



Product Data Sheet

(Mini-Y-Purge) Mini-Z-Purge Control System for Leakage Compensation

For enclosures up to

1ZLC/___/___ (1YLC/___/___) 60 cu ft, 1.35 m³

2ZLC/___/___ (2YLC/___/___) 120 cu ft, 2.7 m³

3ZLC/___/___ (3YLC/___/___) 240 cu ft, 5.4 m³

Z-Purge Class I Division 2 Grp A to D, Y-Purge Class I Division 1 Grp A to D

Ex [pz] Ex [py] Ex pD Zone 2 (22) Category 3 GD ATEX



MiniPurge
LC Panel Mount

MiniPurge
LC Back Plate

FEATURES

- + One Model number includes the Control Unit (CU) and Relief Valve (RLV)
- + Simple integrated mounting with little or no piping needed.
- + IECEX , ATEX, FM and cULus approvals covering IEC/EN 60079-2 & NFPA 496.
- + Clear visual status indication.
- + Remote Alarm contacts.

OPERATION

For purged enclosures in Class I Division 2 Gp A-D, Zone 2 IIC Ex [pz] Ex [py] and Zone 22 Ex pD.

The Leakage Compensation (LC) Pressurizing system has an initial High Purge Flow rate to remove the gasses which may be present when the purged enclosure is initially closed. The high purge rate is initiated manually.

When the purge is turned off a small amount of air flow maintains the enclosure pressure. This compensates for leaks, conserving compressed air.

Typical Enclosure Size:

60 ft³ (1.35 m³) @ 8 scfm = 225 NI/min
120 ft³ (2.70 m³) @ 16 scfm = 450 NI/min
240 ft³ (5.40 m³) @ 32 scfm = 900 NI/min

Note: Enclosure sizes are based on 30-minute purge period. There is no restriction on this purge period.

COMPONENTS

The system has two components. The Control Unit controls air flow and monitors flow and pressure. The Relief Valve (RLV) allows the flow of purge gas and provides the measurement of the flow through the enclosure then closes at the end of purging. Preferred options are Panel Mount and Back Plate option. Panel Mount fits directly on the enclosure with minimum external space. Back Plate mounts either directly onto the outside of or remote from the enclosure.

COMMON SPECIFICATION

The Control Unit:

Purge Medium: Compressed Air or Inert Gas, clean, dry & free of flammable gasses.

Supply Pressure: 60 psi (4 bar)

Maximum Working Pressure: 115 psi (8 bar)

Supply Pipe: Model # 1 & 2 - 1/2" (15mm) O/D, Model # 3 - 3/4" (20mm). Max. Length: 20ft (6 meters).

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

Manual Purge flow On/off Lever

Relief Valve (RLV):

Magnetic operation (patented) with integral spark arrestor.

Opening pressure 4" WC, 1kPa, 10 mbar.

Purge Flow Sensor: 8 scfm (225 NI/min), 16 scfm (450 NI/min), 32 scfm (900 NI/min). 1/4" (6mm) pipe required between Control Unit and RLV, to be installed internal to the purged enclosure.

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

Low Pressure Sensor "Alarm": setting 0.2" wc (0.5 mbar)

"Purge Flow" Yellow indicates purge flow through the enclosure.

Permissible enclosure leakage: 2 scfm (60 NI/min)

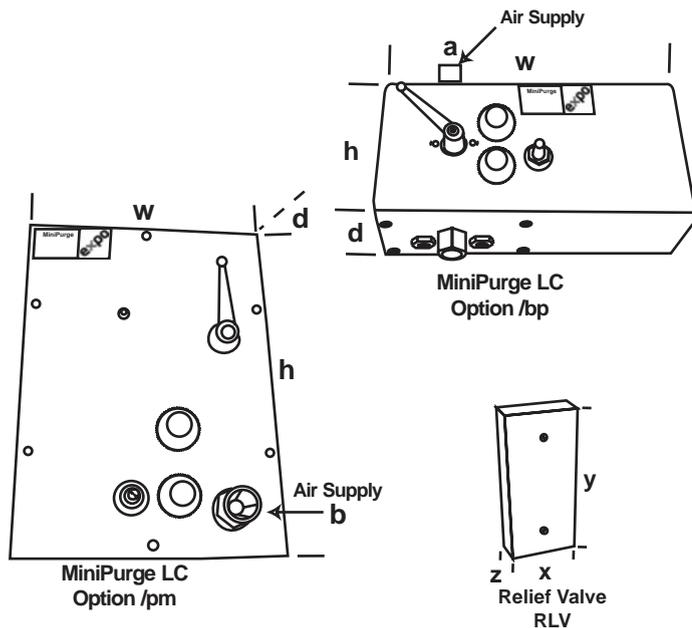
Materials of construction:

Control Unit: 316L stainless steel mounting plate.

Relief Valve: 316L stainless steel.

Technical Specification

Mini-Z-Purge Mini-Y-Purge
1ZLC/___/___, 2ZLC/___/___, 3ZLC/___/___
1YLC/___/___, 2YLC/___/___, 3YLC/___/___



Dimensions Control Unit	_ZLC/pm/_ _YLC/pm/_		_ZLC/bp/_ _YLC/bp/_	
Width w	7.9"	200mm	10.1"	257mm
Height h	10.9"	275mm	5.0"	127mm
Depth d	3.9"	98mm	3.1"	78mm
Signals	1/8" NPT(F)		1/8" NPT(F)	
Purge fit. length	1.0"	25mm	0.4"	11mm
Purge Inlet a	1/2" NPT(F)		3/8" NPT(F)	
Dimensions Relief Valve	1ZLC/pm/ 1ZLC/bp/ RLV25	2ZLC/pm/ 2ZLC/bp/ RLV36	3ZLC/pm/ 3ZLC/bp/ RLV52	
RLV Width x	2.4"	62mm	3.5"	88mm
RLV Height y	5.2"	133mm	6.7"	170mm
RLV Depth z	1.3"	33mm	1.5"	38mm
Weight	7lb	3kg	9lb	4kg
			11lb	5kg

Note on IS Output (Type Z and Ex pz Only)

IS output 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) circuit powered from inside the enclosure.

COMMON SPECIFICATION

Control Unit:

Panel Mount:

Model No. 1, 2 or 3ZLC/pm/IS or /PO

Model No. 1, 2 or 3YLC/pm/IS or /PO

Control Unit Location: Side or Front of purge enclosure.

Back Plate:

Model No. 1, 2 or 3ZLC/bp/IS or /PO

Model No. 1, 2 or 3YLC/bp/IS or /PO

Control Unit Location: Top, Side or Bottom of purge enclosure.

Warning Label: (loose) for User's calibration details, for mounting to purged enclosure.

"Alarm" Remote options:-

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

/PO "Pneumatic Output"

"Alarm Output" Main supply 60 psi / 4 bar

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

OPERATION

Type Number (example)

07 1 Z LC/bp/IS

Size

1 Purge flow rate 8scfm, 225 NI/min

2 Purge flow rate 16scfm, 450 NI/min

3 Purge flow rate 32scfm, 900 NI/min

Certification / Approval

Z North America Class I Division 2

FM 1X8a4AE, cUL E190061

IECEX SIR07.0027X Ex [pz] Ex pD

Europe ATEX Category 3 G D

SIRA 01ATEX1295X Ex [pz] Ex pD

Y North America Class I Division 1

For protecting Class I Division 2 equipment

FM 1X8a4AE, cUL E190061

IECEX SIR07.0027X Ex [py] Ex pD

Europe ATEX Category 3 G D

SIRA 01ATEX1295X Ex [py] Ex pD

Pressurization method

LC Leakage Compensation

Housing

bp Back Plate

pm Panel Mount

Output

IS Intrinsically Safe Output

PO Pneumatic Output

