



Product Data Sheet

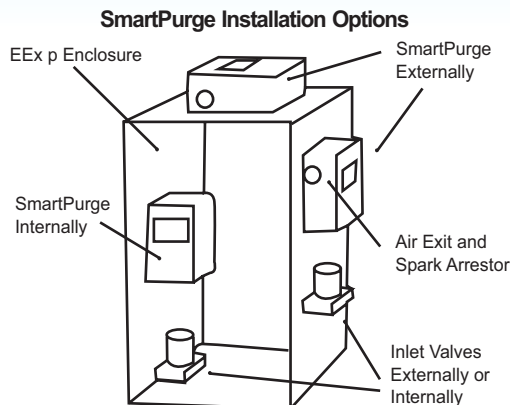
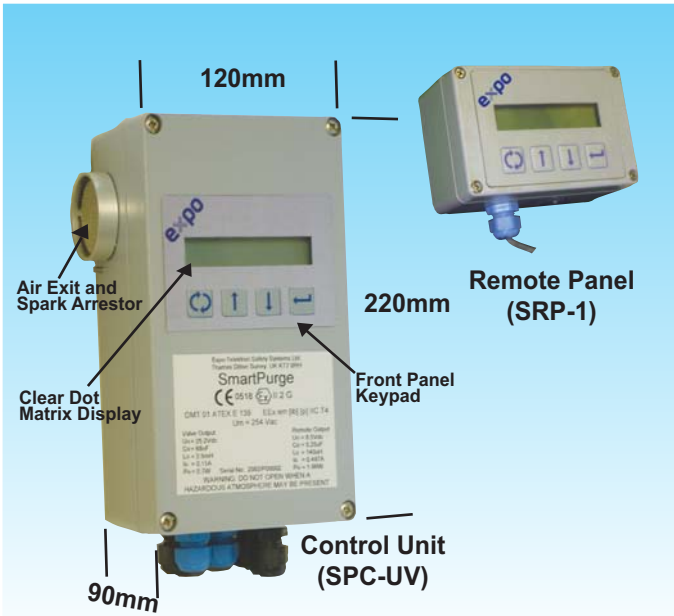
SmartPurge

ATEX Certified Intelligent Purge and Pressurization System

SPC-UV

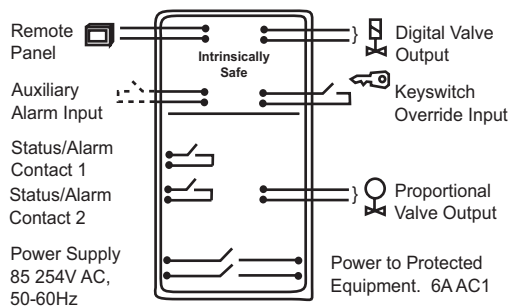
Enclosure sizes up to 3.6m³

Zone 1, II 2G T4 EEx p II



Equipment positions shown are representative only.

SmartPurge Connection Diagram



FEATURES

- + Purges enclosures up to 3.6 m³ (127 cu ft) in under 30 minutes purge time.
- + High maximum air flow capacity of 600 NI/min.
- + Compact and easy to install.
- + Mounting position: side, top, external or internal to pressurized enclosure.
- + ATEX certified [EEx p] to EN 50016 and IEC 61508.
- + A single control system for Leakage Compensation or Continuous Flow using either a digital or proportional valve.
- + Easy to program for maximum flexibility. User selectable over three purge flow ranges.
- + Universal power supply: 85-254V AC.
- + Accessible front Panel Keypad enables set-up in the hazardous location.
- + Clear Matrix Display for status indication and set-up.
- + 2 selectable Alarms incorporated.
- + Auxiliary inputs for Override Keyswitch, Door Switch or Intermediate Pressure Switch.
- + Optional Remote Keypad and Display duplicates ALL functions of front panel.
- + Patented magnetic Relief Valves.

OVERVIEW

The SmartPurge Control System allows general-purpose electrical apparatus to be located safely in a Hazardous Location. A Hazardous Location is where there is a presence of ignitable gases, liquids or dusts and has been classified as hazardous/explosive. The SmartPurge ensures effective purging of the enclosure and contents before power can be applied. Compressed air or inert gas can be used as the purge medium. The microprocessor based unit incorporates multi language menu (En, D, F, I, N, E)

Accessories:

The SmartPurge can be combined with the accessories shown overleaf to give a fully functional purge and pressurization system.

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ATEX

ISO 9001

Technical Specification SmartPurge

SPECIFICATION

SmartPurge System Specifications

Order Code: SPC-UV

Purge Flow Range

100 NI/min to 600 NI/min
(Below 100 NI/min for CF systems only to special order)

Maximum Purge Time

99 minutes

Power Switching

2 pole 6A AC1, 250V 5A dc1, 30V

Supply Voltage

85 to 254V AC. 50 to 60 Hz (10VA).

Factory option: (11-28V DC) Order Code: SPC-LV

Low Pressure Trip Options

Immediate trip. Alarm only. Delay trip
(Maximum delay time: 99 minutes)


Status/Alarm Function

Choice of two (SPNO) for Alarm: General Alarm,
Pressure correct/Not correct, Low Pressure Pre-Alarm,
Purge in Progress, Ready to Purge

Alarm/Status

Two single pole 3A, 250V

Certification

DMT 01ATEXE 139. CE 0518  II 2 G
ATEX II 2 G EEx em [ib] [p] IIC T4

Enclosure Pressure

0.8 to 7 mbarg after purge.

Relief Valve Opening Pressure

10 mbarg (+0/-2). Test Pressure 18 mbarg

Control Valve Outputs

IS digital solenoid valve, non-IS proportional EEx valve

Purge Override

Password or IS Keypad

External Control Input

IS Volt Free Contact (Override Keypad, Door Switch,
Pressure Switch, Start Purge switch)

Environmental Protection

IP65 aluminum enclosure, color: RAL 7001 (gray)

Mounting Position

Side or top, external or internal

Control Unit Dimensions

200 x 120 x 90mm (7.9" x 4.7" x 3.5") 20mm
clearance for air exit and spark arrestor

Temperature Range

-10 to +40°C

| | | | |
|---------------|---------------------|--------|--------------|
| Weight | SmartPurge | 3.0 kg | 6.5lb approx |
| | Remote Panel | 0.5 kg | 1.0lb approx |

STATUS INDICATION LAMP

Intrinsically Safe device giving simple remote indication of the purge system status.

Red: Pressure Fault
Flashing: Low Purge Flow
Amber: Purge in Progress
Green: Purge Complete

Stainless steel bezel mounts in 22mm diameter hole.
2 meter attached I.S. cable

Order Code: SRL-1

AIR SUPPLY one of the following needs to be chosen



Air Supply for Leakage Compensation Systems Intrinsic Safe Digital Valve for the control of Leakage Compensation and Continuous Flow systems. It is independent of the SmartPurge supply voltage and therefore ideally suited for use on products supplied to global markets.

| Supply Pressure | Flow Rate | Order Code |
|-----------------|----------------|------------|
| 2-7 bar | 100-600 NI/min | SDV-1 |



Proportional Control Valve for the automatic control of the flow rate, both during purge and Leakage Compensation. Choose the appropriate valve for the desired flow rate, and then choose the appropriate supply voltage.

| Supply Pressure | 1-4 bar | 1-7 bar |
|------------------|------------------|------------------|
| Flow Rate | Up to 300 NI/min | Up to 600 NI/min |
| 24V | SPV-1-24 | SPV-2-24 |
| 110V | SPV-1-110 | SPV-2-110 |
| 230V | SPV-1-230 | SPV-2-230 |

Air Supply for Continuous Flow Systems

When high purge and Continuous Flow (CF) is required, the above Leakage Compensation options should be used. For CF systems, when the air flow rate is the same both during and after purging, a simple air supply set can be used.

Order Code: SCF-225

ACCESSORIES

Remote Panel

Duplicates the operation and status of the SmartPurge system. It is Intrinsically Safe and can operate up to 50 meters from the main Control Unit. The Remote Panel has an LCD and 4 menu navigation buttons, and duplicates all the functions of the Control Unit. This includes a 'Password' override function.

Order Code: SRP-1

Override Switch

Intrinsically Safe Key operated override switch for panel mounting.

Order Code: SMO-1

SmartPurge Interface Unit

For switching higher loads or additional signals, Interface Units are available.

Expo Technology is the leading manufacturer of Purge and Pressurization equipment conforming to International Standards. The range includes systems for Small Electronic Enclosures, Large Electrical Cabinets, Analytical Instruments and full Ex p for Large Electric Machines. Expo Technology also manufacture Intrinsically Safe, Increased Safety, Flameproof and Non Incendive equipment for hazardous areas. With full design, and consultancy facilities Expo can undertake special projects and backs up it manufacture with qualified specialists who can undertake installation, maintenance and commissioning. Please contact one of our sales offices to discuss your hazardous area protection projects.

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