

# TYPE EXAMINATION CERTIFICATE



[1]

[2]

**Equipment or Protective System intended for use in Potentially Explosive Atmospheres  
Directive 2014/34/EU**

[3]

Type Examination Certificate Number: **DEMKO 16 ATEX 1750X Rev. 0**

[4]

Product: **P+F 6mm Modules – S1SL-1AI-1C, S1SL-2AI-2C, S1SD-1AI-1U.1, S1SD-1AI-2U, S1SD-1AI-2C, S1SD-1AI-1U, S1SD-1AI-1C.H, S1SD-1TI-1U, S1SD-1AI-1U.2, S1SD-1AI-1U.3 and S1SD-2PF**

[5]

Manufacturer: **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]

UL International Demko A/S 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 Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014.

The examination and test results are recorded in confidential report no. **4787518779**

[9]

Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

**EN 60079-0:2012+A11:2013**

**EN 60079-15:2010**

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 Type examination certificate relates only to the design of the specified product, and not to specific items of product subsequently manufactured.

[12]

The marking of the product shall include the following:

**II 3 G Ex nA IIC T4 Gc**

**Certification Manager**  
Jan-Erik Storgaard

**Certification Body**

This is to certify that the sample(s) of the Product described herein ("Certified Product") has been investigated and found in compliance with the Standard(s) indicated on this Certificate, in accordance with the ATEX Product Certification Program Requirements. This certificate and test results obtained apply only to the product sample(s) submitted by the Manufacturer. UL did not select the sample(s) or determine whether the sample(s) provided were representative of other manufactured product. UL has not established Follow-Up Service or other surveillance of the product. The Manufacturer is solely and fully responsible for conformity of all product to all applicable Standards, specifications, requirements or Directives. The test results may not be used, in whole or in part, in any other document without UL's prior written approval.

**Date of issue:** 2016-07-22

UL International Demko A/S, Borupvang 5A, 2750 Ballerup, Denmark  
Tel. +45 44 85 65 65, [info.dk@ul.com](mailto:info.dk@ul.com), [www.ul.com](http://www.ul.com)



[13]

[14]

## Schedule TYPE EXAMINATION CERTIFICATE No. DEMKO 16 ATEX 1750X Rev. 0

[15]

Description of Product:

These devices are open-type 6mm wide DIN rail mounted modules that perform a variety of functions such as isolation, amplification, signal splitting, transmitter, and temperature conversion. Units may be provided with a backplane connection for a DIN rail mounted backplane accessory that allows adjacent modules to be electrically connected. All modules utilize screw type terminations for field wiring.

The optical radiation output of the product with respect to explosion protection, according to Annex II clause 1.3.1 of the Directive 2014/34/EU is covered in this certificate based on Exception 1) to the scope of EN 60079-28:2015.

Temperature range

The ambient temperature range is -25°C to +70 °C.

Electrical data

Model Number	Function	Electrical Ratings
S1SL-1AI-1C	Passive Isolator, 1 channel	Input:20mA Output:20mA
S1SL-2AI-2C	Passive Isolator, 2 channel	Input:20mA Output:20mA
S1SD-1AI-1U.1	Isolation Amplifier	Power:24VDC, 0.7W Input:10V, 20mA Output:10V,20mA
S1SD-1AI-2U	Isolated Amplifier/Splitter	Power:24VDC, 1.4W Input:10V, 20mA Output:10V,20mA
S1SD-1AI-2C	Transmitter Power Supply/Splitter	Power:24VDC, 1.4W Input:20mA Output:20mA
S1SD-1AI-1C.H	SMART Transmitter Power Supply	Power:24VDC, 1.3W Input:17V, 20mA Output:20mA
S1SD-1AI-1U	Transmitter Power Supply	Power:24VDC, 1.3W Input:17V, 20mA Output:10V,20mA
S1SD-1TI-1U	Universal Temperature Converter	Power:24VDC, 0.8W Output:10V,20mA
S1SD-1AI-1U.2	Bipolar Isolation Amplifier	Power:24VDC, 0.8W Input:10V, 20mV Output:10V,20mA
S1SD-1AI-1U.3	Shunt/mV Isolation Amplifier	Power:24VDC, 0.8W Input:150mV Output:10V,20mA
S1SD-2PF	Power feed module	Input 24VDC, 3A Output 24VDC, 3A

Installation instructions

Supply wiring temperature ratings shall be 0.5-2.5 mm<sup>2</sup> and 105°C minimum.

Terminals shall be torque down to 0.6 Nm.

Devices with suffix 'B' may be used with the In-Rail-Bus system as long as safety caps are installed on both ends of the bus PCB.

Mounting instructions

Devices shall be mounted on a DIN rail.

Routine tests

None

[16]

Descriptive Documents

The scheduled drawings are listed in the report no. provided under item no. [ 8 ] on page 1 of this Type Examination Certificate.

[17]

Special Conditions of Use:

- Install the device in a suitable approved housing (with a minimum of IP54 protection) that meets the requirements of EN 60079-15. Housing shall only be accessible with the use of a tool.
- The equipment shall only be used in an area of not more than pollution degree 2, as defined in EN 60664-1.
- Transient protection shall be provided that is set at a level not exceeding 140 % of the peak rated voltage value at the supply terminals to the equipment.

[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: