

Motor Pressurization System



Operation

The Motor Purging and Pressurization control system has been designed for use on large electrical machines located in a hazardous location.

The system delivers a high purge rate for a given duration (as defined by machine designer and Notified Body) prior to start-up, to purge any potentially explosive gases from the machine. After purge, the system automatically switches to leakage compensation mode for normal operation. The Closed Loop Automatic Pressurization System (CLAPS) automatically compensate for pressure variations in the machine during start-up or through temperature variations during operation. The system enables the machine to continuously operate at a set over-pressure, saving considerable time during test and commissioning, and

Components

The system comprises the Control Unit (CU) and the Relief Valve (RLV). The Control Unit contains the pneumatic logic to monitor & control air flow, pressure and purge timing, and provides the system outputs. The RLV measures purge flow at the outlet and provides over-pressure protection for the machine through a patented magnetically-set exhaust valve with integrated spark arrestor.

The system outputs are volt-free contact closures terminated inside an Ex e junction box.

IECEX, ATEX & INMETRO Certified Purging and Pressurization System for Large Electrical Machines.

D808 MOTOR SYSTEMS

Features

- + **Simple Order Code**
One model number defines Control Unit (CU) and Relief Valve (RLV)
- + **User Selectable Settings(* default)**
5 pre-set selectable purge flow rates
(7000/8000/10000/12000/14000 NI/min)
1-99* minute purge time (-0/+3 sec. tolerance)
Suits a wide variety of machine frames sizes
- + **Clear Visual Status Indication**
Local indicators for "Alarm/Pressurized", "Intermediate Low Pressure" and "Purging"
- + **Continuous Operation through Closed Loop Automatic Pressurization System (CLAPS)**
Eliminates spurious trips on start-up or load change
- + **316L Stainless Steel enclosure & fittings**
Excellent resistance to corrosion for harsh environments
- + **Full Compliance with Standards**
Direct purge flow measurement at Relief Valve exhaust orifice
- + **Global Approvals**
IECEX & ATEX certified Ex [pxb] to IEC/EN 60079-2 for gas and dust applications.
INMETRO certified Ex [pxb] to ABNT NBR IEC 60079-2, for gas and dust applications.

Explosion Protection

Hazardous Area classification:

IECEX, INMETRO Zone 1, Group IIC T6 Gb
IECEX, INMETRO Zone 21, Group IIIC T95°C Db

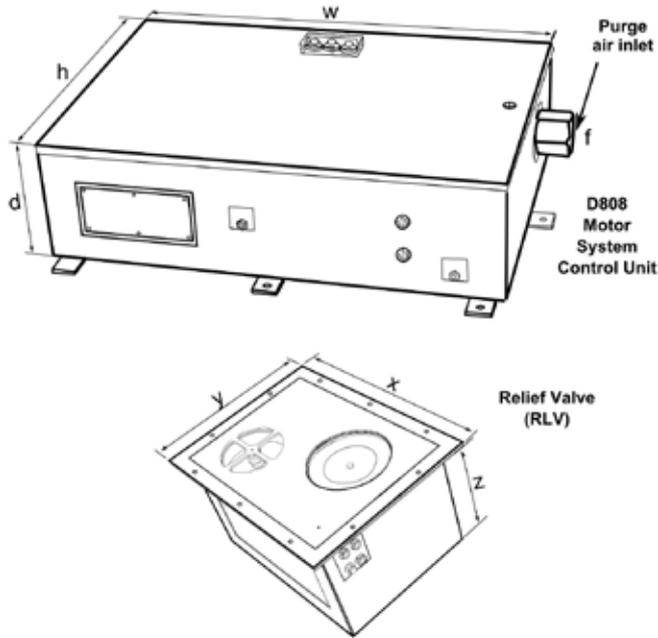
ATEX Category 2 G, Zone 1, Group IIC T6 Gb
ATEX Category 2 D, Zone 21, Group IIIC T95°C Db

Ambient Temperature: -20°C to +55°C (4°F to 131°F)

MPSD808 06-16



TECHNICAL SPECIFICATION



Dimensions/Spec.		D808	
Width	w	41.3"	1050mm
Height	h	29.5"	750mm
Depth	d	10.3"	262mm
Fitting	f	2" NPT (F)	
CU Weight		70kg	154lb
RLV Width	x	21.26"	540mm
RLV Height	y	16.14"	410mm
RLV Depth	z	11.8"	292mm
RLV Weight		23 kg	5lb

Enclosure & Mounting:

Wall mounting lugs & spacer provided for fitting to machine.

Process Connections:

Purge Supply: 2" NPT (F). Minimum

Supply Line: 50mm (2") I.D.

Reference points & signals: 1/8" NPT (F)

Compressed Air Supply: Clean Dry Air or Inert Gas.

Supply Pressure: Min 4.2barg, Max 8barg.

Supply inlet filter 50 μ and regulator fitted.

Minimum supply pressure to be maintained during purge.

TECHNICAL DATA

Order Code: D808MOTORSYS-E

Description: 7XLC/ss/ET/OV/PA/PC/D808

Purge flow rate, user selectable to:

7,000 to 14,000 NI/min.

Leakage Compensation Capacity: Up to 5,100 NI/min @ 4.2 barg inlet pressure.

Intrinsically safe Electronic Timer, range 1-99 mins. battery powered

System outputs are volt-free contact closures terminated on Ex e Junction Box, with:

Power = 250 Vac 4 Amp (AC15) DPNO Ex d IIC T6

Alarm = 250 Vac 4 Amp (AC15) SPCO Ex d IIC T6

Intermediate Pressure/Pre-alarm = 250 Vac 4 Amp

(AC15) SPCO Ex d IIC T6

Minimum pressure sensor default set at 1.5 mbarg

Range: 1.5 to 5 mbarg

Intermediate sensor/pre-alarm default set at 4 mbarg

Range: 3 to 6 mbarg

CLAPS sensor default set at 10 mbarg

Range: 10 mbarg to 15 mbarg

Certification/Approval:

IECEX Zone 1 Ex [pxb] ia IIC T6 Gb

IECEX Zone 21 Ex [pxb] ia IIIC T95°C Db

ATEX II 2(2) G Ex [pxb] ia IIC T6 Gb

ATEX II 2(2) D Ex [pxb] ia IIIC T95°C Db

INMETRO/TUV Zone 1 Ex [pxb] ia IIC T6 Gb

INMETRO/TUV Zone 21 Ex [pxb] ia IIIC T95°C Db

Relief Valve Lift-Off pressure setting: default 30mbarg

Minimum: 20mbarg, Maximum: 35mbarg

OPTIONS

+ Output kit for system purge in progress for D808

Order Code: KMP-1SP0-006

+ Output kit for high pressure switch for D808

Order Code: KMP-1SP0-007

+ Secondary low pressure switch for D808 system

Order Code: KMP-1SP0-011