



Control Unit



Relief Valve

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.

Motor Pressurization System

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 [px] to IEC/EN 60079-2.
IECEX & ATEX certified Ex [p] to IEC/EN 61241-4 for dust applications.
INMETRO certified Ex [px] & Ex [p] to ABNT NBR IEC 60079-2.

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)

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Expo Technologies Ltd.
Unit 2 The Summit, Hanworth Road,
Sunbury on Thames, TW16 5DB. UK
T: +44 (0) 20 8398 8011
E: sales@expoworldwide.com

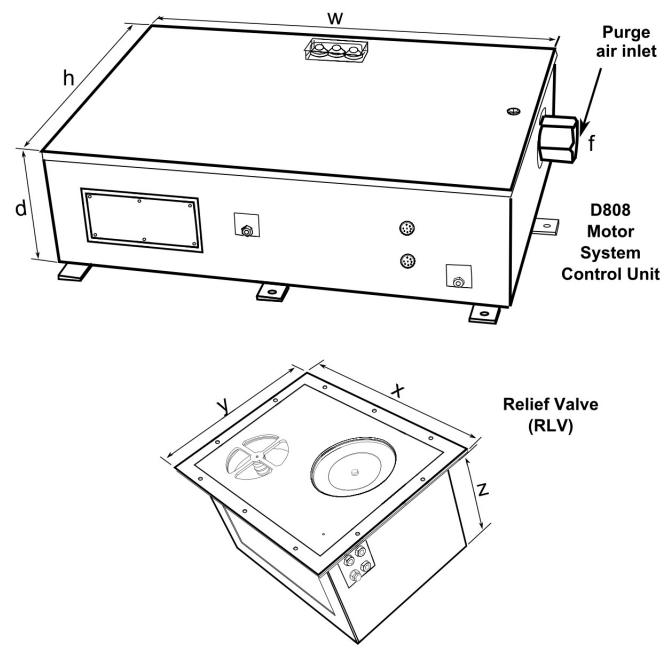
Expo Technologies Inc.
9140 Ravenna Road Unit #3
Twinsburg, OH 44087. USA
T: +1 (440) 247 5314
E: sales.na@expoworldwide.com



Purge + Pressurization + Innovation
www.expoworldwide.com



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 50µ 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 [px] ia IIC T6 Gb
IECEX Zone 21 Ex [p] ia IIIC T95°C Db
ATEX II 2(2) G Ex [px] ia IIC T6 Gb
ATEX II 2(2) D Ex [p] ia IIIC T95°C Db
INMETRO/TUV Zone 1 Ex [px] ia IIC T6 Gb

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



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