

1 **UK-TYPE EXAMINATION CERTIFICATE**

2 **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres
UKSI 2016:1107 (as amended) – Schedule 3A, Part 1**

3 UK-Type Examination Certificate Number: **BAS21UKEX0425X**
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 product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 SGS Baseefa, Approved Body number 1180, in accordance with Regulation 43 of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016, UKSI 2016:1107 (as amended), 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 Schedule 1 of the Regulations.

The examination and test results are recorded in confidential Report No. **GB/BAS/ExTR21.0096/00**

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 UK-TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified product. Further requirements of the Regulations 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 Baseefa Customer Reference No. **2191**


Project File No. **21/0331**

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R S SINCLAIR
TECHNICAL MANAGER
On behalf of SGS Baseefa Limited

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Schedule

14

Certificate Number BAS21UKEX0425X

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

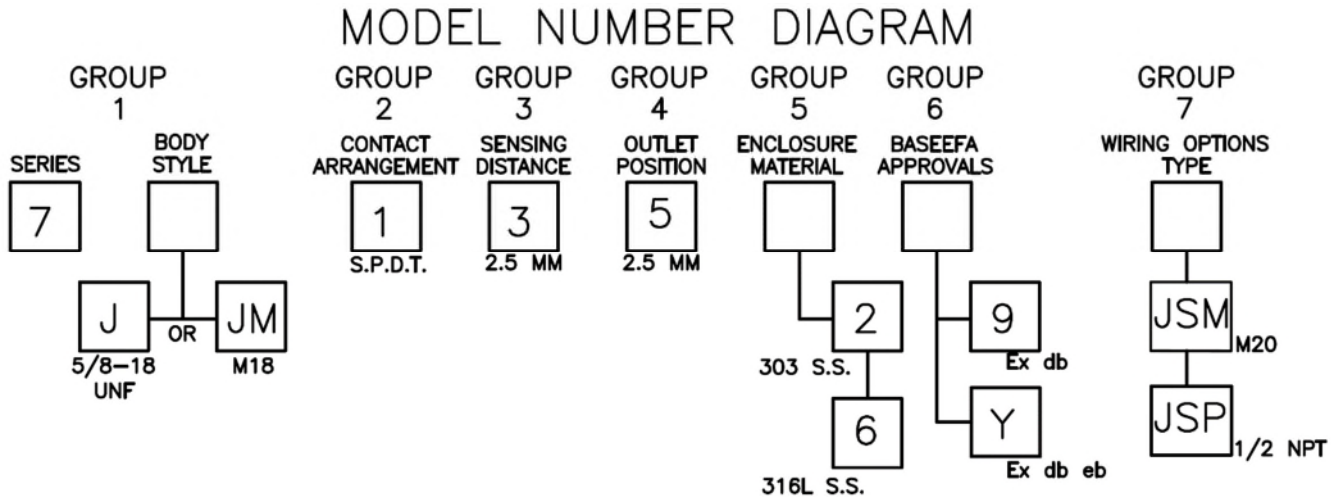
The IPx8 rating is at a depth of 1 meter for 24 hours.

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

GB/BAS/ExTR21.0096/00

17 Specific Conditions of Use

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.

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
21 (1)	External effects
21 (2)	Aggressive substances, etc.

19 Drawings and Documents

Number	Sheet	Issue	Date	Description
CERT-ES-09233-1	1	AA	10/18/2021	STENCIL, ARTWORK 70 SERIES MICRO JUNCTION
*CERT-ES-09594-1	1	AA	5/19/2023	ARTWORK 70 SERIES MICRO JUNCTION (-40°C TO +75°C)
Baseefa14ATEX0236X				Certificate

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