Системы продувки и нагнетания давления типа Z и Ex pzc серии 5500 и сопутствующее оборудование

Технические характеристики

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Оренбург (3532)37-68-04
Пенза (8412)22-31-16
Петрозаводск (8142)55-98-37
Псков (8112)59-10-37
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Саранск (8342)22-96-24
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Смоленск (4812)29-41-54
Сочи (862)225-72-31
Ставрополь (8652)20-65-13
Сургут (3462)77-98-35
Сыктывкар (8212)25-95-17
Тамбов (4752)50-40-97
Тверь (4822)63-31-35
Тольятти (8482)63-91-07
Томск (3822)98-41-53
Тула (4872)33-79-87
Тюмень (3452)66-21-18
Ульяновск (8422)24-23-59
Улан-Удэ (3012)59-97-51
Уфа (347)229-48-12
Хабаровск (4212)92-98-04
Чебоксары (8352)28-53-07
Челябинск (351)202-03-61
Череповец (8202)49-02-64
Чита (3022)38-34-83
Якутск (4112)23-90-97
Ярославль (4852)69-52-93

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Type Z & Ex pzc purge and pressurization system

5500 Control Unit

BEBCO EPS®

- 100% automatic purge and pressurization system including purging, temperature and leakage control, alarming and system power
- Third party approvals for Class I, II, Div. 2 and Zone 2/22
- Universal mounting
- RTD inputs for temperature alarm and control
- Five standard purge programs

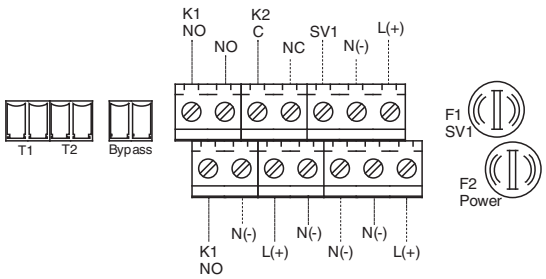
Bebco EPS 5500 series Type Z & Ex pzc purge and pressurization control unit

Function

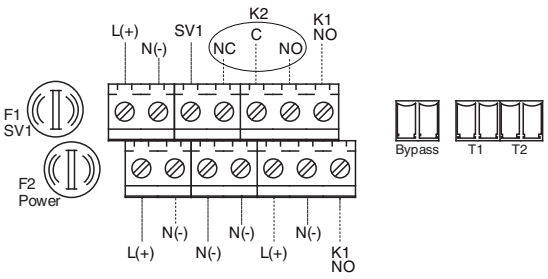
The 5500 series purge/pressurization system consists of the control unit with a user interface in a 316 stainless steel enclosure that works in conjunction with the EPV vents and pneumatic solenoid valves or manual valves form a certified purge and pressurization system for enclosures. The user interface is menu driven and easily guides users through custom programing for their applications. (2) RTD's can be connected to inputs and the user can select temperature ranges for controlling and alarming critical temperatures through a set of contacts and energizing a solenoid valve for displacing air within the enclosure or operate cooling or heating functions. Enclosure pressure and leakage can be monitored. In the event of a loss in pressure a solenoid valve can engage to restore the defined pressure settings and/or alarm for pressure loss.
The 5500 series purge and pressurization system has NEC, CEC, CCC, ATEX and IECEx third-party certifications for Class I, II/Div. 2 and Zone 2/22

Connection

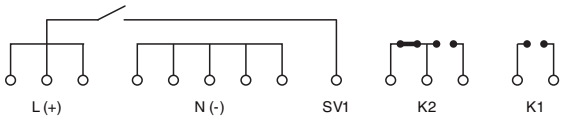
External Mount Terminal Block



Internal Mount Terminal Block



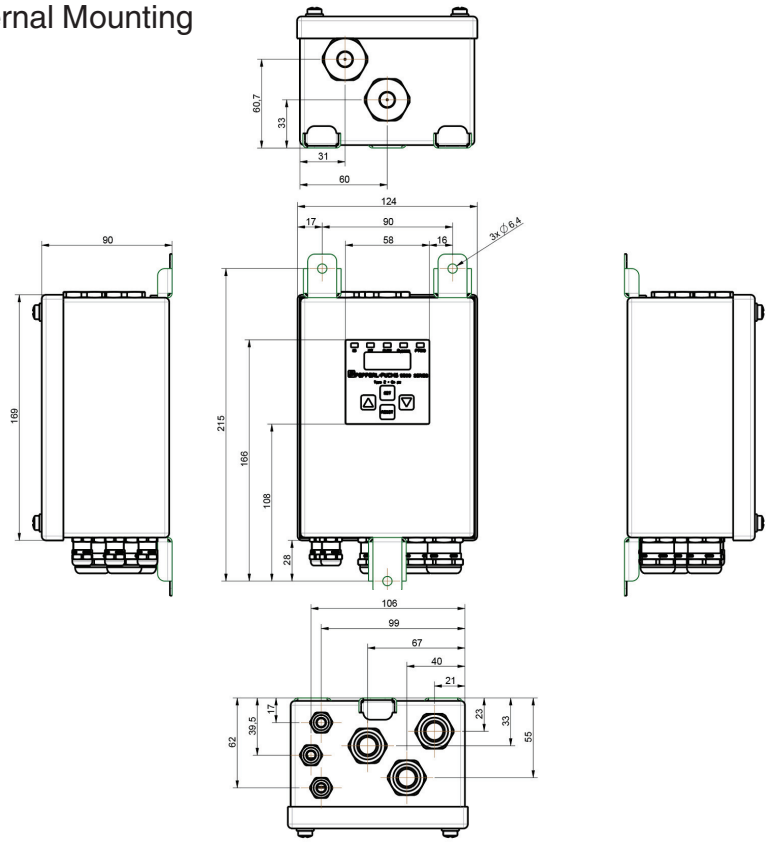
Terminal Block Connections



Release date: 2024-07-09 Date of issue: 2024-07-09 Filename: t167146_eng.pdf

Dimensions

Internal Mounting

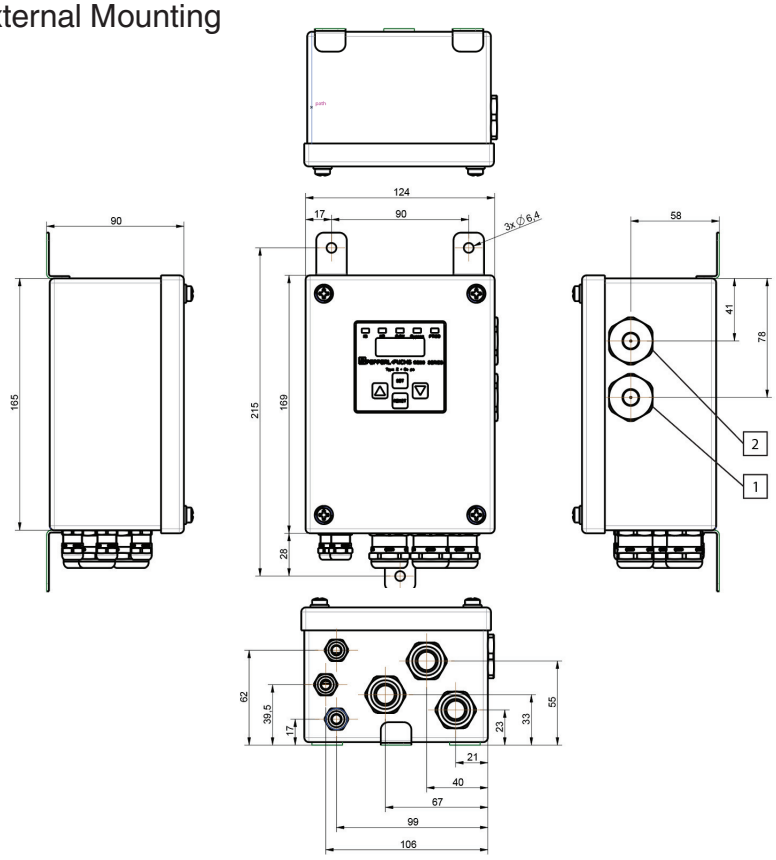


1. Low-pressure port (atmospheric pressure)
2. High-pressure port (enclosure pressure)

Release date: 2024-07-09 Date of issue: 2024-07-09 Filename: t167146_eng.pdf

Dimensions

External Mounting



1. Low-pressure port (atmospheric pressure)
2. High-pressure port (enclosure pressure)

Technical Data

General specifications		
Operating mode		fully automatic (FA)
Series		5500
System		Type Z Purge ; Ex pzc Purge
Number of volume exchanges		4 ... 19
Hazardous environment		gas or dust
Supply		
Rated voltage	U_r	100 ... 240 V AC, 0.05 A, 50 ... 60 Hz 20 ... 30 V DC, 0.2 A
Power consumption		100 ... 240 V AC - 2.3 VA (without digital valve) 20 ... 30 V DC - 2.5 W (without digital valve)
Electrical specifications		
Fuse rating		**F2:** AC: max. 2 A DC: max. 3.15 A **F1:** AC: max. 0.08 A DC: max. 0.5 A
Input		
Input I		Temperature, up to 2 RTDs per unit
Connection		Pt100, 2-wire-connection
Input type		temperature input Input accuracy: 2.5% of the measurement value + PT100 error
Input II		1 Bypass
Connection		passive contact (switch)

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Technical Data

Input type	mechanical contact
Output	
Output I	
Connection	K1, terminals: K1/N0, K1/N0
Output type	enclosure power, (1) SPST
Inrush current	6 A
Contact loading	6 A at 250 V AC , 30 V DC resistive load, 6 A at 30 V DC
Output II	
Connection	K2, terminals: K2 (NO, C, NC)
Output type	alarm, (1) SPDT
Inrush current	3 A
Contact loading	3 A at 250 V AC , 30 V DC resistive load, 3 A at 30 V DC
Output III	
Connection	digital valve, terminals SV
Output type	(1) SPST, powered contacts from supply 5.0 A at 250 VAC or 30 VDC
Inrush current	5 A
Indicators/settings	
LED indication	Membrane Pad K1: Green - Contact K1 is energized K2: Amber - Contact K2 is energized SV/encl press.: Blue for safe pressure, Amber for valve on Bypass: Amber when bypass is active PT100 error: Red when fault in PT100 sensor
Pneumatic parameters	
Protective gas supply	instrument grade air or inert gas
Safe pressure	- gas 0.7 mbar (0.3 in w.c.) - dust 1.6 mbar (0.65 in w.c.)
Directive conformity	
Electromagnetic compatibility	
Directive 2014/30/EU	EN 61326-1:2013
RoHS	
Directive 2011/65/EU (RoHS)	EN IEC 63000:2018
Conformity	
Degree of protection	EN 60529
Shock resistance	EN 60068-2
Ambient conditions	
Ambient temperature	-20 ... 40 °C (-4 ... 104 °F) at T6 -20 ... 60 °C (-4 ... 140 °F) at T4
Relative humidity	5 ... 95 %, non-condensing
Vibration resistance	5 ... 100 Hz , 1 g, 12 m/s², all axes
Impact resistance	30 g, 11 ms, all axes
Mechanical specifications	
Connection type	High pressure port: 1/8" NPTF Low pressure port: 1/8" NPTF
Cable gland	**Cable size** M12 diameter 3 - 6.5 mm M20 diameter 10 - 12 mm **RTD/Bypass**: (3) M12x1.5 **K1, K2, SV**: 'P_C' (3) M20x1.5
Degree of protection	Type 4X, IP66
Material	**Housing**: 316 stainless steel **Cable Gland**: 316 stainless steel or Nickel Plated Brass **Pressure Ports**: 316 stainless steel **Membrane Pad**: Autotex F200XE **O-ring:** EPDM
Mass	approx. 2.7 kg (6 lb)
Dimensions	165 x 124 x 90 mm (6.5 x 4.9 x 3.5 in)
Height	203 mm

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Technical Data

Width	165 mm
Depth	105 mm
Data for application in connection with hazardous areas	
Certificate	DEMKO 14 ATEX 1282X
Marking	Ex II 3 (3) G Ex ic ec nC [ic Gc] [pzc Gc] IIC T4 Gc (-20 °C ≤ Ta ≤ 60 °C) Ex II 3 (3) G Ex ic ec nC [ic Gc] [pzc Gc] IIC T6 Gc (-20 °C ≤ Ta ≤ 40 °C) Ex II 3 (3) D Ex ic tc [ic IIIC Dc] [pzc Dc] IIIB T80 °C Dc (-20 °C ≤ Ta ≤ 60 °C) (external version) Ex II 3 (3) D Ex ic tc [ic IIIC Dc] [pzc Dc] IIIB T60 °C Dc (-20 °C ≤ Ta ≤ 40 °C) (external version) Ex II 3 (3) D Ex ic tc [ic Dc] [pzc Dc] IIIC T80 °C Dc (-20 °C ≤ Ta ≤ 60 °C) (internal version) Ex II 3 (3) D Ex ic tc [ic Dc] [pzc Dc] IIIC T60 °C Dc (-20 °C ≤ Ta ≤ 40 °C) (internal version)
Directive conformity	
Directive 2014/34/EU	EN IEC 60079-0:2018 , EN 60079-11:2012 , EN 60079-15:2019 , EN 60079-2:2014 , EN 60079-7:2015+A1:2018 , EN 60079-31:2014
International approvals	
UL approval	
cULus	UL File E184741 Class I, Division 2, Groups A, B, C, D T4 (-20 °C ≤ Ta ≤ 60 °C) Class II, Division 2, Groups F, G, T4 (-20 °C ≤ Ta ≤ 60 °C) Class I, Division 2, Groups A, B, C, D T6 (-20 °C ≤ Ta ≤ 40 °C) Class II, Division 2, Groups F, G T6 (-20 °C ≤ Ta ≤ 40 °C)
IECEx approval	IECEx UL 14.0019X Ex ic ec nC [ic Gc] [pzc Gc] IIC T4 Gc (-20 °C ≤ Ta ≤ 60 °C) Ex ic ec nC [ic Gc] [pzc Gc] IIC T6 Gc (-20 °C ≤ Ta ≤ 40 °C) Ex ic tc [ic IIIC Dc] [pzc Dc] IIIB T80 °C Dc (-20 °C ≤ Ta ≤ 60 °C) (external version) Ex ic tc [ic IIIC Dc] [pzc Dc] IIIB T60 °C Dc (-20 °C ≤ Ta ≤ 40 °C) (external version) Ex ic tc [ic Dc] [pzc Dc] IIIC T80 °C Dc (-20 °C ≤ Ta ≤ 60 °C) (internal version) Ex ic tc [ic Dc] [pzc Dc] IIIC T60 °C Dc (-20 °C ≤ Ta ≤ 40 °C) (internal version)
General information	

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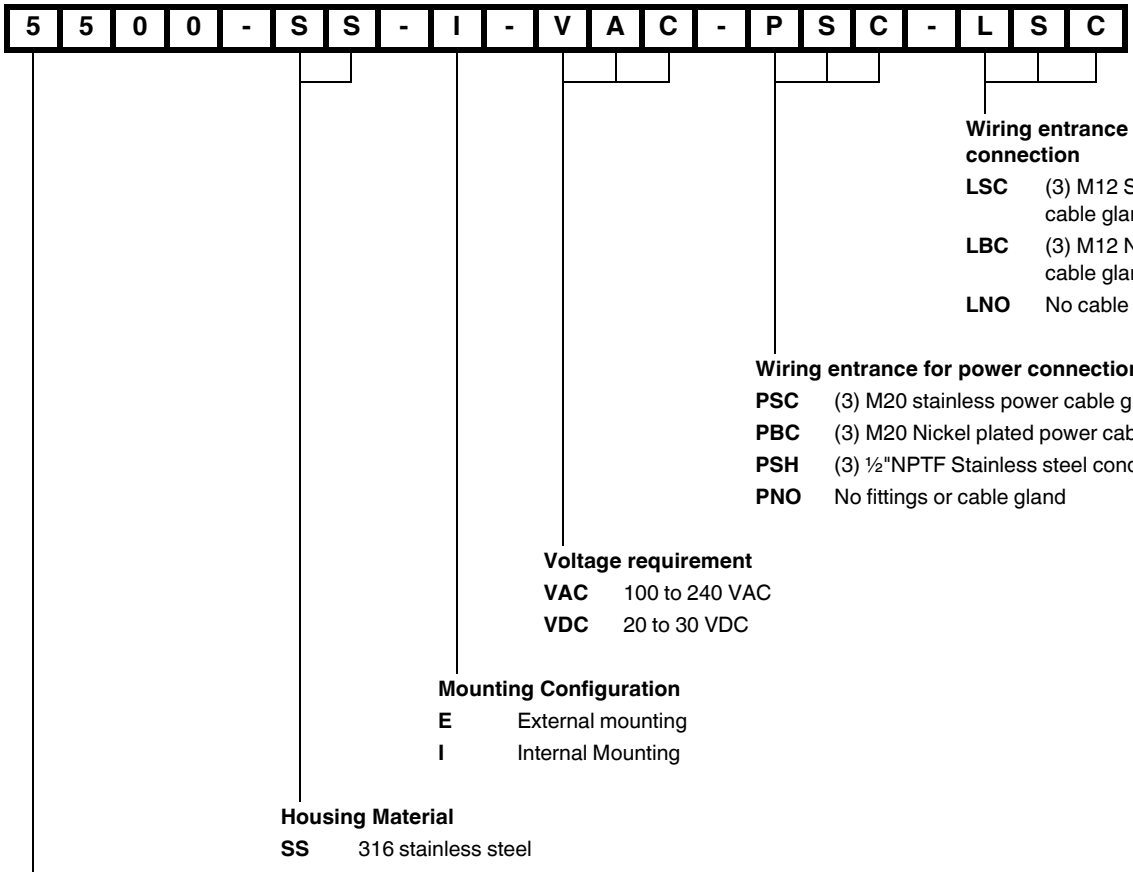

Typical Configuration Guide

Certification	Control Unit			Vent	Manifold
UL	5500-SS-*-**-	**PSH** [a]-	LSC	EPV-5500-**-***	5500-MAN-**CDUL**-*
			LBC		
ATEX/IECEx	5500-SS-*-**-	**PSC**-	LSC	EPV-5500-**-***	5500-MAN-**EX01**-*
			LBC		
		PBC-	LSC		
			LBC		

a. A complete system consists of a control unit, a manifold and a vent.

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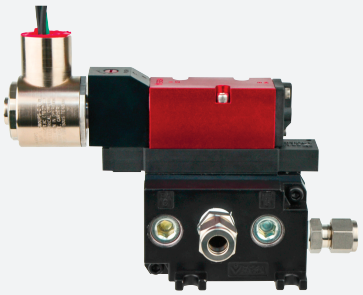
5500 series manifold

5500-MAN-CDUL-120VAC



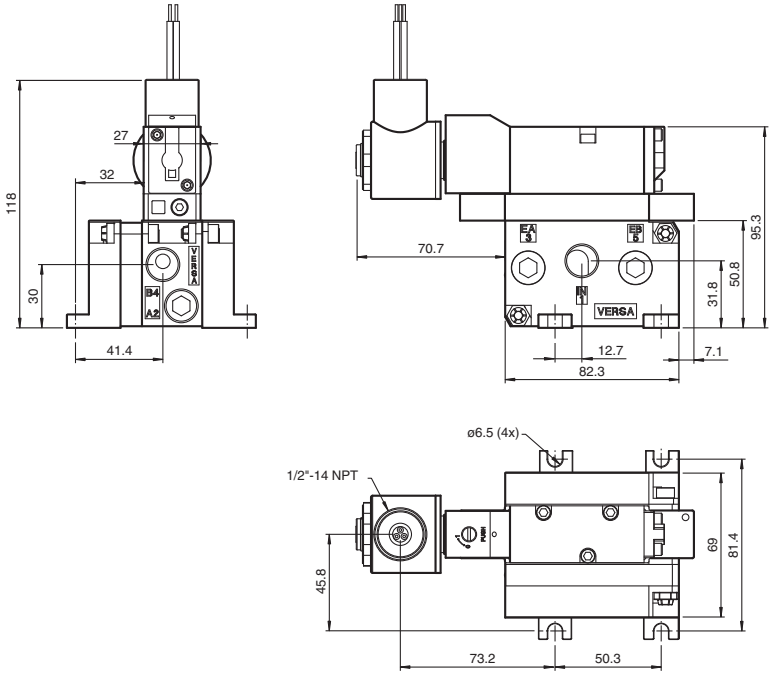
- Suitable for Class I, II/Div. 2 for hazardous locations
- Certified for UL
- Manifold combines the solenoid valve for purging and needle valve for pressurization in one housing
- Suitable for steel or plastic tubing
- Mounting hardware, pneumatic fittings and tubing included

5500 series manifold, UL certified, 120 V AC

Function

The 5500-MAN-CDUL-* combines a solenoid valve for purging and a needle valve for pressurization in one manifold design. When the valve is energized, the solenoid valve opens and allows for a high flow rate of protective gas into the enclosure. When the valve is deenergized, the flow through the internal needle valve is adjustable by using the included Hex key. The solenoid valve is used for purging, leakage compensation, and temperature control by signals from user defined points on the 5500 control unit.
Mounting hardware includes 3/8" tube compression fittings mounted on the manifold for input and output flow, 3/8" tube compression bulkhead fitting for getting flow into the enclosure and certified sealing washers with bolts to mount the manifold to the enclosure. Also included is 1 meter of 3/8" poly tubing with 3/8" poly tube stiffener inserts which allows the connection of plastic tubing to compression fittings without collapsing the tubing.
For NEC, ATEX and IECEx applications see the model number key for proper manifold selection.
The 5500 valve system works with the 5500 control unit and EPV-5500 vents. The 5500 system has UL certification for Class/Division installation.

Dimensions



Technical Data

General specifications	
Operating mode	automatic purging

Release date: 2024-09-10 Date of issue: 2024-09-10 Filename: 70110798_eng.pdf

Technical Data

Series	5500
System	Type Z Purge ; Ex pzc Purge
Hazardous environment	gas or dust
Supply	
Rated power	120 V AC: 7.2 VA, 60 Hz Voltage tolerance: +/- 10 %
Electrical specifications	
Fuse rating	80 mA (fuse rating on 5500 control unit)
Pneumatic parameters	
Protective gas supply	instrument grade air or inert gas
Pressure requirement	1.4 bar (20 psi) to 8.2 bar (120 psi)
Purge flow rate	solenoid valves : Cv (flow coefficient) = 1.4 needle valve : Cv (flow coefficient) = 0.24
Ambient conditions	
Ambient temperature	-20 ... 50 °C (-4 ... 122 °F)
Mechanical specifications	
Connection type	Pneumatic Input port: 3/8 inch Tube compression fitting Output port: 3/8" Tube compression fitting Electrical connection ½" NPTF thread connection w/ 24" (0.61m) flying leads
Degree of protection	type 7 & 9
Material	**Housing**: anodized aluminum **3/8" compression fittings**: 316 stainless steel **Pressure ports**: 3/8" NPTF **Bulkhead fitting**: 316 stainless steel **Mounting bolts**: 1/4 - 20, 316 stainless steel **Sealing washers**: UL recognized type 4X
Mass	1250 g (2.8 lb)
Dimensions	see dimensions
Data for application in connection with hazardous areas	
Certificate	
Temperature class	T3C
International approvals	
UL approval	
cULus	Class I Division 2, Group A-D Class II Division 2, Group F+G

Release date: 2024-09-10 Date of issue: 2024-09-10 Filename: 70110798_eng.pdf

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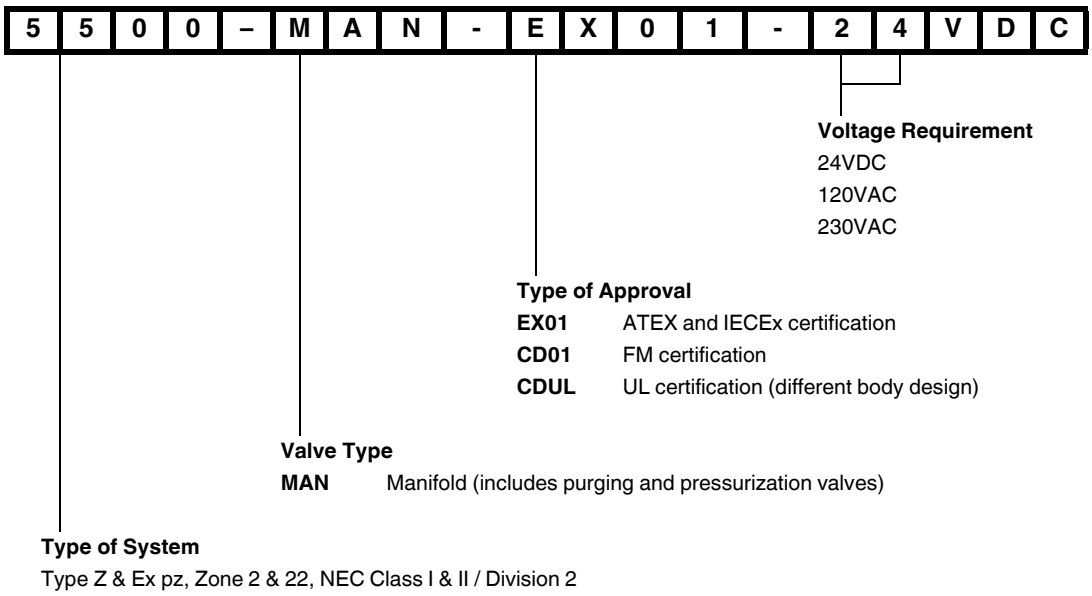
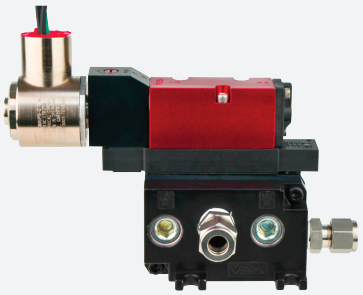

5 5 0 0 – M A N - E X 0 1 - 2 4 V D C
Voltage Requirement
24VDC
120VAC
230VAC
Type of Approval
EX01 ATEX and IECEx certification
CD01 FM certification
CDUL UL certification (different body design)
Valve Type
MAN Manifold (includes purging and pressurization valves)
Type of System
Type Z & Ex pz, Zone 2 & 22, NEC Class I & II / Division 2

5500 series manifold

5500-MAN-CDUL-24VDC



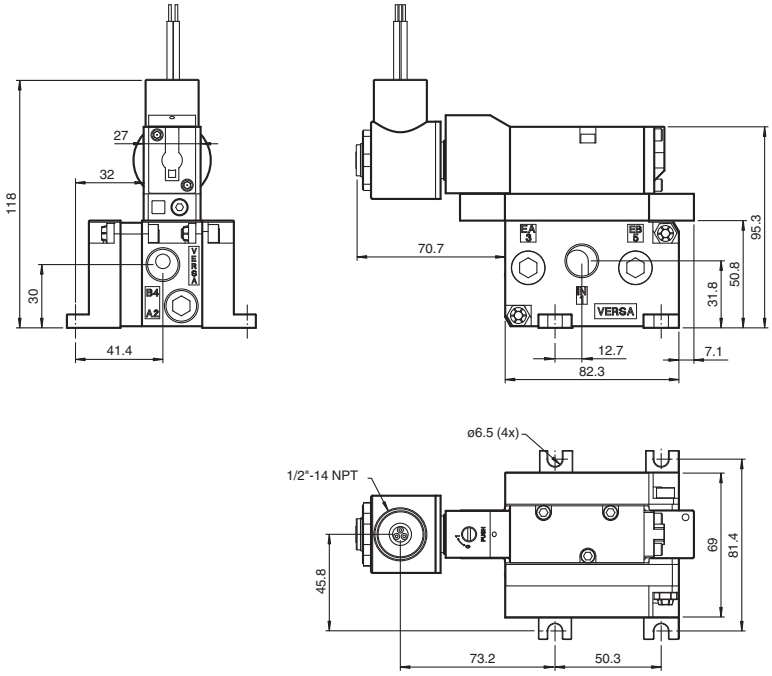
- Certified for UL
- Suitable for Class I, II/Div. 2 for hazardous locations
- Certified for UL CSA
- Manifold combines the solenoid valve for purging and needle valve for pressurization in one housing
- Suitable for steel or plastic tubing
- Mounting hardware, pneumatic fittings and tubing included

5500 series manifold, UL certified, 24 V DC

Function

The 5500-MAN-CDUL-* combines a solenoid valve for purging and a needle valve for pressurization in one manifold design. When the valve is energized, the solenoid valve opens and allows for a high flow rate of protective gas into the enclosure. When the valve is deenergized, the flow through the internal needle valve is adjustable by using the included Hex key. The solenoid valve is used for purging, leakage compensation, and temperature control by signals from user defined points on the 5500 control unit.
Mounting hardware includes 3/8" tube compression fittings mounted on the manifold for input and output flow, 3/8" tube compression bulkhead fitting for getting flow into the enclosure and certified sealing washers with bolts to mount the manifold to the enclosure. Also included is 1 meter of 3/8" poly tubing with 3/8" poly tube stiffener inserts which allows the connection of plastic tubing to compression fittings without collapsing the tubing.
For NEC, ATEX and IECEx applications see the model number key for proper manifold selection.
The 5500 valve system works with the 5500 control unit and EPV-5500 vents. The 5500 system has UL certification for Class/Division installation.

Dimensions



Technical Data

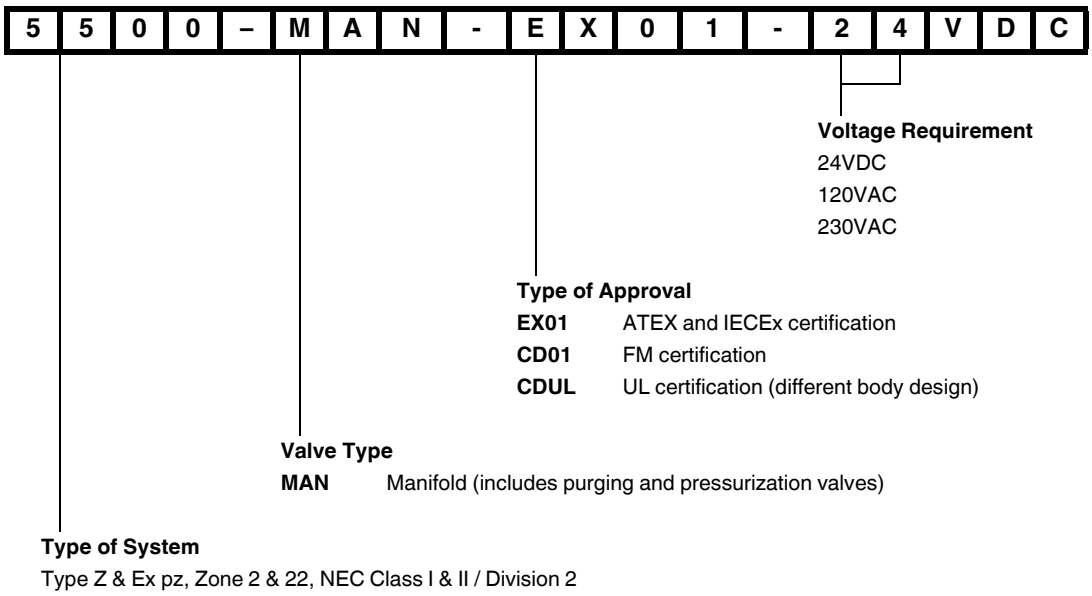
General specifications	
Operating mode	automatic purging

Release date: 2024-09-10 Date of issue: 2024-09-10 Filename: 70110799_eng.pdf

Technical Data

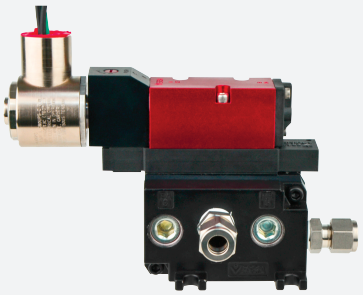
Series	5500
System	Type Z Purge ; Ex pzc Purge
Hazardous environment	gas or dust
Supply	
Rated power	24 V DC: 5.6 W Voltage tolerance: +/- 10 %
Electrical specifications	
Fuse rating	500 mA (fuse rating on 5500 control unit)
Pneumatic parameters	
Protective gas supply	instrument grade air or inert gas
Pressure requirement	1.4 bar (20 psi) to 8.2 bar (120 psi)
Purge flow rate	solenoid valves : Cv (flow coefficient) = 1.4 needle valve : Cv (flow coefficient) = 0.24
Ambient conditions	
Ambient temperature	-20 ... 50 °C (-4 ... 122 °F)
Mechanical specifications	
Connection type	Pneumatic Input port: 3/8 inch Tube compression fitting Output port: 3/8" Tube compression fitting Electrical connection ½" NPTF thread connection w/ 24" (0.61m) flying leads
Degree of protection	type 7 & 9
Material	**Housing**: anodized aluminum **3/8" compression fittings**: 316 stainless steel **Pressure ports**: 3/8" NPTF **Bulkhead fitting**: 316 stainless steel **Mounting bolts**: 1/4 - 20, 316 stainless steel **Sealing washers**: UL recognized type 4X
Mass	1250 g (2.8 lb)
Dimensions	see dimensions
Data for application in connection with hazardous areas	
Certificate	
Temperature class	T3C
International approvals	
UL approval	
cULus	Class I Division 2, Group A-D Class II Division 2, Group F+G
CSA approval	Class I Division 2, Group A-D Class II Division 2, Group F+G

Type Code


5 5 0 0 – M A N - E X 0 1 - 2 4 V D C
Voltage Requirement
24VDC
120VAC
230VAC
Type of Approval
EX01 ATEX and IECEx certification
CD01 FM certification
CDUL UL certification (different body design)
Valve Type
MAN Manifold (includes purging and pressurization valves)
Type of System
Type Z & Ex pz, Zone 2 & 22, NEC Class I & II / Division 2

5500 series manifold

5500-MAN-CDUL-230VAC



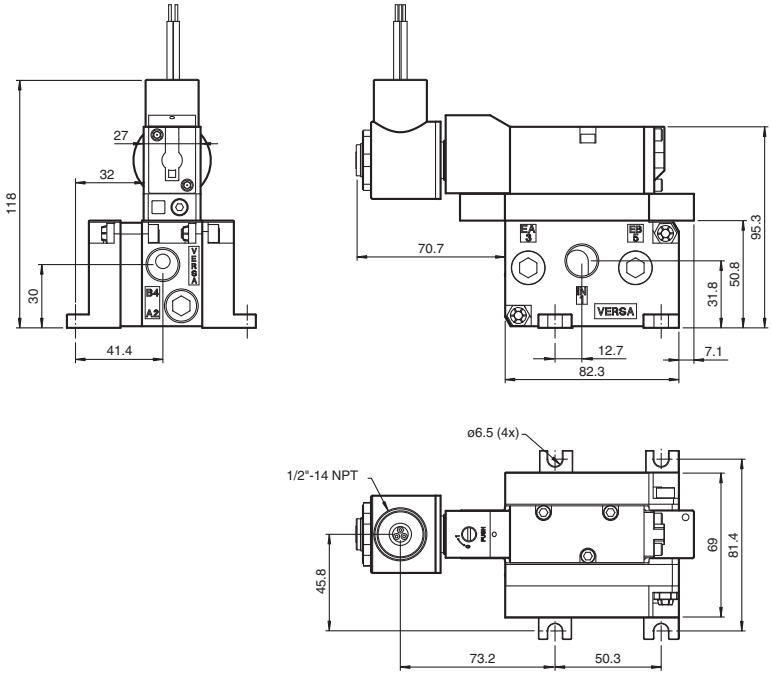
- Certified for UL
- Suitable for Class I, II/Div. 2 for hazardous locations
- Certified for UL CSA
- Manifold combines the solenoid valve for purging and needle valve for pressurization in one housing
- Suitable for steel or plastic tubing
- Mounting hardware, pneumatic fittings and tubing included

5500 series manifold, UL and CSA certified, 230 V AC

Function

The 5500-MAN-CDUL-* combines a solenoid valve for purging and a needle valve for pressurization in one manifold design. When the valve is energized, the solenoid valve opens and allows for a high flow rate of protective gas into the enclosure. When the valve is deenergized, the flow through the internal needle valve is adjustable by using the included Hex key. The solenoid valve is used for purging, leakage compensation, and temperature control by signals from user defined points on the 5500 control unit.
Mounting hardware includes 3/8" tube compression fittings mounted on the manifold for input and output flow, 3/8" tube compression bulkhead fitting for getting flow into the enclosure and certified sealing washers with bolts to mount the manifold to the enclosure. Also included is 1 meter of 3/8" poly tubing with 3/8" poly tube stiffener inserts which allows the connection of plastic tubing to compression fittings without collapsing the tubing.
For NEC, ATEX and IECEx applications see the model number key for proper manifold selection.
The 5500 valve system works with the 5500 control unit and EPV-5500 vents. The 5500 system has UL certification for Class/Division installation.

Dimensions



Technical Data

General specifications	
Operating mode	automatic purging

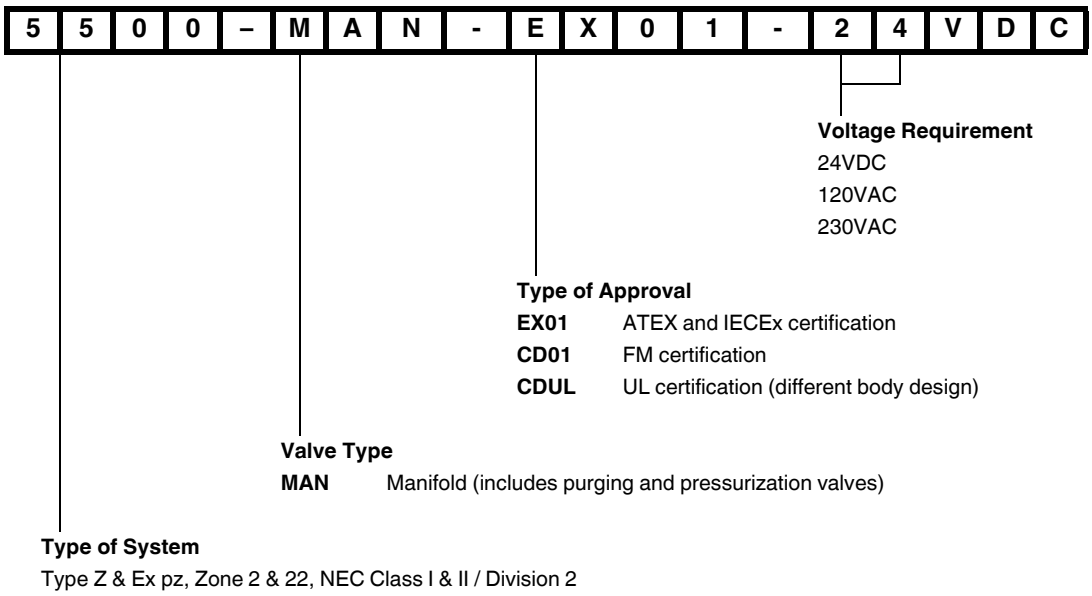
Release date: 2024-09-10 Date of issue: 2024-09-10 Filename: 70110800_eng.pdf

Technical Data

Series	5500
System	Type Z Purge ; Ex pzc Purge
Hazardous environment	gas or dust
Supply	
Rated power	230 V AC: 7.2 VA, 60 Hz Voltage tolerance: +/- 10 %
Electrical specifications	
Fuse rating	80 mA (fuse rating on 5500 control unit)
Pneumatic parameters	
Protective gas supply	instrument grade air or inert gas
Pressure requirement	1.4 bar (20 psi) to 8.2 bar (120 psi)
Purge flow rate	solenoid valves : Cv (flow coefficient) = 1.4 needle valve : Cv (flow coefficient) = 0.24
Ambient conditions	
Ambient temperature	-20 ... 50 °C (-4 ... 122 °F)
Mechanical specifications	
Connection type	Pneumatic Input port: 3/8 inch Tube compression fitting Output port: 3/8" Tube compression fitting Electrical connection ½" NPTF thread connection w/ 24" (0.61m) flying leads
Degree of protection	type 7 & 9
Material	**Housing**: anodized aluminum **3/8" compression fittings**: 316 stainless steel **Pressure ports**: 3/8" NPTF **Bulkhead fitting**: 316 stainless steel **Mounting bolts**: 1/4 - 20, 316 stainless steel **Sealing washers**: UL recognized type 4X
Mass	1250 g (2.8 lb)
Dimensions	see dimensions
Data for application in connection with hazardous areas	
Certificate	
Temperature class	T3C
International approvals	
UL approval	
cULus	Class I Division 2, Group A-D Class II Division 2, Group F+G
CSA approval	Class I Division 2, Group A-D Class II Division 2, Group F+G

Release date: 2024-09-10 Date of issue: 2024-09-10 Filename: 70110800_eng.pdf

Type Code


5 5 0 0 – M A N - E X 0 1 - 2 4 V D C
Voltage Requirement
24VDC
120VAC
230VAC
Type of Approval
EX01 ATEX and IECEx certification
CD01 FM certification
CDUL UL certification (different body design)
Valve Type
MAN Manifold (includes purging and pressurization valves)
Type of System
Type Z & Ex pz, Zone 2 & 22, NEC Class I & II / Division 2

5500 series vent

EPV-5500 Vent System

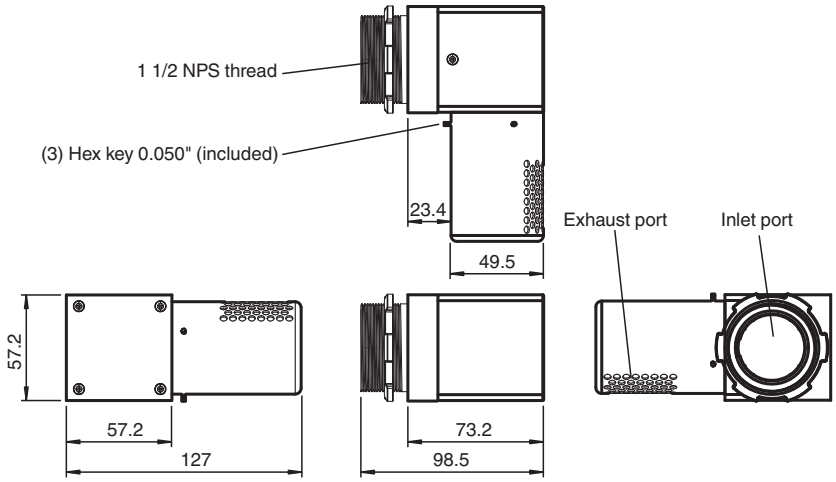
- One design, three flow rate variants to support your design requirements
- Anodized aluminum with an optional stainless steel cap
- Universal mounting

5500 series purge and pressurization system vent

Function

The EPV-5500 vent works with the 5500 control unit and manifold valve to form a certified purge and pressurization system for enclosures. It can not be used alone.
Vents are a required component for all pressurized enclosure systems. The EPV-5500 functions as a pressure relief device, allowing the purge gas to exit the enclosure and includes a spark arrestor. The vent also provides a seal when enclosure is pressurized and operating.

Dimensions



Technical Data

General specifications		
Series		5500
System		Type Z Purge ; Ex pzc Purge
Hazardous environment		gas or dust
Pneumatic parameters		
Protective gas supply		instrument grade air or inert gas
Maximum pressure		depends on the integrity of the enclosure (strength)
Purge flow rate		See graphs

Release date: 2024-07-09 Date of issue: 2024-07-09 Filename: t169761_eng.pdf

Technical Data

Flow rate for leakage compensation	EPV-5500....-01: approx. 593 l/hr (21scfh) @ 0.63 mbar (0.25 in w.c.) approx. 1640 l/hr (58 scfh) @ 1.9 mbar (0.75 in w.c.) EPV-5500....-02: approx. 395 l/hr (14 scfh) @ 0.63 mbar (0.25 in w.c.) approx. 961 l/hr (34 scfh) @ 1.9 mbar (0.75 in w.c.) EPV-5500....-03: approx. 260 l/hr (9.2 scfh) @ 0.63 mbar (0.25 in w.c.) approx. 622 l/hr (22 scfh) @ 1.9 mbar (0.75 in w.c.)
Breaking pressure	EPV-5500....-01: 2.0 mbar (0.8 in w.c.) EPV-5500....-02: 3.5 mbar (1.4 in w.c.) EPV-5500....-03: 3.8 mbar (1.5 in w.c.)
Conformity	
Degree of protection	EN 60529
Shock resistance	EN 60068-2
Ambient conditions	
Ambient temperature	-40 ... 70 °C (-40 ... 158 °F)
Relative humidity	5 ... 95 %, non-condensing
Vibration resistance	5 ... 100 Hz , 1 g, 12 m/s², all axes
Impact resistance	30 g, 11 ms, all axes
Mechanical specifications	
Degree of protection	EPV-5500....-01/02: mounting only Type 4X / IP66 EPV-5500....-03: Type 4X / IP66
Material	
Housing	EPV-5500-AA... body and cap: 6061T6 aluminum EPV-5500-SS... body: 6061T6 aluminum, cap: 316L stainless steel
Spark arrestor	AISI 316L, (1.4404) stainless steel
Installation	- any orientation to enclosure - not gravity dependent - internal and external mounting possible
Mass	approx. 1 kg (2.2 lb)
Dimensions	see dimensions
Mounting	mounting hole 1.5 in NPT knockout (50.8 mm) hole sealing nut (provided)
Data for application in connection with hazardous areas	
Directive conformity	
Directive 2014/34/EU	part of DEMKO 14 ATEX 1282X
International approvals	
UL approval	
cULus	UL File E184741
IECEx approval	part of IECEx UL 14.0019X
General information	

Technical Features

Flow Rate Tables

EPV-5500-...-01 Vent Flow vs. Enclosure Pressure

ft^3/m	Inches of water
5	1
10	1.4
12.5	1.75
15	2.05
17.5	2.4
20	2.75
22.5	3.1
25	3.5
27.5	3.9
30	4.5

l/m	mbar
141	2.5
283	3.5
354	4.4
424	5.1
495	6.0
566	6.8
636	7.7
707	8.7
778	9.7
849	11.2

EPV-5500-...-02 Vent Flow vs. Enclosure Pressure

ft^3/m	Inches of water
5	1.8
10	2.1
12.5	2.5
15	2.9
17.5	3.4
20	3.8
22.5	4.3
25	4.9
30	5.7

l/m	mbar
141	4.5
283	5.2
354	6.2
424	7.2
495	8.5
566	9.5
636	10.7
707	12.2
849	14.2

EPV-5500-...-03 Vent Flow vs. Enclosure Pressure

ft^3/m	Inches of water
2	1.6
5	2.1
7	2.4
10	2.7
12	3.3
15	5.1
20	7.5

l/m	mbar
57	4.0
141	5.2
198	6.0
283	6.7
339	8.2
424	12.7
566	18.7

Type Code

E	P	V	-	5	5	0	0	-	A	A	-	0	1

Configuration

01 30 SCFM (850 l/min) max flow, brk press. 0.8" w.c. (2 mbar)
02 20 SCFM (565 l/min)max flow, brk press. 1.4" w.c. (3.5 mbar)
03 12 SCFM (340 l/min) max flow, brk. press. 1.5" w.c. (3.8 mbar)

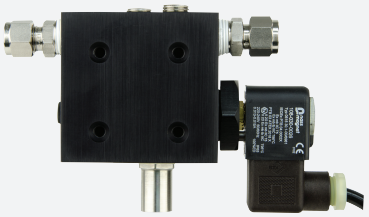
Material

AA Body EPV-...-01: Body: 6061T Al, Cap: 6061T Al
SS Body EPV-...-02: Body: 6061T Al, Cap: 316L stainless steel

Series of vent

5500 5500 Series

Release date: 2024-07-09 Date of issue: 2024-07-09 Filename: t169761_eng.pdf



5500 manifold, ATEX & IECEx certified

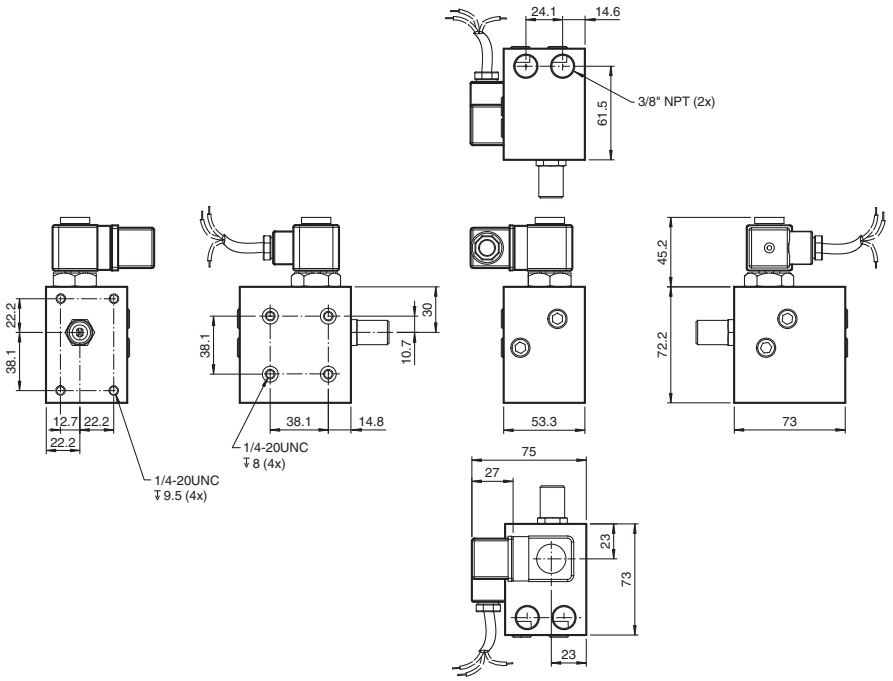
5500-MAN-EX01-*

- Suitable for Zone 2 & 22
- ATEX & IECEx certifications
- Manifold combines the solenoid valve for purging and needle valve for pressurization in one housing
- Suitable for steel or plastic tubing
- Mounting hardware, pneumatic fittings and tubing included

Function

The 5500-MAN-EX01-* combines a solenoid valve for purging and a needle valve for pressurization in one manifold design. When the valve is energized, the solenoid valve is open and allows for a high flow rate of protective gas into the enclosure. When the valve is deenergized, the flow through the internal needle valve is adjustable by a flathead screw driver through the needle stem on the manifold. The solenoid valve is used for purging, leakage compensation, and temperature control by signals from user defined points on the 5500 control unit.
Mounting hardware includes 3/8" tube compression fittings mounted on the manifold for input and output flow, 3/8" tube compression bulkhead fitting for getting flow into the enclosure and certified sealing washers with bolts to mount the manifold to the enclosure. Also included is 1 meter of 3/8" poly tubing with 3/8" poly tube stiffener inserts which allows the connection of plastic tubing to compression fittings without collapsing the tubing.
The 5500-MAN-EX-01-* is certified for Zone applications. For NEC, Class/ Division applications see the model number key for proper manifold selection.
The 5500 valve system works with the 5500 control unit and EPV-5500 vents.
The 5500 system has ATEX and IECEx certification for Zone 2&22 installation.

Dimensions



Technical Data

General specifications		
Operating mode		automatic purging
Series		5500
System		Type Z Purge ; Ex pzc Purge
Hazardous environment		gas or dust
Supply		
Rated power		**24 VDC:** 2.6 W **120 VAC:** 50...60 Hz, 0.029 A **230 VAC:** 50...60 Hz, 0.014 A (Voltage tolerance: +/-10%)
Electrical specifications		
Fuse rating		DC: 500 mA AC: 80 mA (fuse rating on 5500 control unit)
Pneumatic parameters		
Protective gas supply		instrument grade air or inert gas
Pressure requirement		1.7 bar (25 psi) to 8.0 bar (115 psi)
Purge flow rate		solenoid valves : Cv (flow coefficient) = 1.4 needle valve : Cv (flow coefficient) = 0.25
Ambient conditions		
Ambient temperature		-20 ... 50 °C (-4 ... 122 °F) T5
Mechanical specifications		
Connection type		Pneumatic Input port: 3/8 inch Tube compression fitting Output port: 3/8" Tube compression fitting

Release date: 2024-01-24 Date of issue: 2024-01-24 Filename: t169982_eng.pdf

Technical Data

Degree of protection	type 7 & 9
Material	**Housing**: anodized aluminum **3/8" compression fittings**: 316 stainless steel **Pressure ports**: 3/8" NPTF **Bulkhead fitting**: 316 stainless steel **Mounting bolts**: 1/4 - 20, 316 stainless steel **Sealing washers**: UL recognized type 4X
Cable	3 m
Mass	1250 g (2.8 lb)
Dimensions	see dimensions
Data for application in connection with hazardous areas	
EU-type examination certificate	
Marking	Ⓔx II 2 G Ex mb IIC T5 Gb Ⓔx II 2 D Ex mb tb IIIC T95C Db IP65 Protection by encapsulation PTB 03 ATEX 2018 X
International approvals	
IECEx approval	Ⓔx II 2 G Ex mb IIC T5 Gb Ⓔx II 2 D Ex mb tb IIIC T95C Db IP65 Protection by encapsulation IECEx PTB 04.0002X

Release date: 2024-01-24 Date of issue: 2024-01-24 Filename: t169982_eng.pdf

Type Code

Voltage Requirement
24VDC
120VAC
230VAC

Type of Approval

EX01	ATEX and IECEx certification
CD01	FM and CSA certification
CDUL	UL and CSA certification (different body design)

Valve Type

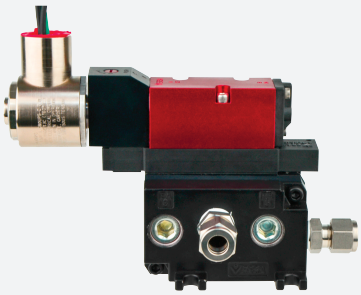
MAN	Manifold (includes purging and pressurization valves)

Type of System
Type Z & Ex pz, Zone 2 & 22, NEC Class I & II / Division 2

5500 series manifold

5500-MAN-CDUL-*

BEBCO EPS



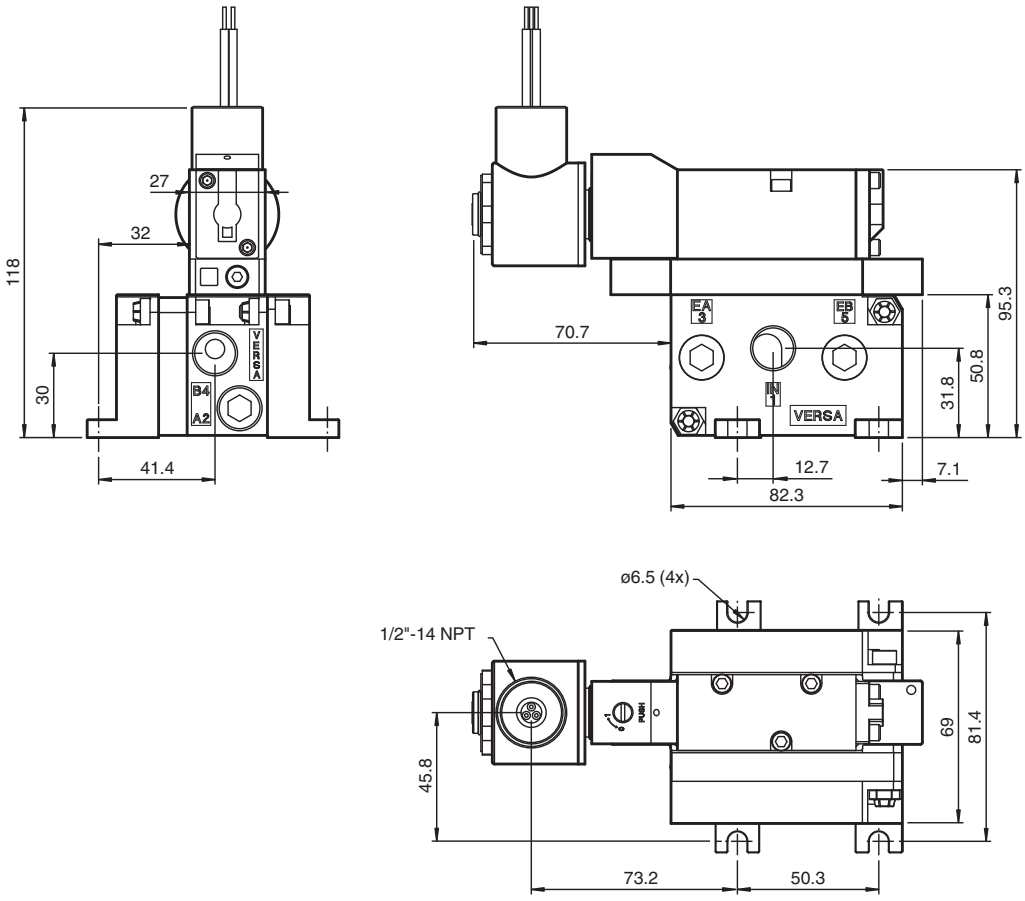
- Suitable for Class I, II/Div. 2 for hazardous locations
- Certified for UL
- Manifold combines the solenoid valve for purging and needle valve for pressurization in one housing
- Suitable for steel or plastic tubing
- Mounting hardware, pneumatic fittings and tubing included

c UL US

Function

The 5500-MAN-CDUL-* combines a solenoid valve for purging and a needle valve for pressurization in one manifold design. When the valve is energized, the solenoid valve opens and allows for a high flow rate of protective gas into the enclosure. When the valve is deenergized, the flow through the internal needle valve is adjustable by using the included Hex key. The solenoid valve is used for purging, leakage compensation, and temperature control by signals from user defined points on the 5500 control unit.
Mounting hardware includes 3/8" tube compression fittings mounted on the manifold for input and output flow, 3/8" tube compression bulkhead fitting for getting flow into the enclosure and certified sealing washers with bolts to mount the manifold to the enclosure. Also included is 1 meter of 3/8" poly tubing with 3/8" poly tube stiffener inserts which allows the connection of plastic tubing to compression fittings without collapsing the tubing.
For NEC, ATEX and IECEx applications see the model number key for proper manifold selection.
The 5500 valve system works with the 5500 control unit and EPV-5500 vents. The 5500 system has UL certification for Class/Division installation.

Dimensions



Technical Data

General specifications		
Operating mode		automatic purging
Series		5500
System		Type Z Purge ; Ex pzc Purge
Hazardous environment		gas or dust
Supply		
Rated power		24 VDC: 5.6 W 120 VAC: 7.2 VA, 60 Hz 230 VAC: 7.2 VA, 60 Hz Voltage tolerance: +/-10%
Electrical specifications		
Fuse rating		DC: 500 mA AC: 80 mA (fuse rating on 5500 control unit)
Pneumatic parameters		
Protective gas supply		instrument grade air or inert gas
Pressure requirement		1.7 bar (25 psig) to 8.0 bar (115 psig)
Purge flow rate		solenoid valves : Cv (flow coefficient) = 1.4 needle valve : Cv (flow coefficient) = 0.24
Ambient conditions		
Ambient temperature		-20 ... 40 °C (-4 ... 104 °F)
Mechanical specifications		

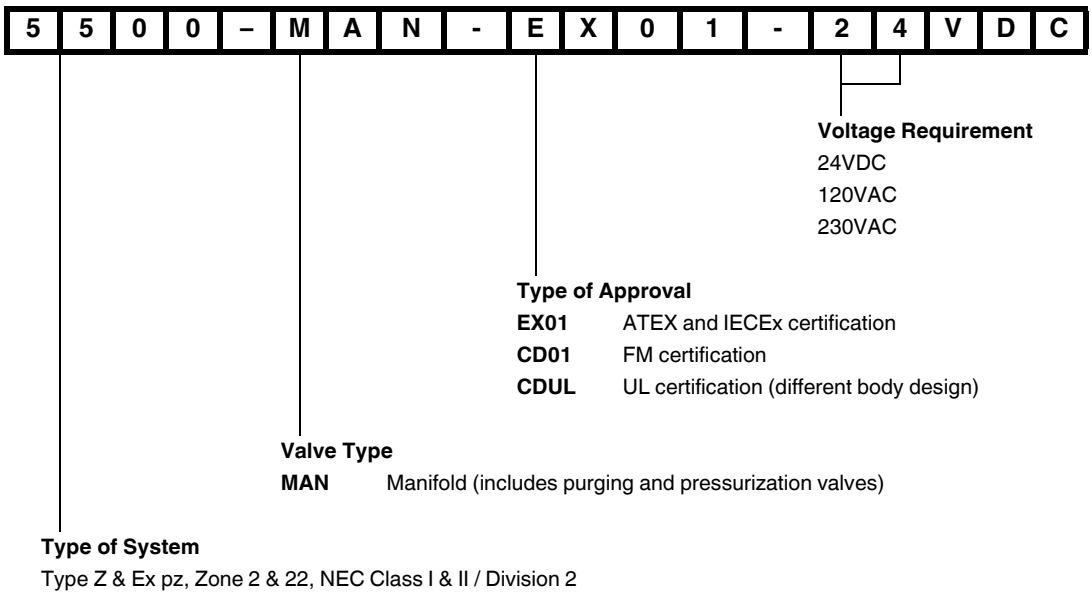
Release date: 2024-09-10 Date of issue: 2024-09-10 Filename: t169983_eng.pdf

Technical Data

Connection type		Pneumatic Input port: 3/8 inch Tube compression fitting Output port: 3/8" Tube compression fitting Electrical connection ½" NPTF thread connection w/ 24" (0.61m) flying leads
Degree of protection		type 7 & 9
Material		**Housing**: anodized aluminum **3/8" compression fittings**: 316 stainless steel **Pressure ports**: 3/8" NPTF **Bulkhead fitting**: 316 stainless steel **Mounting bolts**: 1/4 - 20, 316 stainless steel **Sealing washers**: UL recognized type 4X
Mass		1250 g (2.8 lb)
Dimensions		see dimensions
International approvals		
UL approval		
cULus		Class I Division 2, Group A-D, T3C Class II Division 2, Group F+G, T3C

Release date: 2024-09-10 Date of issue: 2024-09-10 Filename: t169983_eng.pdf

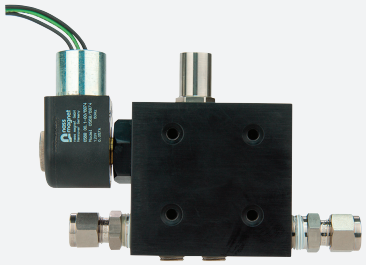
Type Code


5 5 0 0 – M A N - E X 0 1 - 2 4 V D C
Voltage Requirement
24VDC
120VAC
230VAC
Type of Approval
EX01 ATEX and IECEx certification
CD01 FM certification
CDUL UL certification (different body design)
Valve Type
MAN Manifold (includes purging and pressurization valves)
Type of System
Type Z & Ex pz, Zone 2 & 22, NEC Class I & II / Division 2

5500 manifold, FM &CSA certified

5500-MAN-CD01-*

BEBCO EPS®

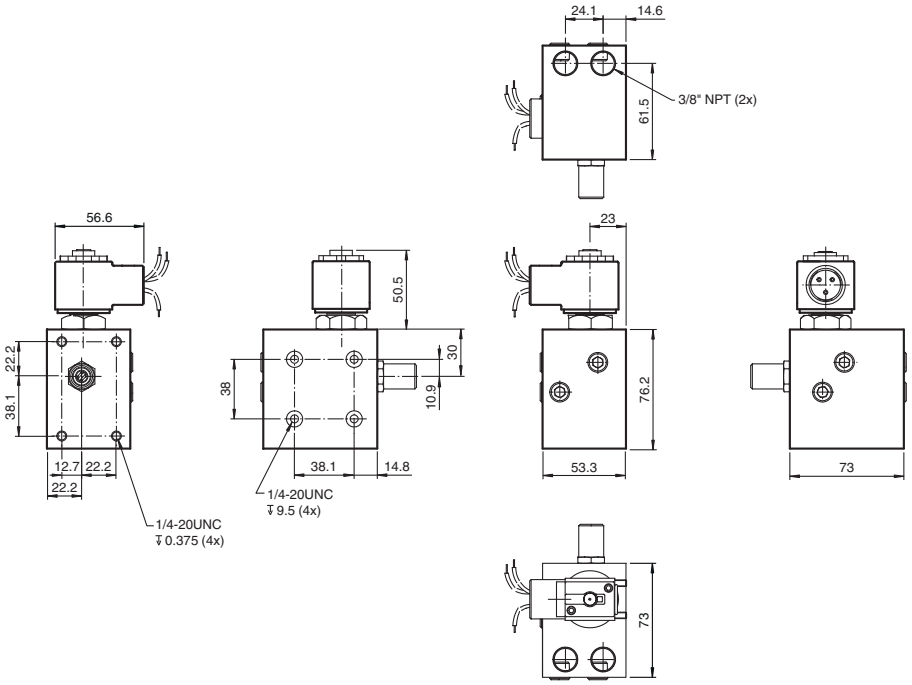


- Suitable for Class I,II/Div. 1 &2 for hazardous locations
- Certifications for FM and CSA
- Manifold combines the solenoid valve for purging and needle valve for pressurization in one housing
- Suitable for steel or plastic tubing
- Mounting hardware, pneumatic fittings and tubing included

Function

The 5500-MAN-CD01- * combines a solenoid valve for purging and a needle valve for pressurization in one manifold design. When the valve is energized, the solenoid valve opens and allows for a high flow of protective gas into the enclosure. When the valve is deenergized, the flow through the internal needle valve is adjustable by a flathead screw driver through the needle stem located on the manifold. The solenoid valve is used for purging, leakage compensation, and temperature control by signals from user defined points on the 5500 control unit.
Mounting hardware includes 3/8" tube compression fittings mounted on the manifold for input and output flow, 3/8" tube compression bulkhead fitting for getting flow into the enclosure and certified sealing washers with bolts to mount the manifold to the enclosure. Also included is 1 meter of 3/8" poly tubing with 3/8" poly tube stiffener inserts which allows the connection of plastic tubing to compression fittings without collapsing the tubing.
The 5500 valve system works with the 5500 control unit and EPV-5500 vents. The 5500 Series system has FM and CSA certification for Class/Division installation, see model number key for proper manifold selection.
For ATEX and IECEx applications look the model number key proper manifold selection.

Dimensions



Technical Data

General specifications	
Operating mode	automatic purging
Series	5500
Hazardous environment	gas or dust
Supply	
Rated power	24 VDC: 4.6 W 120 VAC: 6.8 VA, 60 Hz 230 VAC: 6.8 VA, 60 Hz Voltage tolerance: +/-10%
Electrical specifications	
Fuse rating	DC: 500 mA AC: 80 mA (fuse rating on 5500 control unit)
Pneumatic parameters	
Protective gas supply	instrument grade air or inert gas
Pressure requirement	1.4 bar (20 psi) to 8.2 bar (120 psi)
Purge flow rate	solenoid valves : Cv (flow coefficient) = 1.4 needle valve : Cv (flow coefficient) = 0.25
Ambient conditions	
Ambient temperature	-20 ... 60 °C (-4 ... 140 °F)
Mechanical specifications	
Connection type	Pneumatic Input port: 3/8 inch Tube compression fitting Output port: 3/8" Tube compression fitting Electrical connection ½" NPTF thread connection w/ 24" (0.61m) flying leads

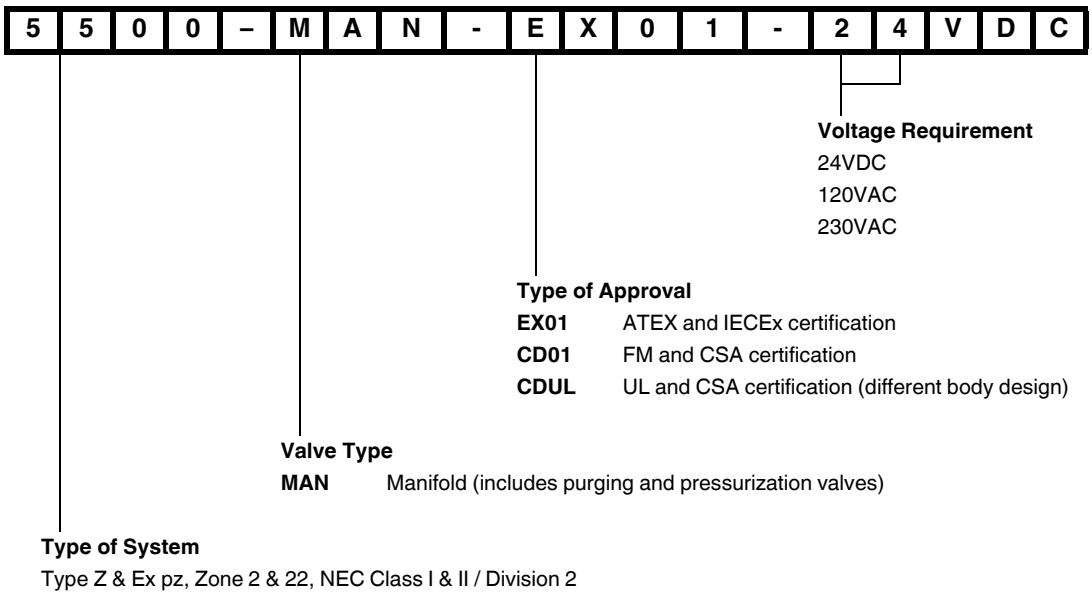
Release date: 2022-07-04 Date of issue: 2022-07-04 Filename: t169984_eng.pdf

Technical Data

Degree of protection		type 7 & 9
Material		**Housing**: anodized aluminum **3/8" compression fittings**: 316 stainless steel **Pressure ports**: 3/8" NPTF **Bulkhead fitting**: 316 stainless steel **Mounting bolts**: 1/4 - 20, 316 stainless steel **Sealing washers**: UL recognized type 4X
Mass		1250 g (2.8 lb)
Dimensions		see dimensions
International approvals		
FM approval		FM3006713 Explosion proof: Class I, Divison 1, Group A-D, T4, Ta = 60C DIP: Class II, Division 1, Groups F+G, T4, Ta = 60C Nonincendive: Class I, Division 2, Groups A-D, T4, Ta = 60C Suitable for Class II, Division 2, Groups F+G, T4, Ta = 60C
CSA approval		CSA 202633 Class I, Division 1, Groups A-D: Class II, Groups E,F,G Class I, Division 2, Groups A-D

Release date: 2022-07-04 Date of issue: 2022-07-04 Filename: t169984_eng.pdf

Type Code


5 5 0 0 – M A N - E X 0 1 - 2 4 V D C
Voltage Requirement
24VDC
120VAC
230VAC
Type of Approval
EX01 ATEX and IECEx certification
CD01 FM and CSA certification
CDUL UL and CSA certification (different body design)
Valve Type
MAN Manifold (includes purging and pressurization valves)
Type of System
Type Z & Ex pz, Zone 2 & 22, NEC Class I & II / Division 2

5500-01 Control Unit Mounting Brackets

5500-ACC-BKT-*

- Angle bracket for mounting the 5500-01 external control unit with or without 5500-MAN manifold to the enclosure
- Includes mounting bolts, nuts, and sealing washer for Type 4X degree of protection
- 316 stainless steel
- One bracket for top, bottom, side mounting option

The 5500-ACC-BKT provides easy installation of the 5500-01 external control unit to an enclosure, with or without 5500-MAN manifold. Mounting hardware is included; control unit and manifold are not included.

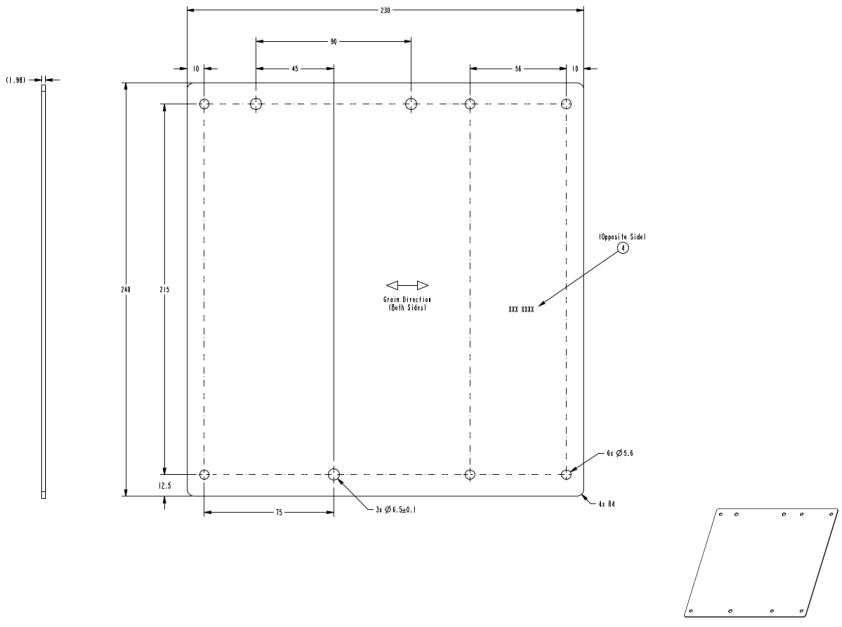
CE

Function

The 5500-ACC-BKT is designed to mount the 5500-01 control unit (with or without an optional 5500-MAN manifold) to the side, top, or bottom of an enclosure, making the control unit visible when viewed directly from the front. The bracket comes with mounting bolts, nuts, and Type 4X/IP66 washers for easy installation. The bracket can be ordered as a standalone mounting device for the 5500-01 control until only, or as a mounting solution for the 5500-01 control unit with the 5500-MAN-CD01, 5500-MAN-EX01, or 5500-MAN-CDUL-01 manifold installed. Control unit and manifold are not included.

Dimensions

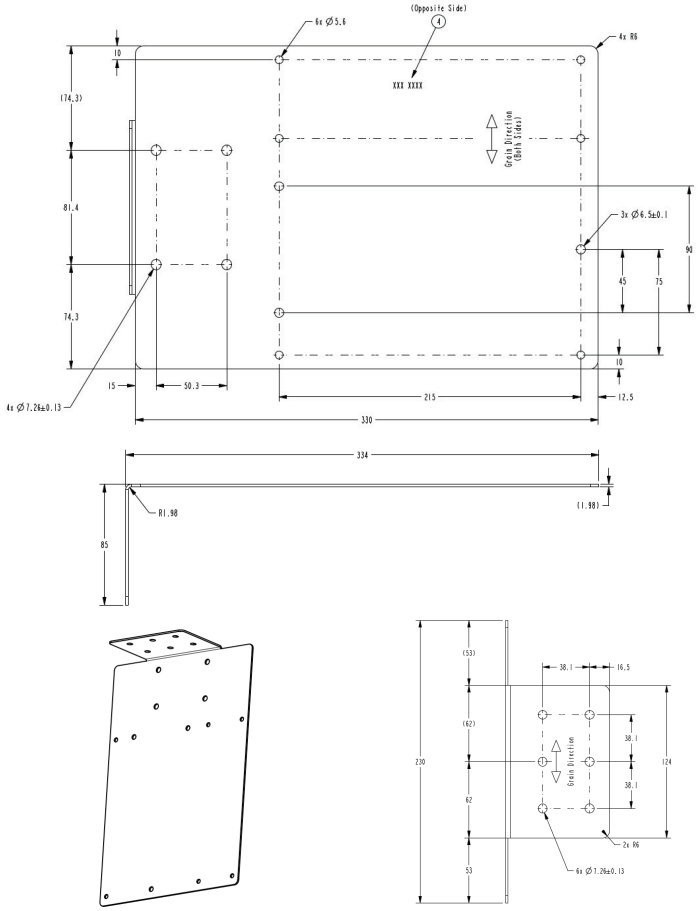
5500-ACC Panel without Manifold Mount



Release date: 2024-03-05 Date of issue: 2024-03-05 Filename: t217786_eng.pdf

Dimensions

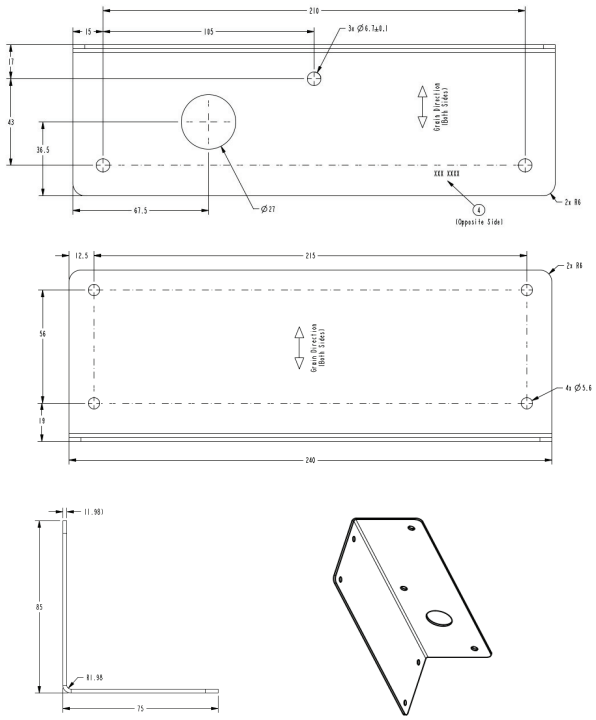
5500-ACC Panel with Manifold Mount



Release date: 2024-03-05 Date of issue: 2024-03-05 Filename: t217786_eng.pdf

Dimensions

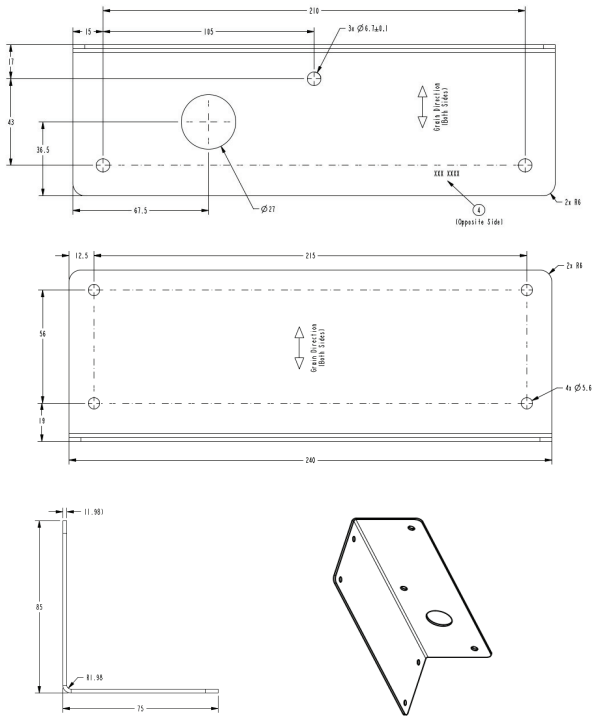
5500-ACC Mounting Bracket
(For use with and without manifold mount)



Release date: 2024-03-05 Date of issue: 2024-03-05 Filename: i217786_eng.pdf

Dimensions

7500-ACC Mounting Bracket
(For use with manifold mount only)



Technical Data

General specifications		
Operating mode		For mounting 5500 control unit to enclosure or back panel
Series		5500
System		Type Z Purge ; Ex pzc Purge
Hazardous environment		gas or dust
Mechanical specifications		
Degree of protection		Mounting type 4X / IP66 (Seeloc washers)
Material		**Bracket:** 316 stainless steel **Panel:** 316 stainless steel Hardware, panel-to-enclosure (Bag 1) **Bolts (3):** 304 stainless steel **Washers (3):** Seeloc by APM Hexseal (P/N 75082 Buna-N) **Nut**: 304 stainless steel Hardware, bracket-to-panel (Bag 2) **Bolts (2):** 304 stainless steel **Washers (2):** Hard fiber **Nuts (2)**: 304 stainless steel
Mass		**5500-ACC-BKT-NM** 1.5 kg **5500-ACC-BKT-YM** 2.6 kg
Dimensions		For **bracket dimensions**, see dimension drawing. Hardware, panel-to-enclosure (Bag 1) **Bolts (3):** ¼ x 20 x ¾" **Washers (3):** 1" (OD); 9.53mm (hole diameter) **Nut**: ¼" Hardware, bracket-to-panel (Bag 2) **Bolts (2):** 5 mm x 12 mm button socket **Washers (2):** No 8 **Nut (2)**: 5 mm nyloc nut
General information		

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Type Code

Structure of the type code

(1)	-	(2)	-	(3)	-	(4)

1	Purge Series
5500	5500 Series

2	Device type
ACC	Accessory

3	Accessory type
BKT	Bracket only

4	Bracket type
NM	No manifold mounting option
YM	Yes manifold mounting option

По вопросам продаж и поддержки обращайтесь:

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