

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 14 ATEX 1282X Rev. 5**

[4]

Product: **Type Z Purge System**

[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/ExTR14.0029/05**

[9]

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

**EN IEC 60079-0:2018
EN 60079-11:2012
EN IEC 60079-15: 2019**

**EN 60079-2:2014
EN IEC 60079-7: 2015 +A1:2018
EN 60079-31:2014**

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 (3) G Ex ic ec nC [ic Gc] [pzc Gc] IIC T4 Gc (-20°C ≤ Ta ≤ +60°C) Internal & External Mounting versions
- II 3 (3) G Ex ic ec nC [ic Gc] [pzc Gc] IIC T6 Gc (-20°C ≤ Ta ≤ +40°C) Internal & External Mounting versions
- II 3 (3) D Ex ic tc [ic IIIC Dc] [pzc Dc] IIIB T80°C Dc (-20°C ≤ Ta ≤ +60°C) External Mounting version
- II 3 (3) D Ex ic tc [ic IIIC Dc] [pzc Dc] IIIB T60°C Dc (-20°C ≤ Ta ≤ +40°C) External Mounting version
- II 3 (3) D Ex ic tc [ic Dc] [pzc Dc] IIIC T80°C Dc (-20°C ≤ Ta ≤ +60°C) Internal mounting version
- II 3 (3) D Ex ic tc [ic Dc] [pzc Dc] IIIC T60°C Dc (-20°C ≤ Ta ≤ +40°C) Internal Mounting version

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: 2014-09-15

Re-issued: 2022-07-22

Certification Body

UL International Demko A/S, Borupvang 5A, 2750 Ballerup, Denmark
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[14]

Schedule

TYPE EXAMINATION CERTIFICATE No.

DEMKO 14 ATEX 1282X Rev. 5

[15]

Description of Product:

Type Z Purge Control Unit -

| | | | | | |
|------|-----|-----|------|------|------|
| 5500 | -SS | -I | -VAC | -PNO | -LNO |
| I | II | III | IV | V | VI |

I. 5500 – Basic Control Unit Type designation

II. Housing material

| | | |
|-----|---|-----------------|
| -SS | – | Stainless Steel |
| -AA | – | Aluminium |

III. Mounting Configuration

| | | |
|----|---|---|
| -E | – | External Mounting |
| -I | – | Internal Mounting |
| -P | – | Panel Mounting (External Mounting with additional mounting bracket) |

IV. Voltage requirement

| | | |
|------|---|-------------|
| -VAC | – | 100-240Vac |
| -VDC | – | 20 to 30Vdc |

V. Wiring entrance for power connection

| | | |
|------|---|--|
| -PNO | – | No fittings or cable gland |
| -PSH | – | (3) ½ inch stainless steel conduit entrance |
| -xxx | – | any other 3 alphanumeric character combination identifying fittings for M20 threaded hole. Fittings must be Ex certified for use for the specific end application. |

VI. Wiring entrance for low voltage connection

| | | |
|------|---|--|
| -LNO | – | No cable glands |
| -xxx | – | any other 3 alphanumeric character combination identifying fittings for M12 threaded hole. Fittings must be Ex certified for use for the specific end application. |

Type Z Purge Control Vent Accessory Unit–

| | | |
|----------|-----|-----|
| EPV-5500 | -AA | -01 |
| I | II | III |

I. EPV-5500 – Basic Control Vent Type designation

II. Material

| | | |
|-----|---|---|
| -AA | – | Anodized aluminium |
| -SS | – | Body ‘EPV -...-01, 02 &03’: 6061T Al, Cap: 304 or 316 stainless steel |

III. Mounting Configuration

| | | |
|-----|---|--|
| -01 | – | 30 SCFM (850 l/min) max flow, brk. Press. 0.8 in. H2O (2.0 mbar) |
| -02 | – | 20 SCFM (565 l/min) max flow, brk. Press. 1.4 in. H2O (3.5 mbar) |
| -03 | – | 12 SCFM (340 l/min) max flow, brk. Press. 1.5 in. H2O (3.8 mbar) |

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 not covered in this certificate.

Temperature range:

The relationship between ambient temperature and the assigned temperature class is as follows:

| <u>Mounting version</u> | <u>Ambient temperature range</u> | <u>Temperature class</u> |
|---------------------------------------|----------------------------------|--------------------------|
| Internal & External Mounting versions | -20 °C to +60 °C | T4 Gc |
| Internal & External Mounting versions | -20 °C to +40 °C | T6 Gc |
| External Mounting version | -20 °C to +60 °C | T80 °C Dc |
| External Mounting version | -20 °C to +40 °C | T60 °C Dc |
| Internal Mounting version | -20 °C to +60 °C | T80 °C Dc |
| Internal Mounting version | -20 °C to +40 °C | T60 °C Dc |



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[14]

Schedule
TYPE EXAMINATION CERTIFICATE No.
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Electrical data

Intrinsically safe specifications:

The bypass switch has the following entity parameters for customer connections:

Voc = 5.15V
Isc = 5.76 mA
Co = 79 uF
Lo = 100 mH

The temperature sense has the following entity parameters for customer connections:

Voc = 5.15V
Isc = 9.21 mA
Co = 79 uF
Lo = 100 mH

See document 16-0729UL-00 for additional details

Routine tests:

Each piece of equipment defined above has to have successfully passed; before delivery:

Dielectric test in accordance with EN IEC 60079-7:2015 +A1:2018, clause 7.1

[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.

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Special Conditions of Use:

- The main control unit and the EPV vent are the only parts that have been evaluated for the certifications of the system.
- For dust environments, the non-metallic membrane touchpad and display may pose an electrostatic discharge hazard. Use only water damp cloth and allow to air dry for cleaning device. Do not use or install in high charge areas. See IEC 60079-32-1 for further information.
- When mounting the 5500 purge control unit, the unit shall not have the membrane keypad exposed to direct UV light sources and direct sunlight. Example methods of protection include, but are not limited to, indoor applications away from UV sources and outdoor locations under shading. As part of regular inspections, if damage to or deterioration of the membrane keypad is detected the unit is to be taken out of service for repair or replacement.
- When the 5500 purge system is mounted to an enclosure, the complete installation shall be evaluated to the appropriate standards and regulations applicable for the final installation location.
- The purge control unit has a temperature class (T6 or T4) that is dependent on ambient temperature. This temperature shall be considered when mounted to an enclosure, or inside of an enclosure.
- All un-used entry points to the 5500 control unit shall be closed with a properly certified ATEX device suitable for the area of installation with the necessary ingress protection.
- The bypass function shall only be enabled during setup or maintenance and only when the area is known to be non-hazardous.
- The device shall be installed in an area of not more than pollution degree 2 as defined in EN 60664-1.
- The device must be installed in accordance with the manufacturer's installation drawing number 116-B026.

[18]

Essential Health and Safety Requirements

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

Additional information

The Type 5500 purge control unit has in addition passed the tests for Ingress Protection to IP 66 in accordance with EN60529:1991+A1:2000+A2:2013.

