



1 **TYPE EXAMINATION CERTIFICATE**

2 Equipment intended for use in Potentially Explosive Atmospheres Directive 94/9/EC

3 Certificate Number: **Sira 12ATEX4176X** Issue: **0**

4 Equipment: **Surge Protector Fisco Field Device**

5 Applicant: **Pepperl+Fuchs GmbH**

6 Address: **Lilienthalstrasse 200
68307 Mannheim
Germany**

7 This equipment and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

8 Sira Certification Service certifies that this equipment has been found to comply with the Essential Health and Safety Requirements that relate to the design of Category 3 equipment, which is intended for use in potentially explosive atmospheres. These Essential Health and Safety Requirements are given in Annex II to European Union Directive 94/9/EC of 23 March 1994.

The examination and test results are recorded in the confidential reports listed in Section 14.2.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule of this certificate, has been assessed by reference to:

EN 60079-0:2012

EN 60079-11:2012

EN 60079-15:2010

10 If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

11 This TYPE EXAMINATION CERTIFICATE relates only to the design of the specified equipment, and not to specific items of equipment subsequently manufactured.

12 The marking of the equipment shall include the following:



II 3 G

Ex ic IIC T4

Ex nAc IIC T4

Ta = -40°C to +70°C

C Ellaby
Deputy Certification Manager

Project Number 26597

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SCHEDULE

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13 DESCRIPTION OF EQUIPMENT

The TPH-LBF*, TCP-LBF* and SCP-LBF* Surge Protector Modules are used to protect Fieldbus equipment from damage caused by voltage surges and secondary lightning strikes in accordance with the requirements of EN 60079-25, Clause 12, "Protection against Lightning and other Electrical Surges".

The pluggable units are intended to fit directly into Fieldbus Power Hubs, Segment Protectors and Field Barriers, providing trunk and spur connections when installed in a Zone 2 hazardous area. The modules contain surge protection components and connections for Fieldbus components (protected side) and bus cables (unprotected side). The different module types are configured to allow the cable screen/shield to either connect directly to earth or indirectly through a gas discharge tube (GDT). An optional Diagnosis PCB is used for monitoring, measuring and recording over-voltage events and to predict the failure of a module. The TCP-*** type module has additional terminals to enable a bus terminator to be connected.

Rating

The Surge Protectors have the following electrical ratings:

TPH-LBF-IA1.36.DE.* and TCP-LBF-IA1.36.IE.*	
Ambient temperature	-40°C to +70 °C
Rated voltage	9 to 32 V
Rated current	0 to 600 mA
Series resistance	2 x 1 Ω

SCP-LBF-IA1.36.DE.*	
Ambient temperature	-40°C to +70 °C
Rated voltage	9 to 32 V
Rated current	0 to 250 mA

The equipment has the following safety description:

MODELS	Zone	ATEX Certification Code	ATEX Marking	Entity Parameters	
TCP-LBF-IA1.36.IE.0	2	Ex nAc IIC T4	II 3G	Ui	≤ 33 V
TCP-LBF-IA1.36.IE.1				li	≤ 600 mA
TPH-LBF-IA1.36.DE.0	2	Ex ic IIC T4	II 3G	Ui	≤ 33 V
TPH-LBF-IA1.36.DE.1				li	≤ 600 mA
SCP-LBF-IA1.36.IE.0				Ci	≤ 2nF
SCP-LBF-IA1.36.IE.1				Li	≤ 100nH

Optional electrical earth bonding bars, type ACC-LBF-EB*** are available for the earth bonding of the TPH-*** and SCP-*** Surge Protection Modules.



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14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report number	Comment
0	18 October 2012	R26597A/00	The release of the prime certificate.

15 SPECIAL CONDITIONS FOR SAFE USE

- 15.1 The function, performance and protection provided by these devices with respect to the effects of abnormal transient energy from lightning or other electrical surges is considered outside of the scope of the standards listed on this certificate.

The following conditions shall be considered:

For Intrinsic Safety 'ic':

- Pay attention to avoid electrostatic discharges while operating the installed device. Avoid electrostatic charge.
- The Surge Protection Devices do not meet the requirement of EN 60079-11, clause 6.3.13, Dielectric Strength Requirements, between the intrinsically safe circuit and the parts that may be earthed, due to presence of Gas Discharge Tubes.
- The Surge Protection Devices shall be fitted in a protective enclosure providing a degree of protection of at least IP 54, which shall comply with EN 60079-0.

For nAc

- Pay attention to avoid electrostatic discharges while operating the installed device. Avoid electrostatic charge.
- The Surge Protection Devices shall be fitted in a protective enclosure providing a degree of protection of at least IP 54, which shall comply with EN 60079-0 and EN 60079-15.
- Connection or disconnection of energized non-intrinsically safe circuits is only permitted in the absence of a hazardous atmosphere.
- The field wiring connections shall either be mechanically secured or shall require a separation force of at least 15 N.
- The Surge Protection Devices do not meet the requirement of EN 60079-15, clause 6.5.1, Electric Strength, Insulation from Earth or Frame, due to presence of Gas Discharge Tubes.

16 ESSENTIAL HEALTH AND SAFETY REQUIREMENTS (EHSRs)

The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed reports listed in Section 14.2.

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17 CONDITIONS OF CERTIFICATION

- 17.1 The use of this certificate is subject to the Regulations Applicable to Holders of Sira Certificates.
- 17.2 Holders of Type Examination Certificates are required to comply with the production control requirements defined in Article 8 of directive 94/9/EC.

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Certificate Annexe

Certificate Number: Sira 12ATEX4176X
Equipment: Surge Protector Fisco Field Device
Applicant: Pepperl+Fuchs GmbH



Issue 0

Drawing No.	Sheets	Rev.	Date (Sira stamp)	Title
16-0878SR-01	1 to10	-	28 Sep 12	Schematics - Surge Protection Modules for Fieldbus Products
16-0878SR-02	1 to 4	-	28 Sep 12	Relevant Components - Surge Protection Modules for Fieldbus Products
16-0878SR-03	1 to 10	-	28 Sep 12	Component Set-Ups - Surge Protection Modules for Fieldbus Products
16-0878SR-04	1 to 5	-	28 Sep 12	Mechanical Parts - Surge Protection Modules for Fieldbus Products
16-0878SR-05	1 to 9	-	28 Sep 12	Layout - Surge Protection Modules for Fieldbus Products
16-0878SR-07	1 to 7	-	28 Sep 12	Assembling - Surge Protection Modules for Fieldbus Products
16-0878SR-10	1 to 9	-	28 Sep 12	Labels - Surge Protection Modules for Fieldbus Products

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