

Purge and Pressurization Systems



Purge and Pressurization is a protection method used with Type 4, 4X and 12 (IP54 recommended minimum) enclosures. The enclosure is initially purged to remove any internal explosive gases or dust. Once this is accomplished, the enclosure is pressurized with a protective air or inert gas supply. This provides a positive internal enclosure pressure which keeps any external explosive gases or dust from entering the enclosure. The two methods of purge and pressurization offered are Leak Compensation and Continuous Flow.

Leak Compensation maintains positive pressure by compensating for losses. System consists of Control Unit and Relief Valve. Certification Type Y and Z models:

- Flush (internal) or external mount models
- Local visual alarm indicator and dry contact output for remote alarm
- Typically recommended for enclosures with volume of 60 Ft³ or less.

Certification Type X Model:

- Provides power disconnect when pressurization is lost or not attained
- Provides automatic purge process
- External mount
- Local visual alarm indicator and dry contact output for remote alarm
- Typically recommended for enclosures with volume of 60 Ft³ or less.

Continuous Flow provides positive pressure via continuous protective air flow through the enclosure. System consists of Control Unit, Calibrated Outlet Orifice and Relief Valve. Certification Type Y and Z Models:

- Flush (internal) or external mount models
- Local visual alarm indicator and dry contact output for remote alarm
- Typically recommended for enclosures with volume of 17 Ft³ or less

INDUSTRY STANDARDS

Type X

Ex [px] Ex [p]

IECEX SIR.0019X [Gb, Db]

Europe, ATEX Category 2 GD

Cert no Sira 14ATEX1045X

USA/Canada NFPA496 CI I Div 1 Groups A, B, C & D

UL E466718

Type Y

Ex [py] Ex [p]

IECEX SIR.0019X [Gb, Db]

Europe, ATEX Category 2 GD

Cert no Sira 14ATEX1045X

North America CI I Div 1 Groups A, B, C & D

For protecting CI I Div 2 equipment

UL E466718

Type Z

Ex [pz] Ex [p]

IECEX SIR.0019X [Gc, Dc]

Europe, ATEX Category 3 GD

Cert no Sira 14ATEX1045X

North America CI I Div 2 Groups A, B, C & D

UL E466718

FEATURES

All exterior components are 316 stainless steel or corrosion-resistant composite

Space-saving flush or exterior mounted models available

Local visual indicators provide system status

Leak compensation models are equipped with rapid purge valve and visual purge status indicator

All models utilize dry, clean inert gas supply of 60 PSI (4 bar) to 115 PSI (8 bar)

Ambient operating temperature -4°F (-20°C) to 131°F (55°C)

Type X models provide automatic purge cycle and 4PNO/20A/440VAC power contactor with 115 VAC or 230 VAC coil

Material: Stainless Steel 316L

Finish: Brushed

SPECIFICATIONS

Catalog Number	Article Number	Thickness	Operation Type	Mounting	Certification Details
PCFB1YZ 	27146	3.18mm	Continuous Flow	Exterior	Type Y, Type Z
PCFF1YZ	27145	3.18mm	Continuous Flow	Flush	Type Y, Type Z
PCFSKIT	27332				
PLCB1YZ 	27144	3.18mm	Leak Compensation	Exterior	
PLCF1YZ 	27143	3.18mm	Leak Compensation	Flush	Type Y, Type Z
PLCS1X1	27147	3.18mm	Leak Compensation	Exterior	Type X
PLCS1X2	27326	3.18mm	Leak Compensation	Exterior	Type X
PLCSKIT	27148				

ADDITIONAL PRODUCT DETAILS

For all IEC and ATEC applications, the final or complete integrated assembly must be submitted to a notified body for certification.

See Specification Sheet for Purge and Pressurization Systems and Certifications table.

WARNING

nVent products shall be installed and used only as indicated in nVent's product instruction sheets and training materials. Instruction sheets are available at www.nvent.com and from your nVent customer service representative. Improper installation, misuse, misapplication or other failure to completely follow nVent's instructions and warnings may cause product malfunction, property damage, serious bodily injury and death and/or void your warranty.



©2026 nVent. All nVent marks and logos are owned or licensed by nVent Services GmbH or its affiliates. All other trademarks are the property of their respective owners. nVent reserves the right to change specifications without notice.

This document is system-generated.