

# EU-TYPE EXAMINATION CERTIFICATE



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

- [3] EU-Type Examination Certificate Number: **DEMKO 08 ATEX 0717128X Rev. 4**
- [4] Product: **Pressure and Temperature Switches**
- [5] Manufacturer: **United Electric Controls**
- [6] Address: **180 Dexter Ave., Watertown, MA 02472 USA**
- [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. **US/UL/ExTR14.0102/03.**
- [9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
- |                            |                        |                         |
|----------------------------|------------------------|-------------------------|
| <b>EN IEC 60079-0:2018</b> | <b>EN 60079-1:2014</b> | <b>EN 60079-31:2014</b> |
|----------------------------|------------------------|-------------------------|
- [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:

II 2 G    Ex db IIC T6 Gb

II 2 D    Ex tb IIIC T85°C Db

### 12 Series Switch with Option M423 Junction Box Only:

II 2 G    Ex db IIC T5 Gb

II 2 D    Ex tb IIIC T100°C Db

**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:** 2008-03-06

**Re-issued:** 2021-09-28

**Notified Body**    UL International Demko A/S, Borupvang 5A, 2750 Ballerup, Denmark  
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# Schedule

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Description of Product

The pressure-operated and temperature switches consist of a stainless steel flameproof switch housing and aluminum or stainless steel main housing. The flameproof switch housing is welded at one end and sealed at the other by a glass-to-metal hermetic seal. The switch housing contains a single or dual micro switch, which can be operated by an operating rod located in the main housing. The electrical wires are permanently mounted by the manufacturer and cannot be replaced. The switches can have an optional certified Cortem junction box with or without terminals located inside the junction box connected via the 1/2" NPT port designated by the M423 suffix. The Cortem junction box is covered under CESI 02 ATEX 091.

Nomenclature for 12 Series Switch:

<u>12</u> I	<u>S</u> II	<u>L</u> III	<u>S</u> IV	<u>N</u> V	<u>X</u> VI	<u>X</u> VII	<u>XXXX</u> VIII
I	12 Series						
II	Main Housing Material S - Stainless Steel A - Aluminum						
III	Electrical Rating L - 125 Vac, 1 A resistive and 28 Vdc, 0.5 A inductive H - 250 Vac, 5 A resistive and 28 Vdc, 3 A inductive						
IV	Number of Switches S - SPDT (single) D - DPDT (dual)						
V	Electrical Conduit N - 1/2 NPT male M - M20 metric thread						
VI	Sensor Type, Pressure Connection or Thermal assembly Different sensor types, pressure connections or thermal assemblies in accordance with manufacturer's Option Chart						
VII	Models, Range Different measuring ranges in accordance with the manufacturer's Model Chart						
VIII	X - Options  Option M423 - ATEX/IECEX Certified Cortem Junction Box Option M460 - External Ground Connection Includes other different accessories/variations that do not affect flameproof properties, electrical ratings, pressure ratings, or temperature ratings as indicated above. Alternate Type Variants indicating customer specification number 12-*****, where "*" is any number that does not affect flameproof properties, electrical ratings, pressure ratings, or temperature ratings as indicated above. The alternate nomenclature is customer specific.						

Option M515 with DIN Connector is not covered by this certificate.

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 ambient temperature range is -50 °C ≤ Tamb ≤ +80 °C.

Option M423 only - ambient temperature range -40 °C ≤ Tamb ≤ +65 °C.

Electrical data

L - 125 Vac, 1 A resistive and 28 Vdc, 0.5 A inductive  
H - 250 Vac, 5 A resistive and 28 Vdc, 3 A inductive

Routine tests

The weld between the switch housing and external disk (or between switch housing and diaphragm) must be helium leak tested on 100% production in accordance with the manufacturer's procedure G-60.

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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.



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**Schedule**  
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[17] Specific conditions of use:

- The wiring to the temperature or pressure switch must only be connected in a safe area or by an approved terminal box certified to EN 60079-0:2012+A11:2013, EN 60079-1:2014, and EN 60079-31:2014 for hazardous locations.
- The epoxy resin shall not be subjected to a temperature greater than 125°C.
- By the installation the wires shall be protected against mechanical damage e.g., by use of conduit.
- Option M515 with DIN Connector is not covered by this certificate.
- An external earth screw is to be used (M460 option) if metal conduit is not used.
- Electrical conduit fitting threaded connection: M20 x 1.5, 7 threads minimum engagement.


[18] Essential Health and Safety Requirements

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

Additional information

The 12 Series Pressure and Temperature Switches have in addition passed the tests for Ingress Protection to IP 66 in accordance with EN60529:1991+A1:2000+A2:2013.



The trademark  will be used as the company identifier on the marking label.

The manufacturer shall inform the notified body concerning all modifications to the technical documentation as described in Annex III to Directive 2014/34/EU of the European Parliament and the Council of 26 February 2014.