



IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: IECEx CML 17.0147X

Issue No: 0

Certificate history:

Issue No. 0 (2017-10-03)

Status: **Current**

Page 1 of 3

Date of Issue: **2017-10-03**

Applicant: **Pneumatrol Limited**
West End Business Park
Blackburn Road
Oswaldtwistle
Lancashire
BB5 4WZ
United Kingdom

Equipment: **Type EP000/d/TB Solenoid Assembly**

Optional accessory:

Type of Protection: **db tb**

Marking:

Ex db IIC T* Gb

Ex tb IIIC T**°C Db

T_{amb} = -65°C to +**°C

See Annex for full marking and ambient ranges

Approved for issue on behalf of the IECEx

H M Amos MIET

Certification Body:

Position:

Technical Manager

Signature:

(for printed version)

Date:

October 3, 2017

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

Certification Management Limited
Unit 1, Newport Business Park
New Port Road
Ellesmere Port, CH65 4LZ
United Kingdom





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Page 2 of 3

Manufacturer: **Pneumatrol Limited**
West End Business Park
Blackburn Road
Oswaldtwistle
Lancashire
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Additional Manufacturing location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2011 Explosive atmospheres - Part 0: General requirements
Edition:6.0

IEC 60079-1 : 2014-06 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

IEC 60079-31 : 2013 Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
Edition:2

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:

[GB/CML/ExTR17.0181/00](#)

Quality Assessment Report:

[GB/CML/QAR16.0014/00](#)



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Issue No: 0

Date of Issue: 2017-10-03

Page 3 of 3

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

Type EP000/d/TB Solenoid Assembly comprises a cast housing with an integral terminal enclosure and a threaded cover.

See Annex for full description and Conditions of Manufacture

SPECIFIC CONDITIONS OF USE: YES as shown below:

- The dimensions of the flamepaths shall not be modified. In the event that the unit requires repair, it must be returned to the manufacturer.
- The non-metallic paint/coating on the enclosure is considered to be a potential electrostatic charging hazard. The equipment shall be cleaned only with a damp cloth.

Annex:

[Certificate Annex IECEx CML 17.0147X Iss 0.pdf](#)

Annexe to: IECEx CML 17.0147X
Applicant: Pneumatrol Limited
Apparatus: Type EP000/d/TB Solenoid Assembly



Description

Type EP000/d/TB Solenoid Assembly comprises a cast housing with an integral terminal enclosure and a threaded cover; all manufactured from grade ANC1B stainless steel to BS3146. The enclosure contains a coil rated at up to 3.2 W d.c. or 9.5 VA a.c. which is retained by a threaded end cap.

The cap also positions and retains a centre tube which locates the pole piece and armature. Alternative coils may be fitted for 12 V to 440 V a.c. 50/60 Hz, or 6 V to 240 V d.c. supplies.

A two way terminal block is fitted within the terminal compartment.

A bridge rectifier may also be fitted so that the 3 W d.c. coil can be operated from an appropriate a.c. or d.c. supply.

Internal and external earthing facilities are provided.

The temperature classifications, assigned maximum surface temperatures and ambient temperature range for each coil type are listed below:

Supply	Coil Rating (max)	Marking	Cable temperature
D.C.	3W	Ex db IIC T6 Gb Ex tb IIIC T85°C Db (T _{amb} = -65°C to +40°C)	-
D.C.	3W	Ex db IIC T5 Gb Ex tb IIIC T100°C Db (T _{amb} = -65°C to +55°C)	-
D.C.	3W	Ex db IIC T4 Gb Ex tb IIIC T135°C Db (T _{amb} = -65°C to +60°C)	85°C
D.C.	3W	Ex db IIC T4 Gb Ex tb IIIC T135°C Db (T _{amb} = -65°C to +80°C)	105°C
A.C./D.C. (rectified)	3W	Ex db IIC T5 Gb Ex tb IIIC T100°C Db (T _{amb} = -65°C to +55°C)	-
A.C./D.C. (rectified)	3W	Ex db IIC T6 Gb Ex tb IIIC T85°C Db (T _{amb} = -65°C to +40°C)	-

Unit 1, Newport Business Park
 New Port Road
 Ellesmere Port
 CH65 4LZ

T +44 (0) 151 559 1160
E info@cmllex.com

www.cmllex.com

Company Reg No. 8554022 VAT No. GB163023642





Supply	Coil Rating (max)	Marking	Cable temperature
A.C.	9.5VA	Ex db IIC T4 Gb Ex tb IIIC T135°C Db (T _{amb} = -65°C to +40°C)	90°C
A.C.	9.5VA	Ex db IIC T3 Gb Ex tb IIIC T200°C Db (T _{amb} = -65°C to +55°C)	105°C

Cable entry holes are provided as specified on the approved drawings for the accommodation of flameproof cable entry devices, with or without the interposition of a flameproof thread adapter. Unused entries are to be fitted with suitable certified flameproof stopping plugs.

The cable entry devices, thread adapters and stopping plugs shall be suitable for the equipment, the cable and the conditions of use and shall be certified as IECEx Equipment (not a Component).

When used in dust atmospheres, the flameproof cable entries or stopping plugs shall be selected and installed so that the dust tight (IP66) integrity of the enclosure is maintained.

Rating

Voltage:	12 to 440 Vac 50.60 Hz 6 to 240 V dc
AC (Max Inrush):	9.5 VA
DC (Max):	3.2 W

Conditions of manufacture

The following are conditions of manufacture

- i. Where the product incorporates certified parts or safety critical components the manufacturer shall ensure that any changes to those parts or components do not affect the compliance of the certified product that is the subject of this certificate.
- ii. The inside of the centre tube assembly shall be subjected to a routine test of 1.5 times the defined/marked maximum working pressure. It shall be shown that the flameproof enclosure cannot become pressurised as a result of leakage of the pressurised medium from the centre tube assembly. The end-user shall be informed of the maximum working pressure of the centre tube assembly.



Specific Conditions Of Use

- i. The dimensions of the flamepaths shall not be modified. In the event that the unit requires repair, it must be returned to the manufacturer.
- ii. The non-metallic paint/coating on the enclosure is considered to be a potential electrostatic charging hazard. The equipment shall be cleaned only with a damp cloth.