

1 **EU - TYPE EXAMINATION CERTIFICATE**

2 **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres
Directive 2014/34/EU**

3 EU - Type Examination Certificate Number: **Baseefa14ATEX0236X – Issue 5**

3.1 In accordance with Article 41 of Directive 2014/34/EU, EC-Type Examination Certificates referring to 94/9/EC that were in existence prior to the date of application of 2014/34/EU (20 April 2016) may be referenced as if they were issued in accordance with Directive 2014/34/EU. Supplementary Certificates to such EC-Type Examination Certificates, and new issues of such certificates, may continue to bear the original certificate number issued prior to 20 April 2016.

4 Product: **70 Series Micro Junction**

5 Manufacturer: **Topworx Incorporated**

6 Address: **3300 Fern Valley Road, Louisville, Kentucky, 40213, United States of America**

7 This re-issued certificate extends EC Type Examination Certificate No. **Baseefa14ATEX0236X** to apply to product designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule attached to this certificate and the documents therein referred to.

8 SGS Fimko Oy, Notified Body number 0598, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.

8.1 The original certificate was issued by SGS Baseefa Ltd (UK Notified Body 1180). It, and any supplements previously issued by SGS Baseefa Ltd have been transferred to the supervision of SGS Fimko Oy (EU Notified Body 0598). The original certificate number is retained.

The examination and test results are recorded in confidential Report No. **See Certificate History**

9 Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0: 2018 EN 60079-1: 2014 EN IEC 60079-7: 2015 +A1: 2018 EN 60079-31:2014

except in respect of those requirements listed at item 18 of the Schedule.

10 If the sign “X” is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of Use specified in the schedule to this certificate.

11 This EU - TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

12 The marking of the product shall include the following:

**⊕ II 2 GD Ex db IIC T6 Gb (Tamb -40°C to +75°C) or
Ex db eb IIC T6 Gb (Tamb -40°C to +75°C) and
Ex tb IIIC T85°C Db (Tamb -40°C to +75°C) IP66/68 - Temperature Class may vary (see schedule)**

SGS Fimko Oy Customer Reference No. **2191**

Project File No. **21/0331**

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Tuomas Hänninen
SGS Fimko Oy

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Schedule

14

Certificate Number Baseefa14ATEX0236X – Issue 5

15 Description of Product

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

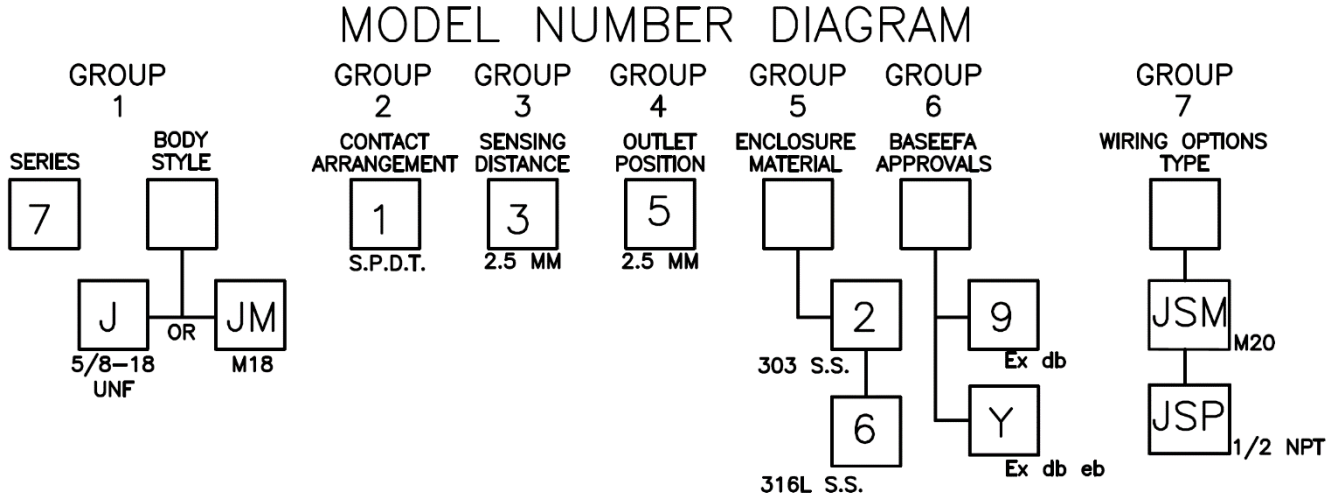
The IPx8 rating is at a depth of 1 meter for 24 hours.

The alternative Temperature Class markings are as follows:

Ex II 2 GD Ex db IIC T5 Gb ($T_{amb} -40^{\circ}C$ to $+75^{\circ}C$) or
Ex db eb IIC T5 Gb ($T_{amb} -40^{\circ}C$ to $+75^{\circ}C$) and
Ex tb IIIC T100° Db ($T_{amb} -40^{\circ}C$ to $+75^{\circ}C$) IP66/68

Ex II 2 GD Ex db IIC T4 Gb ($T_{amb} -40^{\circ}C$ to $+75^{\circ}C$) or
Ex db eb IIC T4 Gb ($T_{amb} -40^{\circ}C$ to $+75^{\circ}C$) and
Ex tb IIIC T135° Db ($T_{amb} -40^{\circ}C$ to $+75^{\circ}C$) IP66/68

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



16 Report Number

See Certificate History

17 Specific Conditions of Use

- 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).
- An external earth bonding connection may be maintained by either the external mounting thread and/or the internal cable gland/conduit entry thread.

18 Essential Health and Safety Requirements

In addition to the Essential Health and Safety Requirements (EHSRs) covered by the standards listed at item 9, the following are considered relevant to this product, and conformity is demonstrated in the report:

Clause	Subject
1.4.1	External effects
1.4.2	Aggressive substances, etc.

19 Drawings and Documents

New drawings submitted for this issue of certificate:

Number	Sheet	Issue	Date	Description
*CERT-ES-09594-1	1	AA	5/19/2023	ARTWORK 70 SERIES MICRO JUNCTION (-40°C TO +75°C)

* This drawing is common to Baseefa14ATEX0236X, IECEx BAS 13.0086X and BAS21UKEX0425X

Current drawings which remain unaffected by this issue:

Number	Sheet	Issue	Date	Description
*CERT-ES-03773-1	1	10	10/19/2015	Conduit entry
*CERT-ES-03773-2	1	10	10/19/2015	Conduit entry
*CERT-ES-03775-1	1	9	10/19/2015	Junction box bodytube
*CERT-ES-03775-2	1	9	10/18/2015	Junction box bodytube

Number	Sheet	Issue	Date	Description
*CERT-ES-03777-1	1 of 1	4	11/13/2014	ASSEMBLY
*CERT-ES-03782-1	1 of 4	4	10/02/2014	PRINTED CIRCUIT BOARD
*CERT-ES-04696-1	1	9	04/18/2018	Stencil Artwork 70 Series Micro Junction
**ES-03782-1	1 to 4	AC	21-02-03	PRINTED CIRCUIT BOARD 70 SERIES MICRO JUNCTION
***CERT-ES-09594-1	1	AA	5/19/2023	ARTWORK 70 SERIES MICRO JUNCTION (-40°C TO +75°C)

* These drawings are common to Baseefa14ATEX0236X and IECEx BAS 13.0086X

** Held with IECEx BAS 15.0136X, and also associated with IECEx BAS 13.0086X & Baseefa15ATEX0193X.

*** This drawing is common to Baseefa14ATEX0236X, IECEx BAS 13.0086X and BAS21UKEX0425X

20 Certificate History

Certificate No.	Date	Comments
Baseefa14ATEX0236X	23 January 2015	The release of the prime certificate. The associated test and assessment against the requirements of EN 60079-0: 2012, EN 60079-1: 2007, EN 60079-7: 2007 and EN 60079-31: 2009 is documented in Test Report No. GB/BAS/ExTR13.0187/00.
Baseefa14ATEX0236X/1	23 April 2015	This supplement introduced an update to the model number diagram and permitted the equipment to be optionally either Ex db or Ex eb as reflected in the updated marking details. The associated assessment is documented in report GB/BAS/ExTR15.0076/00.
Baseefa14ATEX0236X/2	3 March 2016	This supplement introduced grade 316L stainless steel as an alternative material for the manufacture the body tube and conduit entry. The associated assessment is documented in report GB/BAS/ExTR15.0278/00.
Baseefa14ATEX0236X/3	6 June 2018	This supplement confirmed that the current design meets the requirements of IEC 60079-0: 2017 Edition 7, EN 60079-1: 2014, EN 60079-7: 2015 and EN 60079-31: 2014. The associated assessment is documented in report GB/BAS/ExTR18.0098/00.
Baseefa14ATEX0236X/4	31 March 2021	This supplement permitted a change of PCB material and confirms the current design meets the requirements of EN IEC 60079-0: 2018 and EN IEC 60079-7: 2015 + A1: 2018. The associated assessment is documented in report GB/BAS/ExTR21.0042/00.
Baseefa14ATEX0236X Issue 5	6 September 2023	This issue of the certificate incorporates previously issued primary & supplementary certificates into one certificate along with minor changes to the equipment description. No other changes have been made. The associated assessment is documented in report GB/BAS/ExTR21.0096/00.

For drawings applicable to each issue, see original of that issue.