

EC - TYPE EXAMINATION CERTIFICATE

Equipment or Protective System Intended for use in Potentially Explosive Atmospheres Directive 94/9/EC

- 3 EC - Type Examination Certificate Number: **Baseefa14ATEX0013X – Issue 3**
- 4 Equipment or Protective System: **Euroswitch**
- 5 Manufacturer: **Longvale Limited**
- 6 Address: **Needwood, Burton-upon-Trent, Staffordshire, DE13 9PD**
- 7 This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
- 8 Baseefa, Notified Body number 1180, in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.
- The examination and test results are recorded in confidential Report No's. **See certificate history**
- 9 Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN 60079-0: 2012 + A11: 2013 EN 60079-11: 2012
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 equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.
- 11 This EC - TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified equipment or protective system. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.
- 12 The marking of the equipment or protective system shall include the following :
- See schedule**

Baseefa Customer Reference No. **5323**

Project File No. **15/0798**

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R S SINCLAIR
GENERAL MANAGER

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Schedule

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Certificate Number Baseefa14ATEX0013X – Issue 3

15 Description of Equipment or Protective System

The euroswitch range of proximity sensors consist of up to two sets of volt-free switch contacts, either normally-open, normally-closed or change-over, which are actuated by either an external or integral magnet.

The proximity sensors come in various shapes, sizes and external materials of construction (stainless steel, brass, plastic). In all cases the switch contacts are encapsulated into the outer enclosure.

Electrical connections are made to the Gas and Dust certified proximity sensors via an integral cable or separately certified Ex e terminals in a terminal chamber.

Marking for the **METALLIC Group IIC & IIIC** versions (excluding LFM versions) as detailed on drawing ENG002:

Ui	= 30V
Ii	= 250 mA
Pi	= 1.3 W
Ci	= 0 or 120 pF/m of cable for non-wireable types
Li	= 0 or 0.7 µH/m of cable for non-wireable types
The Wireable types shall be marked (metallic IP66/67 enclosures only)	
⊕ II 1G	⊕ II 1D
Ex ia IIC T4 Ga (-60°C ≤ Ta ≤ +125°C)	Ex ia IIIC T135°C IP66/67 Da (-60°C ≤ Ta ≤ +125°C)
Ex ia IIC T6 Ga (-60°C ≤ Ta ≤ +80°C)	Ex ia IIIC T85°C IP66/67 Da (-60°C ≤ Ta ≤ +80°C)
The Non-Wireable types with PVC integral cable types shall be marked	
⊕ II 1G	⊕ II 1D
Ex ia IIC T6 Ga (-20°C ≤ Ta ≤ +80°C)	Ex ia IIIC T85°C IP66/67 Da (-20°C ≤ Ta ≤ +80°C)
The Non-Wireable types with Polyolefin integral cable types shall be marked	
⊕ II 1G	⊕ II 1D
Ex ia IIC T4 Ga (-60°C ≤ Ta ≤ +125°C)	Ex ia IIIC T135°C IP66/67 Da (-60°C ≤ Ta ≤ +125°C)
Ex ia IIC T6 Ga (-60°C ≤ Ta ≤ +80°C)	Ex ia IIIC T85°C IP66/67 Da (-60°C ≤ Ta ≤ +80°C)

Marking for the **METALLIC Group IIC & IIIC** versions (LFM versions only) as detailed on drawing ENG002:

Ui	= 30V
Ii	= 250 mA
Pi	= 1.3 W
Ci	= 0 or 120 pF/m of cable for non-wireable types
Li	= 0 or 0.7 µH/m of cable for non-wireable types
The Wireable types shall be marked (metallic IP66/67 enclosures only)	
⊕ II 1G	⊕ II 1D
Ex ia IIC T4 Ga (-60°C ≤ Ta ≤ +105°C)	Ex ia IIIC T185°C IP66/67 Da (-60°C ≤ Ta ≤ +125°C)
Ex ia IIC T6 Ga (-60°C ≤ Ta ≤ +55°C)	Ex ia IIIC T140°C IP66/67 Da (-60°C ≤ Ta ≤ +80°C)
The Non-Wireable types with PVC integral cable types shall be marked	
⊕ II 1G	⊕ II 1D
Ex ia IIC T6 Ga (-20°C ≤ Ta ≤ +55°C)	Ex ia IIIC T140°C IP66/67 Da (-20°C ≤ Ta ≤ +80°C)
The Non-Wireable types with Polyolefin integral cable types shall be marked	
⊕ II 1G	⊕ II 1D
Ex ia IIC T4 Ga (-60°C ≤ Ta ≤ +105°C)	Ex ia IIIC T185°C IP66/67 Da (-60°C ≤ Ta ≤ +125°C)

Marking for the NON-METALLIC Group IIC & IIIC versions as detailed on drawing ENG005:

Ui	= 30V
Ii	= 250 mA
Pi	= 650 mW
Ci	= 0 or 120 pF/m of cable for non-wireable types
Li	= 0 or 0.7 µH/m of cable for non-wireable types
The Non-Wireable types with PVC integral cable types shall be marked	
⊕ II 1G	⊕ II 1D
Ex ia IIC T6 Ga (-20°C ≤ Ta ≤ +80°C)	Ex ia IIIC T75°C IP54 Da (-20°C ≤ Ta ≤ +70°C)
The Non-Wireable types with Polyolefin integral cable types shall be marked	
⊕ II 1G	⊕ II 1D
Ex ia IIC T4 Ga (-60°C ≤ Ta ≤ +125°C)	Ex ia IIIC T75°C IP54 Da (-20°C ≤ Ta ≤ +70°C)
Ex ia IIC T6 Ga (-60°C ≤ Ta ≤ +80°C)	

The Part Number format for the metal switches from drawing SWM3 can be summarised as follows

Switch Type/Description	XX	-	X	2	X	X	-	X	
Euroswitch (reed switches only)	ES	-					-		
Ferrous switch (magnetic assembly only)	FS	-					-		
Valve position switch (reed switches only)	VIP	-					-		
Safety switch (reed switches only)	ESI	-					-		
80 x 20 x 25 rectangular switch	ES only	-	1				-		
55 x 20 x 25 rectangular switch	ES only	-	2				-		
M18 x 1 x 80mm cylindrical switch	ES only	-	3				-		
M18 x 1 x 55mm cylindrical switch	ES only	-	4				-		
5/8" UNF x 92mm cylindrical switch	ES only	-	5				-		
55 x 20 x 25 rectangular switch	ES only	-	6				-		
35 x 13 x 16 rectangular switch	ES only	-	2S				-		
67 x 15 x 22 rectangular switch	ES only	-	44				-		
80 x 16 x 21 rectangular switch	ES only	-	BZ18				-		
M18 x 1 x 80mm cylindrical switch	FS only	-	A				-		
5/8" UNF x 92mm cylindrical switch	FS only	-	B				-		
M18 x 1 x 92mm cylindrical switch	FS only	-	C				-		
5/8" UNF x 110mm cylindrical switch	FS only	-	D				-		
M18x1 x 110mm cylindrical switch	FS only	-	E				-		
3/4"-16UNF x 148mm cylindrical switch	FS only	-	F				-		
5/8" UNF x 70mm cylindrical switch	FS only	-	G				-		
91 x 22 x 36 rectangular safety switch		-	SS				-		
Brass housing		-			1		-		
Stainless Steel housing		-			2		-		
PVC cable		-				1	-		
Polyolefin 3 or 6 core cable		-				2	-		
PVC 6 core cable		-				3	-		
1A Switching (2000, 4000 6000 series)		-					-	A	
20W Reed (1000, 3000 5000 series)		-					-	B	
3A Switching N/O (1000, 3000 series)		-					-	C	
D.P.C.O (2 reeds, not 6000 series)		-					-	D	
Earth wire (FS series only)		-					-	E	

Switch Type/Description	XX	-	X	2	X	X	-	X	
Fully Potted		-					-	FP	
Lead wires (FS series only)		-					-	L	
Wireable (ES-3000, 4000, 5000 & FS series only)		-					-	W	
Wireable side entry (ES-3000, 4000, 5000 & FS series only)		-					-	WL	
Wireable side entry with rotating head (ES-3000, 4000, 5000 & FS series only)		-					-	WLR	
Line Fault Monitoring (LFM) versions (ES-1000, 3000, 4000 & 5000 series only)		-					-	LFM	

The Part Number format for the non-metallic switches from drawing SPN01 can be summarised as follows:

65 x 15 x 25 Rectangular Switch	ESI	-	8	2	0	X	-	X	
PVC cable	ESI	-				1	-		
Polyolefin 3 or 6 core cable	ESI	-				2	-		
PVC 6 core cable	ESI	-				3	-		
Single pole normally open	ESI	-					-	SR	
Double pole changeover	ESI	-					-	D	

Cylindrical Switches	ESI	-	XX	X	-	X	
M12 x 1 x 60mm cylindrical switch	ESI	-	M12		-		
M18 x 1 x 60mm cylindrical switch	ESI	-	M18		-		
Single pole normally open	ESI	-		PSR	-		
Single pole changeover	ESI	-		PCR	-		
Short housing	ESI	-			-	K40	
Double pole changeover	ESI	-			-	DPDT	

28 x 9 x 16 Rectangular Switch	ESI-V3	XX	
Single pole normally open	ESI-V3	SR	
Single pole changeover	ESI-V3	CR	

The Part Number format for other switches can be summarised as follows:

Valve Position Switch (4-wire)	X	-	VIP	-	X	
Plastic housing	MI	-	VIP	-	4	
Stainless Steel housing	MS	-	VIP	-	I	

The customer special switch types can be summarised as follows:

DIFFERENTIAL PRESSURE SWITCH	ESI	-	VDHA	-	XXXX	
Single Pole Changeover – Titanium	ESI	-	VDHA	-	1035	
Single Pole Changeover – Stainless Steel	ESI	-	VDHA	-	700	
Single Pole Changeover – Stainless Steel	ESI	-	VDHA	-	450	

80 x 20 x 25 rectangular switch – 5m of pvc cable	ES only	-	HLS-25i
80 x 20 x 25 rectangular switch – 10m of pvc cable	ES only	-	HLS-210i

16 Report Number

See certificate history

17 Specific Conditions of Use

1. Non-metallic proximity sensors may pose an electrostatic risk. This should be taken into account during

2. Metallic proximity sensors or metallic parts of non-metallic proximity sensors may pose an electrostatic risk if not earthed. This should be taken into account during installation.
3. Integral cables shall be fixed and effectively protected against damage as required of a Type B cable as defined in clause 9.5.3 of IEC 60079-25: 2010.
4. External cabling to the proximity sensors shall use either type A or type B cable as defined in clause 9.5.2 & 9.5.3 of IEC 60079-25: 2010.
5. Junction boxes used to extend the sensor cabling, that are located in a dust hazardous area must be separately certified and appropriate for use in that hazardous area.
6. Where a sensor has two sets of switching contacts, both sets of switching contacts are considered to be part of the same single intrinsically safe circuit, not separate intrinsically safe circuits.
7. The VDHA type euroswitch bodies may be manufactured from Titanium and so must be mounted in such a way as to avoid impact or friction.

18 Essential Health and Safety Requirements

All relevant Essential Health and Safety Requirements are covered by the standards listed at item 9.

19 Drawings and Documents

New drawings submitted for this issue of certificate.

Number	Sheet	Issue	Date	Description
10-106	1 of 1	A	20/11/15	10-601 CS-601 Body
70-508	1 of 1	07	21/09/15	LID 3 Wireable Series Lid
70-510	1 of 1	08	21/09/15	70-510 FS-A-WL
70-511	1 of 1	06	21/09/15	LID 4 WL-LID
70-513	1 of 1	06	21/09/15	70-513 FS-D-WL
70-520	1 of 1	06	21/09/15	70-520 FS-HEAD-WLR

The above drawings are common to, and held with, Certificate IECEx BAS 14.0003X.

Current drawings which remain unaffected by this issue.

Number	Sheet	Issue	Date	Description
ENG002	1 of 1	7	03/07/15	Marking Details for METAL Exia Euroswitches
ENG005	1 of 1	1	08/09/14	Marking Details for Non Metallic Exia Euroswitches
SPN01	1 of 1	1	11/11/13	Non metallic part numbers
70-011	1 of 1	001	18/12/13	Ferro Switch Cartridge Assy
70-512	1 of 1	03	08/01/14	Boss for side entry Wireable series metric
70-521	1 of 1	01	22/01/14	70-521 FS-A-WLR-SWITCH
70-522	1 of 1	01	22/01/14	70-522 FS-B-LR-SWITCH
70-523	1 of 1	01	28/01/14	70-523 FS-D-WLR
70-524	1 of 1	01	18/09/14	70-524 FS-F-WLR-SWITCH
70-525	1 of 1	01	22/01/14	70-525 WLR INTERNAL PLATE
70-526	1 of 1	2	02/04/14	ES-VDHA-1035 BODY
70-529	1 of 1	02	09/01/14	Switch body FS-G series
70-531	1 of 1	2	02/04/14	ES-VDHA-700 BODY
70-532	1 of 1	2	02/04/14	ES-VDHA-450 BODY
70-609	1 of 1	01	14/07/14	70-609 PCB 24 for WLR Series with Earth

Number	Sheet	Issue	Date	Description
BOD 1	1 of 1	1	11/01/05	Outline dimensions for M-VIP-M
CS 101	1 of 1	C	08/01/14	1000 Series body
CS 201	1 of 1	C	08/01/14	2000 & 6000 Series body
CS 301	1 of 1	3	08/01/14	3000 Series body
CS-301W	1 of 1	03	08/01/14	ES-3000W Housing (CS-301W)
CS-401	1 of 1	3	08/01/14	4000 Series body
CS-401W	1 of 1	03	08/01/14	ES-4000W Housing (CS-401W)
CS 4401	1 of 1	B	08/01/14	44000 Series body
CS-501	1 of 1	04	09/01/14	CS-501 Body
CS-501W	1 of 1	04	21/01/14	ES-5000W Housing (CS-501W)
CS-8000	1 of 1	01	22/11/13	Euroswitch CS-8000
CS-A01	1 of 1	2	08/01/14	Ferrous sensor FS-A series body
CS-B01	1 of 1	2	08/01/14	Ferrous sensor FS-B series body
CS-BZ18	1 of 1	02	08/01/14	Latching switch
CS-C01	1 of 1	2	08/01/14	Ferrous sensor FS-C series body
CS-D01	1 of 1	2	08/01/14	Ferrous sensor FS-D series body
CS-E01	1 of 1	2	08/01/14	Ferrous sensor FS-E series body
CS-F01	1 of 1	2	08/01/14	Ferrous sensor FS-F series body
CS-M2	1 of 1	2	08/01/14	ES-2S Body
CS-SS	1 of 1	07	08/01/14	Euroswitch Model: ESI-SS221
CS-V3	1 of 1	1	11/11/13	V3 series body
FA05	1 of 1	6	11/11/13	Final assembly drawing for ES1000 & 3000 PVC cable
FA06	1 of 1	5	11/11/13	Final assembly drawing for ES2000 & 4000 PVC cable
FA07	1 of 1	6	11/11/13	Final assembly drawing for ES1000 & 3000 Polyolefin cable
FA08	1 of 1	6	11/11/13	Final assembly drawing for ES2000 & 4000 Polyolefin cable
FA09	1 of 1	6	11/11/13	Final assembly drawing for ES5000 PVC & Polyolefin cable
FA15	1 of 1	6	22/11/13	Final assembly drawing for ES6000 & 1000D
FA17	1 of 1	01	10/05/06	Final Assembly for M-VIP-M
FA38A	1 of 1	2	11/11/13	Final assembly drawing for FS-A Polyolefin cable
FA39A	1 of 1	2	11/11/13	Final assembly drawing for FS-B & FS-C PVC & Polyolefin cable
FA40A	1 of 1	2	11/11/13	Final assembly drawing for FS-B & FS-C PVC leads
FA41A	1 of 1	2	11/11/13	Final assembly drawing for FS-D & FS-E PVC & Polyolefin cable
FA42A	1 of 1	2	11/11/13	Final assembly drawing for FS-D & FS-E PVC leads
FA43	1 of 1	5	07/02/14	Final assembly drawing for ES-3000-D PVC & Polyolefin cable
FA44	1 of 1	5	07/02/14	Final assembly drawing for ES-5000-D PVC & Polyolefin cable
FA45A	1 of 1	2	11/11/13	Final assembly drawing for FS-F PVC & Polyolefin cable
FA46A	1 of 1	2	11/11/13	Final assembly drawing for FS-F PVC leads
FA47	1 of 1	5	07/02/14	Final assembly drawing for ES-4000-D PVC & Polyolefin cable
FA49	1 of 1	2	11/11/13	Final assembly drawing for MS-VIP
FA-50	1 of 1	02	26/11/13	Final assembly drawing for MODEL – EZ-BZ18
FA-53	1 of 1	06	10/07/14	Final Assembly for ES-WL / FS-WL Series
FA-54	1 of 1	06	10/07/14	Final Assembly for ES-W / FS-W Series
FA55	1 of 1	1	11/11/13	Final assembly drawing for ESI-V3 series
FA56	1 of 1	1	11/11/13	Final assembly drawing for ESI-M12 series
FA57	1 of 1	1	23/11/13	Final assembly drawing for ES8000 series
FA59	1 of 1	001	27/11/13	Final assembly drawing for ESI-M18, ESI-M18-K40, ESI-M18-DBDT

Number	Sheet	Issue	Date	Description
FA61	1 of 1	02	10/07/14	Final Assembly Drawing for FS-A-WLR & FS-B-WLR
HSRS 1	1 of 1	4	08/01/14	Reed switch for ES1000(D), 3000(D), 5000(D) & BZ18 and ESI-M12, M18 & 8000 series
HSRS 2	1 of 1	4	08/01/14	Reed switch for ES2000, 4000, 6000, 1000-B, 3000-B, 5000-B & ESI-M12PCR-K40, M18PCR-K40, 8201-D & V3-CR
IBT/IBT2	1 of 1	1	22/11/13	Body tubes for ES switches & ESI-M12 series
LFMC	1 of 1	1	03/07/15	Line Fault Monitoring Circuit
M18	1 of 1	001	27/11/13	M18 Body tube
MS-VIP	1 of 1	03	09/01/14	MS-VIP Housing (EExd)
PCB 010	1 of 1	2	07/01/14	PCB for MS-VIP & M-VIP
PCB 04	1 of 1	3	07/01/14	PCB for ES1000, 3000 & 5000 series
PCB 05	1 of 1	3	07/01/14	PCB for ES1000-B, 2000, 4000 & 44000 series
PCB 06	1 of 1	4	07/01/14	PCB for ES1000-B, 4000 & 44000 series
PCB 11	1 of 1	1	19/04/06	PCB for Line Fault Monitoring
PCB 19	1 of 1	02	23/01/14	PCB 19 for Wireable series proximity switch
PCB 21	1 of 1	03	23/01/14	PCB 21 for Wireable series proximity switch
PRC 5	1 of 1	4	10/01/14	PVC cable for ES1000, 3000 & 5000 series
PRC 6	1 of 1	4	10/01/14	PVC cable for ES2000, 4000 series, FS series & MS-VIP
PRC 7	1 of 1	4	09/01/14	Polyolefin cable for ES1000, 3000 & 5000 series
PRC 8	1 of 1	5	09/01/14	Polyolefin cable for ES2000, 4000 series, FS series & MS-VIP
PRC 9	1 of 1	3	09/01/14	Single PVC leads for ES6000 series switches & other double pole changeover switches
PRC 12	1 of 1	1	15/05/06	Thermorad cable for M-VIP-MA
PRC 13	1 of 1	3	09/01/14	PVC cable for double pole changeover switches ES1000, ES3000 & ES5000 series
PRC 14	1 of 1	3	09/01/14	PVC cable for double pole changeover switches ES4000 & ES6000 series
PRC 16	1 of 1	2	09/01/14	Single PVC leads for FS series switches
RS 2	1 of 1	1	08/01/14	Reed switch
S1731	1 of 1	3	08/01/14	Reed switch for MS-VIP, MS-VIP-1 & MS-VIP-4
SWM3	1 of 1	8	12/06/15	Switch part number matrix – metal housing

The above drawings are common to, and held with, Certificate IECEx BAS 14.0003X.

20 Certificate History

Certificate No.	Date	Comments
Baseefa14ATEX0013X	4 March 2014	The release of the prime certificate. The associated test and assessment is documented in Test Report No. GB/BAS/ExTR 14.0017/00.
Baseefa14ATEX0013X Issue 1	10 November 2014	<p>This issue of the certificate incorporates previously issued primary certificate into one certificate and:</p> <ul style="list-style-type: none"> Clarifies the certification marking Permits the inclusion of additional switch types. Permits updates to existing switches. <p>The associated test and assessment is documented in Test Report No. GB/BAS/ExTR 14.0331/00.</p>

Certificate No.	Date	Comments
Baseefa14ATEX0013X Issue 2	15 July 2015	This issue of the certificates permits the optional fitting of Line Fault Monitoring (LFM) resistors in selected metallic switches. The associated test and assessment is documented in Test Report No. GB/BAS/ExTR 15.0208/00.
Baseefa14ATEX0013X Issue 3	3 December 2015	To introduce types HLS-25i and HLS-210i and permit other minor mechanical changes that do not affect the original assessment. The associated test and assessment is documented in Test Report No. GB/BAS/ExTR 15.0349/00.
For drawings applicable to each issue, see original of that issue.		