

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 **Baseefa08ATEX0360X – Issue 8**
Number:

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: **Series 7 Proximity Switches**

5 Manufacturer: **Topworx Incorporated**

6 Address: **3300 Fern Valley Road, Louisville, Kentucky 40213, USA**

7 This re-issued certificate extends EC Type Examination Certificate No. **Baseefa08ATEX0360X** 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 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 (-40°C ≤ Ta ≤ 50°C)*
Ex tb IIIC T85°C* Db (-40°C ≤ Ta ≤ 50°C)* IP66**

* See Schedule for alternative Temperature Class / Ambient Temperature combinations.

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

Project File No. **21/0331**

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SGS Fimko Oy

Takomotie 8
FI-00380 Helsinki, Finland
Telephone +358 (0)9 696 361
e-mail sgs.fimko@sgs.com
web site www.sgs.fi

Business ID 0978538-5 Member of the SGS Group (SGA SA)



Mikko Välimäki
SGS Fimko Oy

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Schedule

14

Certificate Number Baseefa08ATEX0360X – Issue 8

15 Description of Product

The Series 7 Proximity Switches are rated up to 240V a.c., 2A or 24V d.c., 3A and comprise a tubular stainless-steel enclosure in a variety of body styles, with an external male thread and a thin section wall at the front end.

The rear of the enclosure incorporates an additional thread which may be male, or a hexagonal section incorporating a female thread suitable for connection to conduit or a suitably certified cable entry device. The cable entry device must be certified as equipment, not a component. See Annex for details of typical thread and body length details.

The internal cavity contains a magnetically operated switch assembly, and the integral connection leads exit the enclosure via a potted seal assembly within the rear entry. Various insulation material options are permitted for the integral connection leads.

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

General Markings:

Ex db IIC Gb T6 (-40°C ≤ Ta ≤ +50°C)

or T4 (-40°C ≤ Ta ≤ +100°C)

or T3 (-40°C ≤ Ta ≤ +150°C)

Ex tb IIIC Db T85°C (-40°C ≤ Ta ≤ +50°C) IP66

or T135°C (-40°C ≤ Ta ≤ +100°C)

or T200°C (-40°C ≤ Ta ≤ +150°C)

The Series 7 Proximity Switches have typical general body parameters as detailed below:

Switch Model	Body length	Front male thread	Rear hex. A/F	Rear thread
71	3-15/16"	3/8"-24UNF or M12 x 1.0p	1"	1/2"-14 NPT or M20 x 1.5p
72	3-3/4"	3/8"-24UNF or M12 x 1.0p	None	9/16"-18UNF (not for cable entry connection)
73 / H7 / N7 / M7	3-3/4"	5/8"-18 UNF or M18 x 1.0p	1"	1/2"-14 NPT or M20
74	2-13/16"	5/8"-18 UNF or M18 x 1.0p	None	9/16"-18 UNF (not for cable entry connection)
75	4-5/16"	5/8"-18 UNF or M18 x 1.0p	1"	1/2"-14 NPT or M20
76	3-1/4"	5/8"-18 UNF or M18 x 1.0p	None	9/16"-18UNF (not for cable entry connection)
77	5-13/16"	3/4"-16UNF or M20 x 1.5p	1"	1/2"-14 NPT or M20
7CX / 7DX	4-1/4"	5/8"-18 UNF	1"	1/2"-14NPT
7G	4-1/2"	5/8"-18 UNF or M18 x 1.0p	1-1/4"	3/4"-14 NPT or M24
7I	5-5/8"	1"-14 UNS	1-1/16"	1/2"-14 NPT
C7 / R7	4"	5/8"-18 UNF	1-1/4"	3/4"-14 NPT
C8 / H8 / M8	4-1/4"	1"-14 UNS	1-1/4"	3/4"-14 NPT

For switch models with metric thread options, a 'M' suffix on the switch type denotes the inclusion of Metric threads, e.g. Type 74M

The Series 7 Proximity Switches are rated up to maximum values as follows:

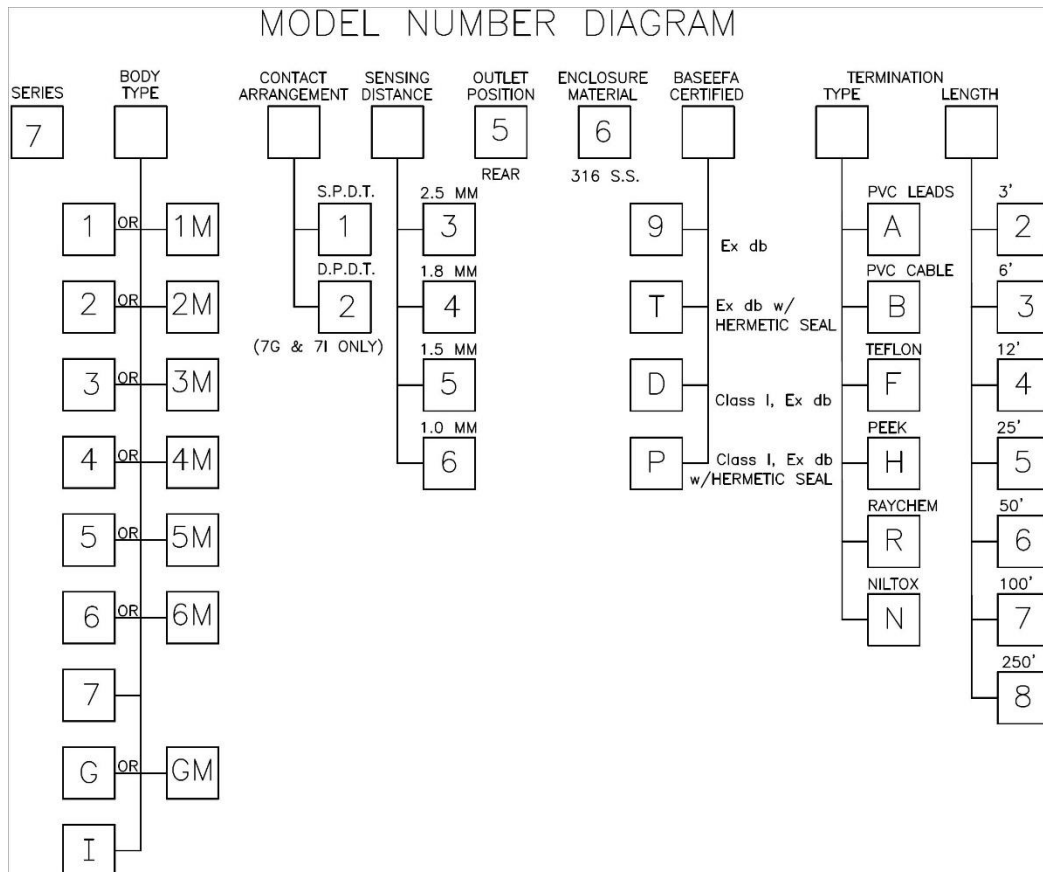
	V a.c.	V d.c.	A
SPDT Switch	240	-	2
	120	-	4
	-	24	3
DPDT Switch	240	-	2
	120	-	3
	-	24	1

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: 120 V a.c. / 0.5A.

The alternative markings for temperature class and ambient temperature combinations, dependent on integral cable type are as follows:

Switch Model	Cable Type	Ambient	Temperature class
71, 73, 74, 75, 77, 7G, 7I	PVC leads or cable	-40°C to +50°C	T6/T85°C
72, 74 & 76	Raychem cable	-55°C to +50°C	T6/T85°C
		-55°C to +100°C	T4/T135°C
		-55°C to +100°C	T3/T200°C
71, 73, 74, 75, 77, 7G, 7I	Teflon leads	-40°C to +100°C	T4/T135°C
71, 73, 74, 75, 77, 7G, 7I	Peek leads	-40°C to +150°C	T3/T200°C
74	Niltox	-20°C to +50°C	T6/T85°C

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



Not all options listed above are available together. See schedule drawings for clarity.

Alternative model variations:

Model 73-13529-H* High Temperature Proximity Switch may alternatively carry the type designation N7-000-P(XX).

The Type 73 Series Proximity Switch may be alternatively configured with 'B' leads PVC and Insulcast 116FR potting. This variant may carry the following markings:

Ex db IIC T6 Gb (-60°C ≤ Ta + 50°C) with Type 'B' PVC cable.

Ex tb III C T85°C Db (-60°C ≤ Ta + 50°C) IP66 with Type 'B' PVC cable.

16 Report Number

See Certificate History

17 Specific Conditions of Use

1. The integral supply cables must be mechanically protected and terminated in a suitable terminal or junction facility.
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
1.4.1	External effects
1.4.2	Aggressive substances, etc.

19 Drawings and Documents

New drawings submitted for this issue of certificate:

Number	Issue	Date	Description
*CERT-ES-09586-1	AA	5/25/2023	ARTWORK 7 SERIES – IECEX/NEC (-40°C to +50°C)
*CERT-ES-09589-1	AA	5/25/2023	ARTWORK 70 IECEX/NEC (-40°C to +100°C/150°C)
*CERT-ES-09590-1	AA	5/25/2023	ARTWORK – 73 & 7G IECEX/NEC (-60°C TO +50°C)

* The above drawings are common to Baseefa08ATEX0360X, IECEX BAS 08.0122X and BAS21UKEX0419X

Current drawings which remain unaffected by this issue:

Number	Issue	Date	Description
ES-01567-1	1	01/28/09	General Arrangement, Model N7 Proximity Switch
CERT-ES-01464-1	5	09/19/13	7G DPDT W/HERMETIC SEAL ASSEMBLY W/LEADS
CERT-ES-01465-1	5	09/19/13	7G DPDT W/HERMETIC SEAL ASSEMBLY W/CABLE
CERT-ES-01466-1	5	09/19/13	7G DPDT W/HERMETIC SEAL ASSEMBLY HI/TEMP
CERT-ES-01519-1	2	02/11/2015	76 SERIES S.P.D.T MODEL GO™ SWITCH ASSEMBLY W/LEADS
CERT-ES-02038-1	4	05/22/12	Assembly, Type M7/P7
CERT-ES-02039-1	4	05/22/12	Assembly, Type H7/N7
CERT-ES-02050-1	5	09/20/13	SWITCH, CONTAINMENT C7-PX TYPE3
CERT-ES-02051-1	5	09/20/13	SWITCH, CONTAINMENT R7-PX TYPE3
CERT-ES-02052-1	5	09/19/13	SWITCH, CONTAINMENT C8, H8, M8 - PX
CERT-ES-02871-1	1	08/24/11	Cable, Niltox

Number	Issue	Date	Description
CERT-ES-02873-1	3	09/17/13	ASSEMBLY, 74 SERIES WITH NILTOX CABLES ATEX Ex d
CERT-ES-03014-1	2	06/01/2012	Body Tube, Type 7CX/7DX
CERT-ES-03141-1	2	09/17/13	ASSY, 7CX S-T-G, XP EXTENDED SENSING WITH HERMETIC SEAL
CERT-ES-03142-1	2	09/17/13	ASSY, 7DX S-T-G, XP EXTENDED SENSING WITH HERMETIC SEAL
CERT-ES-03143-1	1	09/17/13	ASSY, 7CX S-T-G, XP EXTENDED SENSING WITHOUT HERMETIC SEAL
CERT-ES-03144-1	2	09/17/13	ASSY, 7DX S-T-G, XP EXTENDED SENSING WITHOUT HERMETIC SEAL
CERT-ES-03145-1	1	04/10/2012	Marking, Type 7CX/7DX, Standard Temperature
CERT-ES-03146-1	1	04/10/2012	Marking, Type 7CX/7DX, High Temperature
CERT-ES-03199-1	2	05/31/12	Marking, Type 74
CERT-ES-03277-1	2	09/20/13	71 ASSEMBLY SPDT
CERT-ES-04114-1	1	09/17/13	STENCIL – ARTWORK 73 & 7G SWITCH W/ HS & “B” CABLE (-60°C TO +50°C)
CERT-ES-04132-1	1	09/23/13	73 SERIES S.P.D.T. MODEL WITH HERMETIC SEAL, CABLE, -60°C
CERT-ES-04133-1	1	09/23/13	7G ASSEMBLY SPDT WITH HERMETIC SEAL, CABLE, -60°C
CERT-ES-04134-1	1	09/23/13	7G DPDT W/HERMETIC SEAL ASSEMBLY W/CABLE, -60°C
CERT-ES-04812-1	1	02/11/2015	72 SERIES GO SWITCH
CERT-ES-04814-1	1	02/11/2015	ASEEMBLY, 74 SERIES WITH RAYCHEM CABLE
CERT-ES-04857-1	3	05/20/2015	STENCIL, 72, 74, 76 SWITCH WITH RAYCHEM CABLE
CERT-S-70-7001-A	6	09/19/13	73 SERIES S.P.D.T. MODEL GO SWITCH ASSEMBLY W/LEADS
CERT-S-70-7005-A	6	09/19/13	75 SERIES S.P.D.T. MODEL GO SWITCH ASSEMBLY W/LEADS
CERT-S-70-7005A-A	5	09/19/13	75 SERIES GO SWITCH ASSEMBLY FOR MODEL: 75:13529-PAX
CERT-S-70-7008-A	5	09/19/13	73 SERIES S.P.D.T. MODEL GO SWITCH ASSEMBLY W/CABLE
CERT-S-70-7009-A	5	09/19/13	75 SERIES S.P.D.T. MODEL GO SWITCH ASSEMBLY W/CABLE
CERT-S-70-7010-A	6	09/19/13	77 SERIES S.P.D.T. MODEL GO SWITCH ASSEMBLY W/LEADS
CERT-S-70-7011-A	5	09/19/13	77 SERIES S.P.D.T. MODEL GO SWITCH ASSEMBLY W/CABLE
CERT-S-70-7040-A	5	09/18/13	73, 75 & 77 SERIES S.P.D.T. GO SWITCH ASSEMBLIES, HI-TEMP
CERT-S-7G-7001-A	6	09/19/13	7G SERIES D.P.D.T. MODEL GO SWITCH ASSEMBLY W/LEADS
CERT-S-7G-7002-A	11	09/17/13	7G ASSEMBLY SPDT WITH HERMETIC SEAL, LEADS
CERT-S-7G-7003-A	5	09/17/13	7G ASSEMBLY SPDT WITH HERMETIC SEAL, CABLE
CERT-S-7G-7004-A	6	09/17/13	7G ASSEMBLY S.P.D.T. WITH HERMETIC SEAL, HI-TEMP
CERT-S-7I-7001-A	6	09/17/13	7I SERIES D.P.D.T. GO SWITCH ASSEMBLY, LEADS
CERT-S-A70-0340	11	09/17/13	73 SERIES S.P.D.T. MODEL WITH HERMETIC SEAL, LEADS
CERT-S-A70-0341	8	09/17/13	73 SERIES S.P.D.T. MODEL WITH HERMETIC SEAL, CABLE
CERT-S-A70-0342	8	09/17/13	73 SERIES S.P.D.T. MODEL WITH HERMETIC SEAL. HI-TEMP
CERT-S-L7G-7006C	14	09/17/13	STENCIL – ARTWORK APPROVAL, 70 SWITCH ATEX (-40°C TO +50°C)
CERT-S-L7G-7009	11	08/28/12	STENCIL – ARTWORK APPROVAL, 70 SWITCH ATEX (-40°C TO +100°C / 150°C)
C-ES-00029-1	2	06/01/2009	Retainer
C-ES-01022-1	4	06/01/2012	Bodytube, Type C8, H8, M8
C-ES-01051-1	1	02/03/2009	Retainer C8
C-ES-01110-1	3	06/01/2012	Bodytube, Type C7
ES-01181-1	4	06/01/2012	Bodytube, 7G Series, DPDT c/w Hermetic Seal
ES-02849-1	1	08/12/2011	Cable Plug, 74 Series

Number	Issue	Date	Description
PS-00293-1	2	10/01/2008	Retaining Ring, Ground Wire
S-A70-CCLIP	-	07/31/98	Ground Clip For 70 Series
S-S70-0340	6	06/01/2012	Bodytube, 73 Series, Hermetic Seal
S-S70-0356	11	10/06/2008	Body Tube, 74 Series
S-S70-0358	28	03/18/09	Bodytube, 73 Series
S-S70-0396	10	03/19/09	Bodytube, 77 Series
S-S70-0552	25	03/18/09	Bodytube, 75 Series
S-S70-0770	9	07/05/2007	71 SERIES STANDARD BODY TUBES
S-S70-4101	12	03/19/09	Bodytube, 7G Series
S-S70-4110	10	03/19/09	Bodytube, 7I Series
S-S70-7100	4	07/31/01	75-PA* body tube with 1/2" NPT male thread
S-W001	7	12/07/2007	Wire, UL/CSA, Red 18GA
S-W002	7	12/07/2007	Wire, UL/CSA, Blue 18GA
S-W003	7	12/07/2007	Wire, UL/CSA, Black 18GA
S-W039	4	06/15/06	Wire, UL/CSA, Green 18GA
S-W040	6	11/30/00	CABLE, UL/CSA, 4 Conductor 18 AWG
S-W051	1	02/07/1994	Wire, UL/CSA, Black, 20GA
S-W052	1	02/07/1994	Wire, UL/CSA, Red, 20GA
S-W053	1	02/07/1994	Wire, UL/CSA, Blue, 20GA
S-W054	1	02/07/1994	Wire, UL/CSA, Green, 20GA
S-W055	1	02/07/1994	Wire, UL/CSA, Black W/ White Stripe, 20GA
S-W056	1	02/07/1994	Wire, UL/CSA, Red W/ White Stripe, 20GA
S-W057	1	02/07/1994	Wire, UL/CSA, Blue W/ White Stripe, 20GA
S-W058	2	09/29/97	Cable For DPDT - 7 Conductors.
S-W060	6	01/07/2009	Wire, UL/CSA, Black Teflon, 18GA
S-W061	6	01/07/2009	Wire, UL/CSA, Blue Teflon, 18GA
S-W062	6	01/07/2009	Wire, UL/CSA, Red Teflon, 18GA
S-W063	5	01/07/2009	Wire, UL/CSA, Green Teflon, 18GA
S-W068	-	09/01/1992	Wire, UL/CSA, Red W/ White Stripe Teflon, 18GA
S-W069	-	09/01/1992	Wire, UL/CSA, Blue W/ White Stripe Teflon, 18GA
S-W070	-	09/01/1992	Wire, UL/CSA, Black W/ White Stripe Teflon, 18GA
S-W085	2	04/15/05	Wire, Nuclear Grade Silicone, 16GA

These drawings are common to Baseefa08ATEX0360X and IECEx BAS 08.0122X

20 Certificate History

Certificate No.	Date	Comments
Baseefa08ATEX0360X	5 January 2009	The release of the prime certificate. The associated test and assessment against the requirements of EN 60079-0: 2006 and EN 60079-1: 2004 is documented in Test Report No. GB/BAS/ExTR08.0252/00.
Baseefa08ATEX0360X/1	4 February 2009	This supplement introduced an alternative model designation of N7-000-P(XX), for the Model 73-13529-H* High Temperature Proximity Switch. The associated assessment is documented in Test Report GB/BAS/ExTR09.0023/00.

Certificate No.	Date	Comments
Baseefa08ATEX0360X/2	3 June 2009	This supplement extended the scope of the certificate to include dust environments via compliance with EN 61241-0: 2006 and EN 61241-1: 2004, including the revision of the equipment marking in accordance with these standards. It also introduced an increase in switch ratings. The associated assessment is documented in Test Report GB/BAS/ExTR09.0108/00
Baseefa08ATEX0360X/3	6 April 2010	This supplement introduced a revision and renumbering of part and assembly drawings, along with additional and alternative type designations for existing units. An alternative body profile, designated the Type R7, was also introduced. The associated assessment is documented in Test Report GB/BAS/Ex.TR10.0037/00
Baseefa08ATEX0360X/4	6 June 2012	This supplement confirms the current design meets the requirements of EN 60079-0: 2011, EN 60079-1: 2007 and EN 60079-31: 2009 (superseding EN 61241-0 and EN 61241-1), including the revision of the equipment marking in accordance with these standards. An amendment was carried out to the ambient temperature / Temperature Class combinations including the introduction of a T4/T135°C option and a common -40°C lower ambient. A Type 74 Series switch and Type CX and DX body styles were introduced. The associated assessment is documented in Test Report GB/BAS/ExTR12.0152/00.
Baseefa08ATEX0360X/5	5 April 2013	This supplement introduced the Type 71 Series switch. The associated assessment is documented in Test Report GB/BAS/ExTR13.0078/00.
Baseefa08ATEX0360X/6	18 February 2014	This supplement introduced a variation to the Type 73 Series switch with a temperature range of -60°C to +50°C, along with clarification of the voltage and current ratings. It also confirms that the current design meets the requirements of EN 60079-0: 2012. The associated assessment is documented in Test Report GB/BAS/ExTR13.0211/00.
Baseefa08ATEX0360X/7	9 June 2015	This supplement introduced new Type 72 and Type 76 models, along with a new cable wire and alternative temperature class and ambient temperature combinations, depending on integral cable type. It also confirms that the current design meets the requirements of EN 60079-0: 2012: A11: 2013, EN 60079-1: 2014 and EN 60079-31: 2014. The associated assessment is documented in Test Report GB/BAS/ExTR15.0150/00.
Baseefa08ATEX0360X Issue 8	6 September 2023	This issue of the certificate incorporates previously issued primary & supplementary certificates into one certificate and confirms the current design meets the requirements of EN IEC 60079-0: 2018. The associated assessment is documented in Test Report GB/BAS/ExTR21.0096/00.
For drawings applicable to each issue, see original of that issue.		