



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 BAS 13.0086X issue No.:2

Status: **Current**

Certificate history:

Issue No. 2 (2016-3-3)

Issue No. 1 (2015-4-23)

Issue No. 0 (2015-1-26)

Date of Issue: 2016-03-03 Page 1 of 4

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

Electrical Apparatus: **70 Series Micro Switch**
Optional accessory:

Type of Protection: **Flameproof and flameproof/increased safety and dust protection by enclosure**

Marking: **Ex d IIC T6 Gb (T_{amb} -40°C to +75°C) or
Ex de 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 *PP DBREANLEY*

Position:

Technical Manager

Signature:
(for printed version)

DBreanley

3/3/16

Date:

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:

SGS Baseefa 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

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 Edition: 6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-1 : 2007-04 Edition: 6	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-31 : 2008 Edition: 1	Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure "t"
IEC 60079-7 : 2006-07 Edition: 4	Explosive atmospheres - Part 7: Equipment protection by increased safety "e"

*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/BAS/ExTR13.0187/00](#)

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

[GB/BAS/ExTR15.0278/00](#)

Quality Assessment Report:

[GB/SIR/QAR07.0025/06](#)



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Schedule

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 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.

CONDITIONS OF CERTIFICATION: 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 2.1

To allow the option to manufacture the bodytube and the conduit entry of the equipment from 316L grade of stainless steel, as well as the previously certified 303 grade of Stainless Steel.

ExTR: GB/BAS/ExTR15.0278/00

File Reference: 15/0573