



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 13.0086X	Page 1 of 4	<u>Certificate history:</u>
Status:	Current	Issue No: 6	Issue 5 (2021-03-31)
Date of Issue:	2023-09-08		Issue 4 (2020-02-26)
Applicant:	Topworx Incorporated 3300 Fern Valley Road Louisville Kentucky 40213 United States of America		Issue 3 (2018-06-06)
Equipment:	70 Series Micro Switch		Issue 2 (2016-03-03)
Optional accessory:			Issue 1 (2015-04-23)
Type of Protection:	Flameproof and flameproof/increased safety and dust protection by enclosure		
Marking:	Ex db IIC T6 Gb (T_{amb} -40°C to +75°C) or Ex db eb IIC T6 Gb (T_{amb} -40°C to +75°C) and Ex tb IIIC T85°C Db IP66/68 may be alternatively marked see Annex		

Approved for issue on behalf of the IECEx
Certification Body:

R S Sinclair

Position:

Technical Manager

Signature:
(for printed version)

Date:
(for printed version)

8/9/2023

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





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Manufacturer: **Topworx Incorporated**
3300 Fern Valley Road
Louisville
Kentucky 40213
United States of America

Manufacturing locations: **Topworx Incorporated**
3300 Fern Valley Road
Louisville
Kentucky 40213
United States of America

Asco Valve (Shanghai) Co. Limited
No.480, Xin Miao No.3 Road
Xiao Qiao Town
Song Jiang District
Shanghai 201612
China

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](#) 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

[IEC 60079-7:2017](#) Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:5.1

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/ExTR13.0187/00](#)
[GB/BAS/ExTR21.0042/00](#)

[GB/BAS/ExTR15.0076/00](#)
[GB/BAS/ExTR21.0096/00](#)

[GB/BAS/ExTR18.0098/00](#)

Quality Assessment Reports:

[GB/SIR/QAR07.0025/11](#)

[GB/SIR/QAR07.0041/10](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The 70 Series Micro Junction proximity switches are electrically rated as detailed below and comprise a cylindrical machined grade 303 or 316 stainless-steel main body and threaded cover. The main body forms both an Ex d and Ex e chamber. The Ex d chamber has an 5/8 UNF, 1" UNS or M18 external male thread and a thin section wall at the front end and houses a magnetically operated switch assembly which is potted off internally from the Ex e chamber. The rear end of the main body forms the Ex e terminal chamber which is round in section with two sets of machined 'flats' on the body to provide a means of tightening the unit in place. The Ex e terminal chamber has an M42 female thread to accept the threaded cover. The threaded cover has a single 1/2" NPT or M20 female thread for connection to conduit or a suitable cable entry device and an M3 set screw to lock the cover in place. The integral connection leads are soldered to an internal PCB/terminal block assembly and are all encapsulated in the potting.

An internal earth connection is provided by one of the PCB mounting bolts. External earth bonding may be achieved by either the external switch mounting thread or by the rear cable entry thread.

Rated up to maximum values as follows:

V a.c.	V d.c.	A
120	-	4
-	24	3

As the heat dissipated by the switch is a function of the switch passing current ($P=I^2R$) rather than consuming current the maximum values stated above can be considered to include any values for current which dissipate less energy across the switch than the maximum listed above for example: 20 V d.c / 0.5A

The IPx8 rating is at a depth of 1 meter for 24 hours.

See annex for The alternative Temperature Class markings

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. Suitably certified cable entry devices shall be installed in accordance with IEC60079-14 and must maintain the ingress protection (IP) rating of the enclosure. The cable entry device thread shall not protrude within the enclosure body (i.e. shall maintain the clearance to the terminals).
2. An external earth bonding connection may be maintained by either the external mounting thread and/or the internal cable gland/conduit entry thread.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Variation 6.1

To introduce a minor variation to the equipment description

ExTR: **GB/BAS/ExTR21.0096/00**

File Reference: **21/0331**

Annex:

[IECEX BAS 13.0086X-Annex 2.pdf](#)

The unit may be alternative marked as follows without change in ratings:-

Ex db IIC T5 Gb (T_{amb} -40 °C to +75 °C) or
or Ex db eb IIC T5 Gb (T_{amb} -40 °C to +75 °C)
and Ex tb IIIC T100 °C Db (T_{amb} -40 °C to +75 °C) IP66/68

Ex db IIC T4 Gb (T_{amb} -40 °C to +75 °C) or
or Ex db eb IIC T4 Gb (T_{amb} -40 °C to +75 °C)
and Ex tb IIIC T135 °C Db (T_{amb} -40 °C to +75 °C) IP66/68

The switch model number is used to further describe each assembly as follows:-

