



CERTIFICATE FOR CHINA COMPULSORY PRODUCT CERTIFICATION

No.: 2020312304000830

Applicant EXPO Technologies Ltd
Address Unit 2, The Summit, Hanworth Road, Sunbury on Thames Surrey TW16 5DB, United Kingdom
Manufacturer EXPO Technologies Ltd
Address Unit 2, The Summit, Hanworth Road, Sunbury on Thames Surrey TW16 5DB, United Kingdom
Production Factory EXPO Technologies Ltd
Production Address Unit 2, The Summit, Hanworth Road, Sunbury on Thames Surrey TW16 5DB, United Kingdom
Product MiniPurge Purge Controller
Model/Type 1XLC cs DS SS AA MO FM OA TW
Ex marking See Annex
Reference Standards GB3836.1-2010, GB/T3836.5-2017, GB12476.1-2013, GB12476.7-2010

Certification mode Type Test + Initial Factory Inspection + Post-Certification Surveillance

The product(s) is verified and certified according to CNCA-C23-01: 2019 *China Compulsory Certification Implementation Rule on Explosion Protected Electrical Product* and CNEC-C2301-2019 *Guideline of China Compulsory Certification Implementation Rule on Explosion Protected Electrical Product*.

See Annex for the detailed product information (6 pages).

Issued on: 2020-11-04

Valid to: 2025-11-03

The validity of this certificate is maintained through the regular supervision of the issuing authority during the validity period.

Where any discrepancy arises between the English translation and the original Chinese version, the Chinese version shall prevail.

Director:



Nanyang Explosion Protected Electrical Apparatus Research Institute Co.,Ltd.



<http://www.ccc-cnex.com>
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CN 0000298



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Product information:

1. This certificate covers the following models:

- 1XLC cs DS SS AA MO FM OA TW

Nomenclature:

1	X	LC	cs	DS SS AA MO FM OA TW
a	b	cc	mm	Option codes

Model Number Designation for approved MiniPurge systems	
a	Size or Capacity Option codes (Added only if used)
1	MiniPurge with Purge Flow Capacity up to 225 NL/min
2	MiniPurge with Purge Flow Capacity up to 450 NL/min
3	MiniPurge with Purge Flow Capacity up to 900 NL/min
4	MiniPurge with Purge Flow Capacity up to 2000 NL/min
5	MiniPurge with Purge Flow Capacity up to 6000 NL/min
6	MiniPurge with Purge Flow Capacity up to 8000 NL/min
7	MiniPurge with Purge Flow Capacity above 8000 NL/min
b	Pressurization Type
X	X Pressurization
Y	Y Pressurization
Z	Z Pressurization
cc	Action after initial purging
LC	Leakage Compensation only after initial High Purge
CF	Continuous Flow (same flow rate during and after purging)
CF2	Two Flow CF system with initial High Purge rate but only one orifice
CFHP	Continuous (lower) Flow after initial High Purge

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DP	Dust Protection (pressurization only)
mm	Material of the Control Unit Enclosure
al	Aluminium alloy
cs	Mild steel, painted
ss	Stainless steel
bp	Back plate only
co	Chassis only
pm	Panel mounting
nm	Non-metallic
Option codes (Added only if used)	
AA	Active Alarm output fitted
AC	Alarm cancellation circuit
AO	"Alarm Only Action" on Pressure or Flow Failure
AS	Alarm "Action on Pressure or Flow failure", Selector valve
CS	Containment System Monitor
DS	Door Switch Power Interlock fitted
DT	Delayed Trip after Pressure or Flow failure
ES	Electronic Timer with EPPS
ET	Electronic Timer (not EPPS option)
FM	Flow Meter(s) fitted
H6	High Temperature Tamb -20°C to +60°C, Air Supply Max Temp +60°C
H7	High Temperature Tamb -20°C to +60°C, Air Supply Max Temp +70°C
HP	System LC or CF with High Pressure Sensor
IS	Internal Switches suitable for Ex i circuits
LS	Local Sensing
LT	Low Temperature

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MO	Manual Override fitted
MT	Mechanical Purge or Delay timer
OA	On/Off switch controlling Protective gas and logic supply
OB	On/Off switch controlling logic supply only
OC	On/Off switch controlling Protective gas supply only
OS	Outlet (Orifice) Selector valve
OV	Outlet valve, pneumatically operated
PA	"Ex" switch(es) built-in, with/without "Ex" junction box
PC	PE Pressure Control Leakage Compensation Valve (CLAPS System)
PO	Pneumatic Output signals for Power and Alarm control
SP	Secondary Pressurization supply options
SS	Separate Supply for Protective gas and Logic air
TW	Twin (or more) outputs for two or more separate pressurized enclosures purged in parallel
DXXX	Special design for specific flow rates, or other non-certification related options

Relief Valve - The MiniPurge controller is supplied with an optional overpressure relief valve, which is to be fitted to the Ex p protected apparatus to prevent an internal overpressure above the maximum overpressure rating of the apparatus. There are 14 models of relief valve; the designation of each relief valve refers to its nominal bore in mm, as follows: RLV3, RLV6, RLV9, RLV12, RLV19, RLV25, RLV26, RLV52, RLV36, RLV75, RLV104, RLV125, RLV150 and RLV200;

The outlet of each relief valve is fitted with a spark arrestor, of which there are four optional types:

- ① Metal foam
- ② Tortuous path with at least 4 x 90° or 2 x 180° bends
- ③ Multi-layer stainless steel mesh

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④ Knitted mesh

Outlet Orifice - Three types of orifice are used:

- ① Threaded Orifices e.g. 1/4" NPT or 2" BSP with a built in spark arrester. These are selected to maintain a desired back pressure within the Ex p protected apparatus when used with the Continuous Flow options. The designation of each outlet orifice indicates the nominal inlet diameter. The designations are as follows: SA3, SA6, SA9, SA12, SA19, SA25, SA32, SA38 and SA50
- ② Plain holes in the Relief Valve disk, sized according to the flow rate required
- ③ Replaceable orifice type SAU**

High Pressure Sensor for CF Systems (HP code) - If the pressure in the pressurized enclosure rises above the setting of the High Pressure sensor, the controller resets cutting the power to the enclosure. On detecting the overpressure an optional facility is available for the generation of an alarm or indicator. On systems with a High Pressure sensor, the relief valve may be omitted.

High Pressure Sensor for LC Systems (HP code) - If the pressure in the pressurized enclosure rises above the setting of the High Pressure sensor, the purge gas flow is isolated from the pressurised enclosure. The valve isolates both the leakage compensation and the purge streams. On detecting the overpressure, an optional facility is available for the generation of an alarm or indicator. On systems with a High Pressure sensor, the relief valve may be omitted.

Pneumatically Operated Outlet Valve - The pneumatically operated outlet valve is used to positively open or close the outlet of the purged enclosure by means of a spring return pneumatic cylinder. Systems fitted with the Pneumatically Operated Outlet Valve will carry the option OV.

Note: the possible protection type of certified Ex products(components) list in Option codes(see table above) could be Ex d, Ex e, Ex ia or Ex iaD.

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Ex marking:

Standard versions: Ex [px] IIC T6 Gb, Ex [pD] 21 IP54 T85°C (Ta: -20°C~+55°C)
 Ex [py] IIC T6 Gb, Ex [pD] 21 IP54 T85°C (Ta: -20°C~+55°C)
 Ex [pz] IIC T6 Gc, Ex [pD] 22 IP54 T85°C (Ta: -20°C~+55°C)

Standard/ET/ES versions: Ex [px] ia IIC T5 Gb, Ex [pD] iaD 21 IP54 T100°C
 (Ta: -20°C~+55°C)

Low temperature versions: Ex [px] d e IIC T3 Gb, Ex [px] d e IIC T4 Gb
 (Ta: -60°C~+55°C)

Low temperature/ET/ES versions: Ex [px] d e ia IIC T3 Gb, Ex [px] d e ia IIC T4 Gb
 (Ta: -60°C~+55°C)

High temperature versions – H6: Ex [px] IIC T4 Gb
 (Ta: -20°C~+60°C, Purge air temp. up to +60°C)

High temperature/ET/ES versions – H6: Ex [px] ia IIC T4 Gb
 (Ta: -20°C~+60°C, Purge air temp. up to +60°C)

High temperature versions – H7: Ex [px] IIC T4 Gb
 (Ta: -20°C~+60°C, Purge air temp. up to +70°C)

High temperature/ET/ES versions – H7: Ex [px] ia IIC T4 Gb
 (Ta: -20°C~+60°C, Purge air temp. up to +70°C)

Combined Versions

Low temp. with High temp. H6: Ex [px] d e IIC T3/T4 Gb
 (Ta: -60°C~+60°C, Purge air temp. up to +60°C)

Low temp. with High temp. H6 and ET/ES: Ex [px] d e ia IIC T3/T4 Gb
 (Ta: -60°C~+60°C, Purge air temp. up to +60°C)

Low temp. with High temp. H7: Ex [px] d e IIC T3/T4 Gb
 (Ta: -60°C~+60°C, Purge air temp. up to +70°C)

Low temp. with High temp. H7 and ET/ES: Ex [px] d e ia IIC T3/T4 Gb
 (Ta: -60°C~+60°C, Purge air temp. up to +70°C)

- Producers should organize production in accordance with the technical documents approved by the certification body.

2. Specific conditions of safety use:

- When using the AO, AS and DT options, the recommendations for the additional

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requirements of Ex p apparatus shall be applied.

- The installer/user shall ensure that the MiniPurge Control Unit is installed in accordance with the equipment certificate that covers the combination of the pressurised enclosure(s) and MiniPurge Control Unit.
 - The values of the safety parameters shall be set in accordance with the equipment certificate that covers the combination of the pressurized enclosure(s) and MiniPurge Control Unit.
 - This MiniPurge Control Unit shall be incorporated into equipment and the appropriate Conformity Assessment Procedures applied to the combination. This certificate does not cover the combination.
 - The purge controller, low temperature version, shall be protected by a system that ensures that it cannot be energized if the temperature of the controller logic air or purge controller falls below -20°C. This system shall utilise the RTDs that are fitted to the purge controller to provide the appropriate level of system integrity.
 - Where a Vortex cooler is fitted the hot air outlet pipe shall be kept free from obstructions and blockage.
 - The following routine tests are to be carried out:
The vortex cooler is functioning correctly. (H6 and H7 options ONLY)
The pneumatic logic isolator is functioning correctly. (H6 and H7 options ONLY)
 - See instruction for other information.
3. Certificate related report(s):
- Type test report: CQST2009C581
 - Factory inspection report: CN2020Q010175
4. Certificate change information: None

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