IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres

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

Certificate No.: **IECEx BAS 08.0119**

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Certificate history:

Status: **Current**

Issue No: 8

Issue 7 (2014-07-29)
Issue 6 (2014-06-25)
Issue 5 (2014-04-09)
Issue 4 (2012-12-03)
Issue 3 (2011-08-22)
Issue 2 (2010-08-12)
Issue 1 (2009-09-16)
Issue 0 (2009-02-04)

Date of Issue: 2022-06-21

Applicant: **Bifold Fluidpower Limited**
Broadgate
Oldham Broadway Business Park
Chadderton
Oldham
Greater Manchester OL9 9XA
United Kingdom

Equipment: **Type 57 and 67 Solenoid**

Optional accessory:

Type of Protection: **Flameproof & Dust Enclosure**

Marking: Ex db IIB Gb T*

Ex tb IIIB Db T*°C IP66

*For Marking Details for Temperature Class and Surface Temperature see Equipment Section

Approved for issue on behalf of the IECEx Certification Body: **Mr R S Sinclair**

Position: **Technical Manager**

Signature: (for printed version)

Date: (for printed version) 05/08/22

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 www.iecex.com or use of this QR Code.

Certificate issued by:

SGS Baseefa Limited
Rockhead Business Park
Staden Lane
Buxton, Derbyshire, SK17 9RZ
United Kingdom

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Manufacturer: **Bifold Fluidpower Limited**
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Manufacturing locations: **Bifold Fluidpower Limited**
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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 equipment 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 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

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 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 Reports:

GB/BAS/ExTR08.0244/00
GB/BAS/ExTR09.0127/00
GB/BAS/ExTR10.0185/00
GB/BAS/ExTR11.0195/00
GB/BAS/ExTR12.0298/00
GB/BAS/ExTR13.0317/00
GB/BAS/ExTR14.0112/00
GB/BAS/ExTR21.0213/00

Quality Assessment Report:

GB/BAS/QAR07.0038/09

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EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

The Type 57 and 67 Solenoid comprises a cylindrical steel enclosure that houses a coil and moving armature assembly. The unit is normally rated 24V dc (Alternative coils may be wound for voltages up to 35V within the power limitations of the 24Vdc range) and has a range of Coil ratings from 3.5W to 12W with different Temperature Classifications as shown in the marking section below.

Solenoid Power Rating (W)	Temperature Class @ Ambient		Surface Temperature @ Ambient	
	-40°C ≤ Tamb ≤ 40°C	-40°C ≤ Tamb ≤ 60°C	-40°C ≤ Tamb ≤ 40°C	-40°C ≤ Tamb ≤ 60°C
≤5.7	T6	T5	T80°C	T100°C
≤6.5	T6	T4	T85°C	T105°C
≤8	T5	T4	T90°C	T110°C
≤10	T5	T4	T100°C	T120°C
≤12	N/A	T4	T110°C	T130°C

The ends of the cylindrical enclosure are closed with threaded end caps manufactured in stainless steel and locked with socket head cap screws. The armature operated push-rod passes through a bushing in the front end cap, which also includes a vented mounting arrangement.

The rear end cap may optionally include a manual override facility, and provides access to the coil connection terminals and the internal earth connection.

A cable entry boss, which also includes an external earth connection lug, is provided on the side of the Type 57 and 67 Solenoid body. The entry may be threaded M20 or ½"NPT for the accommodation of a flameproof cable entry device, with or without the interposition of a flameproof thread adapter.

The cable entry arrangement is to be suitable for the equipment, the cable and the conditions of use and is to be certified as Equipment (not a Component). When used in an explosive dust atmosphere the cable entry arrangement is to shall maintain the ingress protection of the enclosure

Nomenclature

The model number nomenclature gives details of the equipment. For example model number 67A24D50AGK85M153 can be broken down into the following.

Solenoid Type A=ATEX	Voltage	Power Rating e.g. 50=5.0W 105=10.5W	Arctic Service	Conduit Entry Option i.e. K85 = ½" NPT, Otherwise M20	Override options e.g. M = Manual Override	Coil Holder, Armature material e.g. Remco B	Internal revision number.
67A	24D	50	AG	K85	M	15	3

SPECIFIC CONDITIONS OF USE: NO

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Variation 8.1

To assess the Type 57 and Type 67 against the following standards: IEC 60079-0:2017, IEC 60079-1:2014 and IEC 60079-31:2013 and the marking has been updated as per the requirements.

Variation 8.2

To remove drawings: 0-S0015/11 0-S0026/02 0-S0032/15 0-S0035/15 0-S0039/11 0-S0054/47 0-S0055/15 66-8-xx-xx 0-GA0180/47 0-GA0184 0-S0013/15 0-S0068/02 0-S0069/11 0-S0076/02 0-S0079/02 0-S0081/16 0-GA0135 0-GA0136 0-GA0137 0-GA0224 0-S0111/02 0-S0112A/17 0-GA0223/15 0-GA0223A/15 0-S0022/02 0-S0023/02 0-S0112/15 0-S0115/15 0-S0062/15 0-S0067/15 0-S0142/15 0-S0147/16 0-S0209/02 0-S0208/02 0-GA0421 0-S0066/02 0-S0063/02 0-GA0202/02 0-GA0202A/02 0-S0220/11 0-GA0425 0-GA0424 0-GA0423 0-S0065/02

Variation 8.3

To add drawings: 0-SC0037 0-SC0039 0-SL0003 0-SL0004

ExTR: **GB/BAS/ExTR21.0213/00** File Reference: **21/0641**