



1 **TYPE EXAMINATION CERTIFICATE**

2 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

3 Certificate Number: **Sira 12ATEX4154X** Issue: **1**

4 Equipment: **Enclosure Leakage Sensor ELS-1*****

5 Applicant: **Pepperl+Fuchs GmbH**

6 Address: Lilienthalstrasse 200
68307 Mannheim
Germany

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

8 CSA Group Netherlands B.V. certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design of Category x equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

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 to this certificate, has been assured by compliance with the following documents:

IEC 60079-0:2011 Ed. 6

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 Specific Conditions of Use identified 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. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.

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 +80°C

Project Number 2286

Signed: 

Title: Director of Operations

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CSA Group Netherlands B.V.
Utrechtseweg 310,
6812 AR, Arnhem,
Netherlands



SCHEDULE

TYPE EXAMINATION CERTIFICATE

Sira 12ATEX4154X
Issue 1

13 DESCRIPTION OF EQUIPMENT

The type ELS-1*** Enclosure Leakage Sensor is used as a water ingress sensor, mainly for Fieldbus field devices. The sensor detects water in the installed environment and sends the status information to the Pepperl+Fuchs Fieldbus Couplers with integrated physical layer diagnostics. The model number has a suffix of up to three unspecified characters.

The sensor has two permanently attached connection wires and can be connected directly to the Fieldbus. The functional supply voltage range of the sensor is 9 VDC to 33 VDC. The ELS-1*** is equipped with a dual-colour LED, giving a visual indication of the sensor status, which can flash either green in the idle state or red in the alarm state, indicating the presence of water.

The electronic components of the Enclosure Leakage Sensor are mounted on a single sided printed circuit board (PCB). A plastic housing shell is glued to the PCB and all components, beside the sensor electrodes, are encapsulated into the enclosure. In order to keep the LED visible, a small dot of transparent adhesive is used to glue the LED to the inner side of the housing. The power supply connection wires are soldered onto the PCB. The sensor electrodes have been assessed as intrinsically safe and meeting the requirements for Ex [ic] IIC. This has not been marked on the equipment.

The equipment has the following input parameters:

FISCO and/or Entity parameters		
EN 60079-11:2012 (Ex ic)		EN 60079-15:2010 (Ex nAc)
Ui	= 33V	Vin = 33 V
Li	= 0	
Ci	= 0	

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report number	Comment
0	4 th September 2012	R26714A/00	The release of prime certificate.
1	15th October 2019	2286	<ul style="list-style-type: none"> Transfer of certificate Sira 12ATEX4154X from Sira Certification Service to CSA Group Netherlands B.V.. Type-Examination Certificate in accordance with 94/9/EC updated to Type-Examination Certificate in accordance with Directive 2014/34/EU. <i>(In accordance with Article 41 of Directive 2014/34/EU, 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. Variations to such</i>

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			<i>Type-Examination Certificates may continue to bear the original certificate number issued prior to 20 April 2016.)</i>
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15 SPECIAL CONDITIONS FOR SAFE USE

Type nA

- 15.1 The type ELS-1*** Enclosure Leakage Sensor shall be fitted in a protective enclosure providing a degree of protection of at least IP54, which shall comply with IEC 60079-0 and EN 60079-15.
- 15.2 Provision shall be made on installation, to provide transient protection to the device not exceeding 140 % of the peak value of rated voltage.
- 15.3 The integral leads shall be installed such that the type of protection "nAc" is maintained.

Type ic

- 15.4 The protective sleeve provided with the equipment shall be installed in accordance with the instructions.
- 15.5 Pay attention to avoid electrostatic discharges while operating the installed device. Avoid electrostatic charge.

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 in the reports listed in Section 14.2.

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Certificate Annexe



Certificate Number: Sira 12ATEX4154X
Equipment: Enclosure Leakage Sensor ELS-1***
Applicant: Pepperl+Fuchs GmbH

Issue 0

Drawing No.	Sheets	Rev.	Date (Sira stamp)	Title
16-0883SR-01	1 to 2	-	14 Aug 12	Schematic
16-0883SR-02	1 to 4	-	14 Aug 12	Relevant Components
16-0883SR-03	1 to 2	-	14 Aug 12	Component set up
16-0883SR-05	1 to 2	-	14 Aug 12	PCB Layout
16-0883SR-07	1 to 4	-	14 Aug 12	Mechanical Design and Assembling
16-0883SR-10	1 to 3	-	14 Aug 12	Type Label

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