[1] # TYPE EXAMINATION CERTIFICATE

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

[3] Type Examination Certificate Number: **DEMKO 14 ATEX 1269806X Rev. 1**

[4] Product: **Associated Apparatus Barrier, Model SK-PC-D2-UU1-10-HS**

[5] Manufacturer: **Pepperl + Fuchs GmbH**

[6] Address: **Lilienthalstrasse 200, 68307 Mannheim Germany1600**

[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. **4787916587.2.1**

[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** **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 [ic] IIC T6 Gc

II 3 G Ex nA [ic IIIB] IIC T6 Gc

Certification Manager
Jan-Erik Storgaard

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: 2014-03-21

Re-issued: 2017-07-28

Certification Body UL International Demko A/S, Borupvang 5A, 2750 Ballerup, Denmark
Tel. +45 44 85 65 65, info.dk@ul.com, www.ul.com

This certificate may only be reproduced in its entirety and without any change, schedule included.

[13] [14]

Schedule
TYPE EXAMINATION CERTIFICATE No.
DEMKO 14 ATEX 1269806X Rev. 1

[15] Description of Product:
Model SK-PC-D2-UU1-10-HS is an open type USB barrier that provides two USB channel connections. It is intended for installation into an ATEX certified, IP54 minimum enclosure and is suitable for installation in Zone 2, Groups IIC hazardous locations. The barrier provides [ic] energy limited field wiring to Zone 2, Group IIC and Zone 22 Group IIIB Hazardous Locations.

For each of the two channels, the barrier provides four lines to the ic intrinsically safe apparatus: the power lines (V+,V-) and the data lines (D+, D-).

Performance Testing
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 -40 °C to +60 °C.

Electrical data

Supply Circuit	[ic] Field Parameters	
9-30Vdc, 500mA max SELV	U_o (V)	4.92
	I_o (mA)	195
	C_o (µF)	32
	L_o (µH)	240
	P_o (mW)	626

Routine tests:
No routine tests necessary.

[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:

- Barrier shall be installed in an enclosure that provides a degree of protection not less than IP 54 in accordance with EN 60079-0.
- Barrier shall only be used in an area of not more than pollution degree 2, as defined in EN 60664-1.

[18] Essential Health and Safety Requirements
The Essential Health and Safety Requirements (EHSRs) covered by the standards listed at item 9

This certificate may only be reproduced in its entirety and without any change, schedule included.

[1] # TYPE EXAMINATION CERTIFICATE

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

[3] Type Examination Certificate Number: **DEMKO 14 ATEX 1269806X Rev. 2**

[4] Product: **Associated Apparatus Barrier, Model SK-PC-D2-UU1-10-HS**

[5] Manufacturer: **Pepperl+Fuchs SE**

[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. **US/UL/ExTR14.0027/02.**

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

EN IEC 60079-0:2018 **EN IEC 60079-0:2018/A11:2024** **EN 60079-7:2015**
EN IEC 60079-7:2015/A1:2018 **EN 60079-11:2012**

Where additional criteria beyond those given here have been used, they are listed at item 18 in 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” listed under item 17 of 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 (marking is provided in the Schedule as a part of item 15, if applicable):

II 3 G Ex ec [ic Gc] IIC T6 Gc

II (3) D [Ex ic Dc] IIIB

Certification Manager
Thomas Wilson

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: 2014-03-21
Re-issued: 2025-04-15

Certification Body UL International Demko A/S, Borupvang 5A, 2750 Ballerup, Denmark
Tel. +45 44 85 65 65, info.dk@ul.com, www.ul.com

This certificate may only be reproduced in its entirety and without any change.

[13] **Schedule**

[14] **TYPE EXAMINATION CERTIFICATE No.**

DEMKO 14 ATEX 1269806X Rev. 2

[15] Description of Product:

Model SK-PC-D2-UU1-10-HS is an open type USB barrier that provides two USB channel connections. It is intended for installation into an ATEX certified, IP54 minimum, enclosure and is suitable for installation in Zone 2, Groups IIC hazardous locations. The barrier provides "[ic]" energy limited field wiring to Zone 2, Group IIC and Zone 22 Group IIIB Hazardous Locations.

For each of the two channels, the barrier provides four lines to the "ic" intrinsically safe apparatus: the power lines (V+,V-) and the data lines (D+, D-).

Performance testing

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 -40 ºC to +60 ºC.

Electrical data

Supply Circuit	[ic] Field Parameters	
9-30Vdc, 500mA max SELV	U_o (V)	4.92
	I_o (mA)	204
	C_o (µF)	190
	L_o (mH)	1.9
	P_o (mW)	565

The following table values of Lo and Co can be applied in combination for gas group IIC:

External capacitance Co (µF)	190	52	28	12	8
At external inductance (µH)	1	2	4	16	50

Routine tests:

No routine tests necessary.

[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] Specific condition(s) of use:

- Barrier shall be installed in an enclosure that provides a degree of protection not less than IP 54 in accordance with EN IEC 60079-0.
- Barrier shall only be used in an area of not more than pollution degree 2, as defined in EN 60664-1.

[18] Essential Health and Safety Requirements:

The Essential Health and Safety Requirements (EHSRs) covered by the standards listed at item 9.

This certificate may only be reproduced in its entirety and without any change.