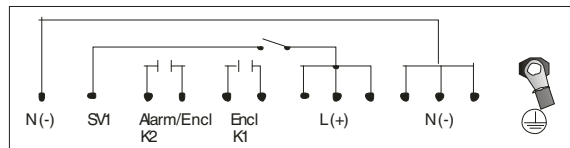
Connection

Electrical Connections

Terminal Block

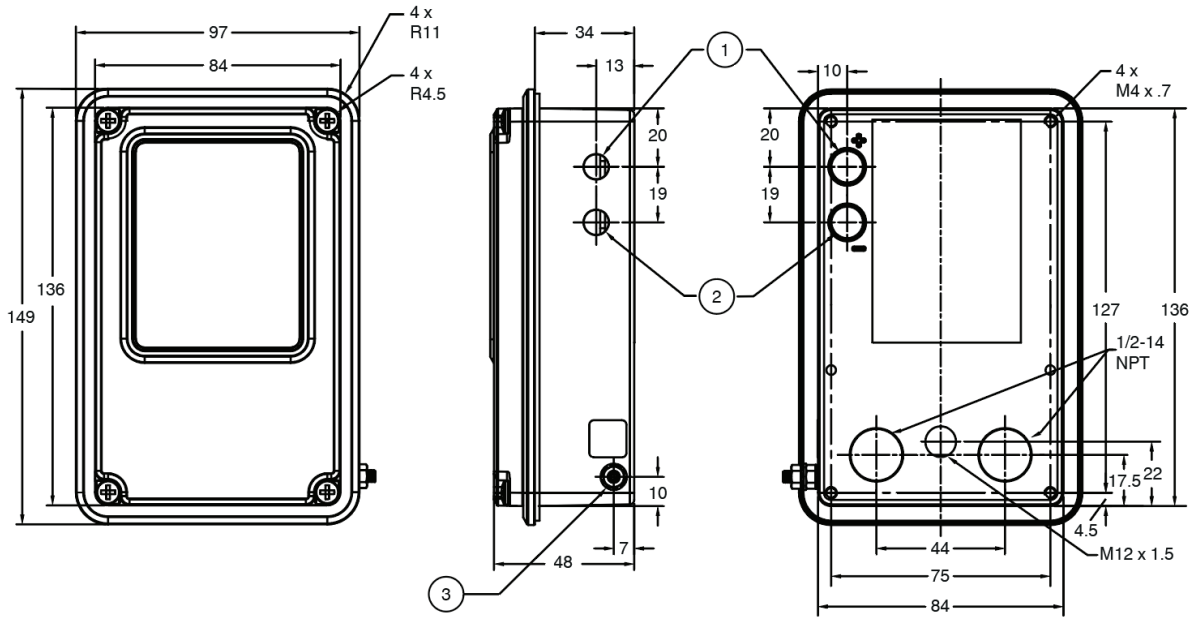


Terminal Block Connections



Release date: 2025-06-18 Date of issue: 2025-06-18 Filename: 70145762_eng.pdf

Dimensions



1	High-pressure port 1/8-27 NPT
2	Low-pressure port 1/8-27 NPT
3	Protective earth stud, torque 12 in lb (1.35 Nm)

Technical Data

General specifications

Equipment architecture	max. enclosure size 12.7 m ³ (450 ft ³) For complete technical data, see the 7500 Control Unit and 7500-MAN-MV-01 datasheets
Operating mode	fully automatic (FA)
Series	7500
System	Type Z Purge ; Ex pzc Purge
Hazardous environment	gas or dust

Supply

Rated voltage	U _r	20 ... 30 V DC at 0.1 A 90 ... 250 V AC , 50 ... 60 Hz at 0.04 A without solenoid valve Supply voltage can be line-to-line or line-to-neutral, single phase OVC II
Power consumption		max. 2.7 W / 7.3 VA without valve

Electrical specifications

Connection	screw terminals -- see manual for specifications on wire size and torque values
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Output

Output I		
Connection	K1, terminals, 1 x NO	
Output type	enclosure power contacts	
Contact loading	5 A at 250 V AC , 5 A at 30 V DC, relays must be externally fused inrush current: 50 A	
Output II		
Connection	K2, terminals, 1 x NO	

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Technical Data

Output type	alarm and control contacts
Contact loading	5 A at 250 V AC , 5 A at 30 V DC, relays must be externally fused inrush current: 50 A
Output III	
Connection	SV1, terminals, L1 powered contact
Output type	solenoid manifold, contact
Contact loading	0.5 A at 250 V AC , 0.5 A
Indicators/settings	
LED indication	K1: Green - Contact K1 is energized (enclosure contacts) K2: Amber - Contact K2 is energized (alarm/control contacts) P/SV: Blue - Safe pressure P1 (minimum enclosure pressure) P/SV: Amber - Solenoid manifold is energized (purging/pressure compensation)
Pneumatic parameters	
Protective gas supply	compressed air or inert gas, 40 µm filter, free from oil
Pressure requirement	supply pressure: 1.4 ... 8.2 bar (20 ... 120 psig)
Safe pressure	For model 7500-01*: P1 for gas: 0.12 inch w.c. (0.30 mbar) P1 for dust: 0.52 inch w.c. (1.29 mbar) P2: 0.8 inch w.c. (1.99 mbar) P3: 2.5 inch w.c. (6.22 mbar) P4: 4.5 inch w.c. (11.2 mbar) pressure sensing : -0.31 / +0 mbar (-0.125 / +0 in wc) For model 7500-03*: P1 for gas: 0.23 inch w.c. (0.57 mbar) P1 for dust: 0.63 inch w.c. (1.57 mbar) P2: 0.8 inch w.c. (1.99 mbar) P3: 2.5 inch w.c. (6.22 mbar) P4: 4.5 inch w.c. (11.2 mbar) pressure sensing: -0.43 / +0 mbar (0.175 / +0 in wc)
Enclosure pressure	For model 7500-01*: 0 ... 12.9 mbar (0 ... 5 in wc) For model 7500-03*: 0 ... 25.8 mbar (0 ... 10 in wc)
Directive conformity	
Electromagnetic compatibility	
Directive 2014/30/EU	EN 61326-1:2013
RoHS	
Directive 2011/65/EU (RoHS)	EN IEC 63000:2018
Conformity	
Electromagnetic compatibility	EN 61326-3-2:2008, EN 61000-6-2:2005
Emitted interference	FCC CFR 47, part 15, subpart B: 2017 , ICES-003, Issue 6:2016, Class A ITE
Ambient conditions	
Ambient temperature	-40 ... 50 °C (-40 ... 122 °F) at T6 -40 ... 65 °C (-40 ... 149 °F) at T5 -40 ... 70 °C (-40 ... 158 °F) at T4
Storage temperature	-40 ... 80 °C (-40 ... 176 °F)
Relative humidity	5 ... 90 %, non-condensing
Altitude	max. 2000 m
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	electrical: 2 x 1/2 inch NPTF (open from factory) 1 x M12 opening (plugged from factory) pneumatic: high-pressure port - 1/8 in NPTF, low-pressure port - 1/8 in NPTF
Degree of protection	Type 4X , IP66
Material	Lens: Makrolon® GP-V polycarbonate Screws: AISI 316 (1.4401), 304, or 18-8 stainless steel Housing: A380, A356, or 6061-T6 aluminum Mounting gasket: Bisco® HT-800 medium cellular silicone Mounting tabs: SAE 304 stainless steel M12 plug: 6061-T6 aluminum
Mass	710 g (1 lb 10 oz)
Dimensions	150 x 100 x 50 mm (5.9 x 4 x 2 in)
Data for application in connection with hazardous areas	

Technical Data

Certificate	
Marking	Ⓜ II 3 G Ex ec mc nC [pzc Gc] IIC T6...T4 Gc Ⓜ II 3 D Ex mc tc [pzc Dc] IIIC T60 °C ... T80 °C Dc
Directive conformity	
Directive 2014/34/EU	IEC/EN 60079-0 , IEC/EN 60079-2 , IEC/EN 60079-7 , IEC/EN 60079-15 , IEC/EN 60079-18 , IEC/EN 60079-31 Supplements: EN 61010-1:2010
International approvals	
UL approval	
cULus	Class I, Division 2, Groups A, B, C, D T6 ... T4 Class II, Division 2, Groups F, G T6 ... T4
IECEx approval	Ex ec mc nC [pzc Gc] IIC T6...T4 Gc Ex mc tc [pzc Dc] IIIC T60 °C ... T80 °C Dc
General information	
Supplementary information	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 .

Type Code

Structure of the type code

7500	-	(1)	-	(2)	-	(3)	-	UNV	-	(4)
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7500	Device Type
7500	7500 Series Purge System

(1)	Model Options
01	Maximum sensor pressure of 5" H2O
02	Maximum sensor pressure of 10" H2O
03	Maximum sensor pressure of 10" H2O, low minimum pressure
XX	Any other 2-character alphanumeric combination to identify other customer options

(2)	Housing Material
SS	304 or 316 Stainless steel
AA	Aluminum

(3)	Mounting Configuration
STD	Standard housing type
XXX	Any other 3-character alphanumeric combination to identify other mounting options within the certification aspects such as the entry hub, pressure port fittings, etc.

UNV	Voltage Requirement
UNV	Universal (20–30 V DC or 90–250 V AC)

(4)	Wiring Entrance for Power Connection
PNO	No fittings or cable glands
XXX	Any other 3-character alphanumeric combination to identify fittings installed in threaded wire entry holes