



Product Data Sheet

**IECEX
& ATEX
Certified!**

Mini-Z-Purge Control System for Continuous Flow

For enclosures up to
1ZCF/___/___ 17 cu ft, 0.39 m³
Z-Purge Class I Division 2

Ex [pz] Zone 2(22) IECEX Category 3 G D ATEX

Mini-Y- Purge 1YCF/___/___ 17 cu ft, 0.39 m³

Y-Purge Class I Division 1 Groups A, B, C & D

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



MiniPurge
CF panel mount

MiniPurge
CF back plate

OPERATION

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

The initial purge flow removes the gasses, which may be present in the area when the enclosure is closed. After the purge cycle has been completed it continues to maintain pressurization. For enclosures with an internal source of flammable gas or vapor release, the continuous flow can be set to reduce the concentration below 25% of the LFL (LEL). Reference must be made to IEC/EN 60079-2 or NFPA 496 Standards before applying.

The Continuous Flow (CF) Pressurizing system is designed for small to medium size purged enclosures. Typical Enclosure Size: 17 cu ft (0.39 m³) @ 3.2 scfm = 90 NI/min
Note: Enclosure sizes are based on 30-minute purge period. There is no restriction on this purge period.

COMPONENTS

The system has three components. The Control Unit controls air flow and monitors flow and pressure. The Spark Arrestor Unit (SAU) provides a protected fixed measuring orifice to measure flow through the enclosure. The Relief Valve (RLV) provides over-pressure protection for the enclosure. 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.

FEATURES

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

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)

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

Supply Inlet 1/4 NPT(F): Connected with 1/2" (12mm) O/D [Min. 3/8" (10mm) I/D] pipe. 33ft (10 meter) Max Length

Relief Valve RLV25 (Full 1" bore)

Magnetic operation (patented) with integral spark arrestor. Opening pressure 1kPa, 10 mbar, 4" wc

Spark Arrestor Unit - SAU25

User Selectable: supplied with 8 orifice plates for Purge Flows of: **0.4, 0.9, 1.4, 2.3, 3.2, 4.8, 6.4 or 8.0 scfm**
(NI/min: 10, 25, 40, 65, 90, 135, 180, or 225)

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)

Materials of Construction

Control Unit: 316L stainless steel mounting plate.

Spark Arrestor Unit: 316L stainless steel

Relief Valve: 316L stainless steel.

Weight: 5 lb (2.4kg) approx

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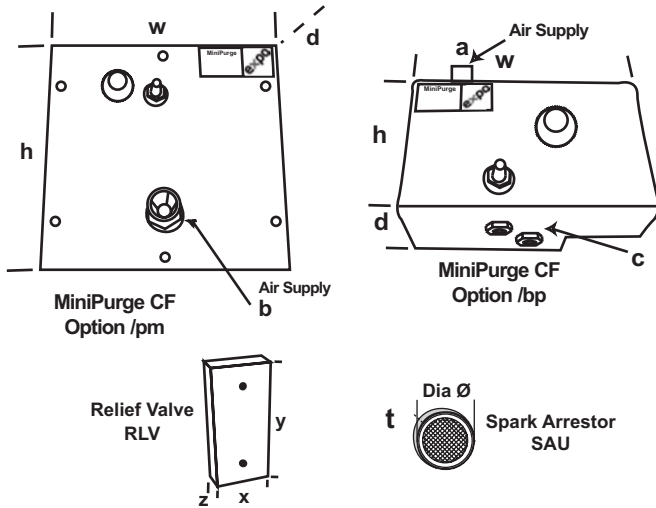


Technical Specification

Mini-Z-Purge Mini-Y-Purge

1ZCF/___/___ 17 cu ft, 0.39 m³

1YCF/___/___ 17 cu ft, 0.39 m³



Dimensions/Spec.		1ZCF/pm/___ 1YCF/pm/___		1ZCF/bp/___ 1YCF/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"	
SAU Diameter	Ø	2.2"	55mm	2.2"	55mm
SAU Depth	t	1.4"	35mm	1.4"	35mm

Selection of Orifice Plate				
Orifice Plate #	Purge Flow		Enclosure Volume	
	scfm	NI/min	ft ³ (4 VC*)	m ³ (5 VC*)
1	0.4	10	3.0	0.06
2	0.9	25	8.3	0.15
3	1.4	40	10.5	0.24
4	2.3	65	17.2	0.39
5	3.2	90	24	0.54
6	4.8	135	36	0.81
7	6.4	180	48	1.08
8	8.0	225	60	1.35

*VC = Volume Changes (based on 30 minute purge time)

COMMON SPECIFICATION

Panel Mount

Model No. 1ZCF/pm/IS or /PO

Model No. 1YCF/pm/IS or /PO

Control Unit Location: Side or Front of purge enclosure

Back Plate

Model No. 1ZCF/bp/IS or /PO

Model No. 1YCF/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 Output options:

/PO Pneumatic output"

"Alarm Output" Main supply 60 psi / 4 bar

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

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

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.

OPERATION

Type Number (example)

07 1 Z CF/bp/IS

Size

1 Purge flow rate 8scfm, 225 NI/min

Certification / Approval

Z North America Class I Division 2
FM 1X8a4AE, cUL E190061
IECEX SIR 07.0027X Ex [pz] Ex pD
Europe ATEX Category 3 GD
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 SIR 07.0027X Ex [py] Ex pD
Europe ATEX Category 3 GD
SIRA 01ATEX1295X Ex [py] Ex pD

Pressurization method

CF Continuous flow

Housing

bp Back Plate

pm Panel Mount

Output

IS Intrinsically Safe Output

PO Pneumatic Output

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