[1] # EU-TYPE EXAMINATION CERTIFICATE

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

[3] EU-Type Examination Certificate Number: **DEMKO 16 ATEX 1640X Rev. 2**

[4] Product: **Purge control system, Model 6500-01-****-***-** and 6500-01-UIC-*****

[5] Manufacturer: **Pepperl & Fuchs AG**

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

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

[8] UL International Demko A/S, notified body number 0539 in accordance with Article 17 of the Council Directive 2014/34/EU of 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.
The examination and test results are recorded in confidential report no. **4789116251.2.1**

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

| | | |
|---|---|---|
| **EN IEC 60079-0:2018** | **EN 60079-2:2014** | **EN 60079-5:2015** |
| **EN 60079-7:2015+A1:2018** | **EN 60079-11:2012** | **EN 60079-31:2014** |

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

[11] This EU-Type Examination Certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by the certificate.

[12] The marking of the product shall include the following:

Options where UIC is included with EPCU:

**II 2 G Ex eb q ib [ib Gb] [pxb Gb] IIC T4 Gb** | **II 2 G Ex eb q ib [ib Gb] [pyb Gb] IIC T4 Gb**

**II 2 D Ex tb ib [ib Db] [pxb Db] IIIC T135°C Db** | **II 2 D Ex tb ib [ib Db] [pyb Db] IIIC T135°C Db**

Options where UIC is panel mounted or otherwise not installed with EPCU:

**II 2 G Ex eb q [ib Gb] [pxb Gb] IIC T4 Gb** | **II 2 G Ex eb q [ib Gb] [pyb Gb] IIC T4 Gb**

**II 2 D Ex tb [ib Db] [pxb Db] IIIC T90°C Db** | **II 2 D Ex tb [ib Db] [pyb Db] IIIC T90°C Db**

UIC:

**II 2 G Ex ib [pxb Gb] IIC T4 Gb** | **II 2 G Ex ib [pyb Gb] IIC T4 Gb**

**II 2 D Ex ib [pxb Db] IIIC T135°C Db** | **II 2 D Ex ib [pyb Db] IIIC T135°C Db**

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**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.

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# Schedule
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[15] Description of Product

The 6500 purge system is designed to be a purge controller system for “pxb” and “pyb” applications.

The system consists of a main control unit and a vent.

The main control unit is made up of the EPCU (Electronic purge control Unit) and the UIC (User Interface controller).The main control unit packages the EPCU and UIC into a single mechanical unit. The EPCU contains the terminal board for customer wiring and performs the power distribution for the rest of the system components (vent, user interface, manifold) and contains the enclosure power relay and auxiliary alarm relay.

The EPCU controls the primary function of the purge unit: Performs the control of purge gas entering the enclosure, determines when an adequate amount of air has been passed through the enclosure and adequate pressure exists within the enclosure to allow power to the enclosure. The EPCU is a dust tight enclosure that allows customer wiring connections through the use of EN 60079-7 (increased safety) where the wiring terminations are spaced adequately apart to prevent wires from touching. The electronics within the EPCU are filled with glass beads, using EN 60079-5 (powder fill) as a protection method. I/O powered in a hazardous environment are protected through EN 60079-11 (intrinsic safety). This includes the UIC, connections for an EPV-6500 vent, a temperature sensor and switch input.

The UIC (user interface controller) is an intrinsically safe device connected to the EPCU via a connector providing power and RS-485 data. It provides the installer/operator a method of setting up and operating the purge controller. As an option, the UIC can be remotely panel mounted and a plain lid is then used on the EPCU.

Model nomenclature:

6500-01-aaaa-bbb-ccc, where

| 6500-01 | -EXT1 | -PNO | -LNO |
|---|---|---|---|
| Series Family | Mounting configuration options | Wiring entrance for power connections (Ex e) | Wiring entrance for IS voltage connections |
| 6500-01 – basic model | | | |
| | EXT1 – external mount | | |
| | PM01 – panel mount version 1 | | |
| | PM02 – panel mount version 2 | | |
| | **** - any other alpha-numeric combination to define a specific mounting configuration | | |
| | | PNO – no fittings or cable gland provided (installer to select suitable fittings) | |
| | | *** - any other 3 character alphanumeric combination to identify fittings | |
| | | | LNO – no fittings or cable gland provided (installer to select suitable fittings) |
| | | | *** - any other 3 character alphanumeric combination to identify fittings |

6500-01-UIC-aaa, where

| 6500-01-UIC | -EXT |
|---|---|
| Series Family | Mounting configuration options |
| 6500-01 – basic model | |
| | EXT – external mount (part of enclosure) |
| | PM01 – panel mount version |

Temperature range:
The ambient temperature range is -20 °C to + 70°C.

Electrical data

Supply voltage: 20-30Vdc 0.6 Amps or 100 to 250Vac, 50/60Hz, 0.2 Amps
Enclosure relays 20-30Vdc or 100 to 250Vac 8A to 60ºC, 5A to 70ºC
Auxiliary relay 20-30Vdc or 100 to 250Vac 2A

Intrinsically safe specifications:
$U_m$ : 250 V

Intrinsic safety entities listed below are subject to the following considerations.

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The parameters are valid when one of the two conditions below is given:
-The total Li of the external circuit (excluding the cable) is < 1% of the Lo value or
-The total Ci of the external circuit (excluding the cable) is < 1% of the Co value.
The parameters are reduced by 50% when both of the two conditions below are given:
-The total Li of the external circuit (excluding the cable) is > 1% of the Lo value and
-The total Ci of the external circuit (excluding the cable) is > 1% of the Co value.

Switch input (IS)
Uo = 9.56V
Io = 19.4mA
Co = 3.6µF
Lo = 90mH
Po = 46mW

RTD input (IS)
Uo = 5.88V
Io = 3.38mA
Co = 43µF
Lo = 100mH
Po = 5mW

Digital valve output (IS
Uo = 27.72V
Io = 109mA
Co = 84nF
Lo = 3mH
Po = 756mW

Proportional valve output (IS)
Uo = 19.11V
Io = 70mA
Co = 251nF
Lo = 7.2mH
Po = 345mW

Vent connections only to be connected to EPV-6500-xx-xx type vent UIC connections only to be connected to 6500-01-UIC-xxx type user interface controller
RS-485 connection Um = 250V

For ambient temperatures below –10 °C and above +60 °C use field wiring suitable for both minimum and maximum ambient temperature.

Mounting instructions
Refer to “Instructions”.

Routine tests
Dielectric strength test of the filling material – EN 60079-5 clause 5.2.2
Dielectric Test – EN 60079-7 clause 7.1
Routine tests for infallible transformers – EN 60079-11 clause 11.2

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

[17] Specific conditions of use:

- When the purge control unit is mounted to an enclosure, the complete unit shall be evaluated to EN 60079-2.
- The non-metallic touchpad and display do not pose an electrostatic discharge hazard under normal use conditions. Use only water damp cloth and allow to air dry for cleaning device. Do not use or install in high charge areas.
- In hazardous dust environment, regularly remove dust to prevent excessive temperature rise.
- Cable glands and/or blanking elements used with this system shall be properly certified for the environment they are being used. Only the cable gland size identified for a particular hole shall be fitted to the hole.
- Attention: The maximum cable length between the Vent or UIC and the control unit is 245ft (74.6m). This is based on worst case cable capacitance (Ccable) of 60pf/ft (197pf/m) and worst-case cable inductance of 0.2µH/ft (0.66µH/m). Further operational reductions may apply. See manual.
- The relay contact circuits shall be externally fused at installation. Each circuit shall have a fuse that is rated for the voltage type being used (AC or DC) with a breaking capacity of at least 1500A. The rating of the fuse for the enclosure power connections shall not exceed 11A. for the Aux relay, it shall not exceed 3A.

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

Additional information
The model 6500-01-****-***-*** has in addition passed the tests for Ingress Protection to IP 64 in accordance with EN60529:1991+A1:2000+A2:2013.