

MiniPurge
Dust Protection
panel mount



MiniPurge
Dust Protection
back panel

Operation

MiniPurge Dust Protection (DP) is a pressurization system used as a protection method for electrical equipment installed within area subject to combustible dust accumulation. When fitted to a suitable enclosure, the system enables regular electrical equipment to be operated safely in a hazardous location.

International standards require that the enclosure is cleaned to remove any accumulated dust within it, prior to operation. Once the enclosure is free of dust, The MiniPurge DP can be started. The system opens the inlet valve to pressurize the enclosure, and then maintains that pressure for normal operation. Once proper pressurization is achieved, the local system indicator changes to GREEN (PRESSURIZED) and the remote output is energised, pneumatic (option: /PO) goes high, volt-free contacts (option: /IS) closed. Failure to achieve pressurization (or loss of pressure in normal operation) changes the local system indicator to RED (ALARM) and the remote output, where used is de-energised.

Components

The system has two components: Control Unit (CU) and Relief Valve (RLV). The Control Unit contains the pneumatic logic to monitor and control air flow and pressure, and provides the system output (pneumatic or volt-free contact closures). The RLV provides over-pressure protection for the enclosure.

MiniPurge Dust Protection Type Z(Y)

Control System for Dust Protection for enclosures

Type Z: Zone 22 - Class II Div 2

Type Y: Zone 21 - Class II Div 1

Features

- + **Simple Order Code**
One model number defines Control Unit (CU) and Relief Valve (RLV)
- + **Control Unit Direct Mounting on Enclosure**
No interconnecting pipework, saving time and money
- + **Compact Size**
Maximum usage of internal space within enclosure
- + **International Approval**
IECEx & ATEX to IEC/EN 61241-4
FM approved to NFPA 496
INMETRO approval to ABNT NBR IEC 60079-2
- + **316L Stainless Steel enclosure and Fitting**
Excellent resistance to corrosion for harsh environments
- + **Clear status indication**
Pneumatic visual indicator on unit (ALARM/ PRESSURIZED)
Volt-free contacts for remote indication

Outputs

The system incorporates a local pneumatic indicator, GREEN for normal pressurization and RED for off or alarm. The external output can be pneumatic (option: /PO) or volt-free contact closure (option: /IS for use with either intrinsically safe or non-incendive circuits (by others).

Accessories

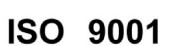
Expo manufactures a range of interface units (MIU series) to provide isolation. For example, the MIU/dA is an external enclosure (Ex d IIC T5) containing a 4-pole contactor for power and a SPCO dry contact for alarm, both driven by the output pneumatic signal. A variety of alternative interface options are available.

Expo also offers additional services, including full enclosure assembly and certification, operator interfaces, a wide variety of standard and custom enclosures, plus a full technical support facility.

MZDP 04-15

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Purge + Pressurization + Innovation
www.expoworldwide.com



TECHNICAL SPECIFICATION

Pressurization Medium: Compressed Air or Inert Gas, Clean and Dry

Supply Pressure: Min 60 psi (4 bar) -Max 115 psi (8 bar)

Temperature Range: -20°C to 55°C, -4°F to 131°F

Alarm Indicators: "Alarm" Red Indicates Low Pressure.
Green Indicates Pressure OK.

Low Pressure Sensor "Alarm" Setting: 1" WC (2.5 mbar)

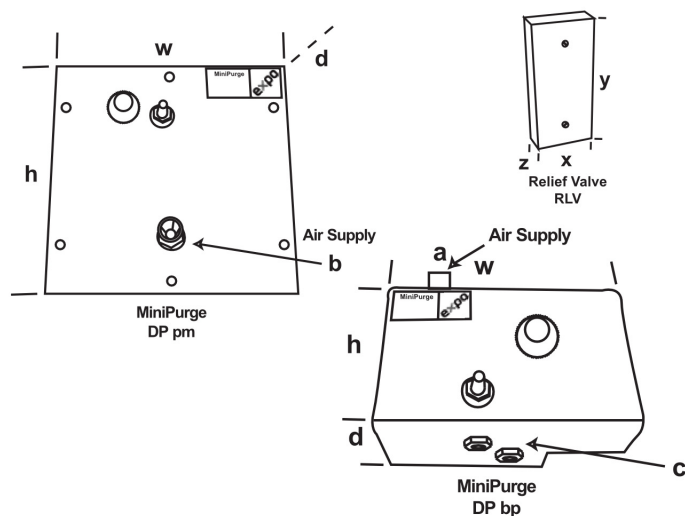
Permissible Enclosure Leakage: 2 scfm (60 NI/min)

Construction Material

Control Unit: 316L Stainless steel mounting plates.

Relief Valve: 316L Stainless steel.

Weight: 5 lb (2.4 kg) approx.



Dimensions/Spec.		1XDP/pm/____		1XDP/bp/____	
Width	w	7.9"	200mm	7.8"	197mm
Height	h	7.9"	200mm	5.0"	127mm
Depth	d	2.4"	62mm	3.1"	79mm
RLV Width	x	2.4"	62mm	2.4"	62mm
RLV Height	y	5.2"	133mm	5.2"	133mm
RLV Depth	z	1.3"	33mm	1.3"	33mm
Fitting Length	a	1.0"	25mm	0.4"	11mm
Fitting NPT	b	1/4"		1/4"	
Signals NPT	c	1/8"		1/8"	

Note on /IS output ('Z' Systems)

I.S. outputs can be connected to Intrinsically Safe or non-incendive circuits, with the panel mount PM option, it can also be connected to general purpose (GP) circuits powered from inside the enclosure.

TECHNICAL DATA

Type Number (example) 07 1 Z DP/bp/IS

Size
1

Certification / Approval

Z North America Class II Division 2
FM 1X8A4.AE
IECEX SIR 07.0027X Ex [p Dc]
Europe ATEX Category 2(3)D
SIRA 01ATEX1295X
INMETRO TÜV 12.1462X Ex [pz Dc]

Y North America Class II Division 1
For protecting Class II Division 2 equipment
FM 1X8A4.AE
IECEX SIR07.0027X Ex [p]
Europe ATEX Category 2(2)D
SIRA 01ATEX1295X
INMETRO TÜV 12.1462X Ex [p]

Pressurization method

DP Dust Protection

Housing

bp Back Plate

pm Panel Mount

Output

IS Intrinsically Safe Output

PO Pneumatic Output

Control Unit:

Panel Mount

Model No:

07 1ZDP/pm/IS or /PO

07 1YDP/pm/IS or /PO

Location of Control Unit:

Side or Front of pressurized enclosure

Back Plate:

Model No:

07 1ZDP/bp/IS or /PO

07 1YDP/bp/IS or /PO

Location of Control Unit:

Top, Side or Bottom of pressurized enclosure.

Warning Label (Loose) for user's calibration details, for mounting the pressurized enclosure.

"Alarm" Remote / Power Outputs:

/IS Dry contacts for switching non-incendive or intrinsically safe circuits. "Alarm" open on loss of pressure.

/PO "Pneumatic Outputs"

"Alarm" OK Main supply 60 psi (4 bar)

Pressure Output "Pressure OK". No Output "Alarm".



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