

[1] **EC-TYPE EXAMINATION CERTIFICATE**

[2] **Equipment or Protective System intended for use
in Potentially Explosive Atmospheres
Directive 94/9/EC**



[3] EC-Type Examination Certificate Number: **DEMKO 03 ATEX 136051X**

[4] Equipment or Protective System: **Safety Barrier for use with Core Processor**

[5] Manufacturer: **Micro Motion**

[6] Address: **Wiltonstraat 30, 3905 KW Veenendaal, The Netherlands**

[7] This equipment or protective system and any acceptable variation there to is 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 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to design and construction of equipment and protective systems 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. 136051

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN 50014: 1997 E incl. A1+A2 **EN 50020: 2002 E**

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

[11] This EC-Type examination certificate relates only to the design, examination and tests of the specified equipment or protective system in accordance to the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by the certificate.

[12] The marking of the equipment or protective system shall include the following:

II (2) G **[EEx ib] IIC / IIB**

On behalf of UL International Demko A/S

Herlev, 2003-11-17

Karina Christiansen
Certification Manager

UL International Demko A/S

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Certificate: 03 ATEX 136051X

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Schedule

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Description of Equipment or protective system

The product covered by this Certificate is a Ex Safety barrier having a part number P/N 20001737.

Intrinsic safety parameters (as associated apparatus):

U_m : 250 V
 U_o : 17,22 V
 I_o : 484 mA
 P_o : 2,05 W

For IIC:

L_o/R_o : 17,06 μ H/ohm - (L_o : 151,7 μ H) See Note 1.
 C_o : 333 nF

For IIB:

L_o/R_o : 68,2 μ H/ohm - (L_o : 607 μ H) See Note 1.
 C_o : 2,04 μ F

Note 1:

The maximum external inductance L_o is calculated as a sum of the inductance in the Core Processor ($L_i = 30 \mu$ H) and the lump inductance in the cable.

The maximum length of the cable to the sensor is 152 meter and the L_o/R_o ratio shall be calculated for the actual used cable and shall be below the stated L_o/R_o ratio.

In accordance to the Installation drawing the total cable capacitance shall be less than 197 pF / meter.

The apparatus has also been evaluated and been found to comply with EN60079-15:2003. The marking in accordance with EN60079-15 shall be:

Ex II 3 (2) G EEx nA [ib] IIB T4 or EEx nA [ib] IIC T4

Electrical ratings (as Category 3 equipment):

Rated supply voltage: 24 VDC

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Report No.

Project Report No.: 136051-03 (Hazardous Location Testing)

Drawings:

All Scheduled drawings are listed in the document 5820GE002, rev. 2006-06-07. All changes in the Schedule drawings shall be send to UL Int. Demko for evaluation.

UL International Demko A/S

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Special conditions for safe use:

- The ambient temperature: -40°C to $+60^{\circ}\text{C}$.

As associated apparatus:

- The complete specifications for entity parameters (Intrinsically Safe data) given in this Schedule must be passed to the purchaser together with any other relevant information.
- The safety barrier is ~~only for use with Micro Motion Smart Sensors~~ having the Intrinsic safety parameter $U_i: 17.3\text{ V}$, $I_i: 484\text{ mA}$, $P_i: 2.1\text{ W}$, $L_i: 30\text{ }\mu\text{H}$ and $C_i: 2200\text{ pF}$.
- For further information see Installation drawing Type ATEX - D - IS.

As Category 3 equipment:

- For installation in areas, where category 3G equipment is required, the module has to be mounted in an enclosure which is in accordance with EN 60079-15.

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Essential Health and Safety Requirements

Concerning ESR this Schedule verifies compliance with the Ex standards only. The manufacturer's Declaration of Conformity declares compliance with other relevant Directives.

The manufacturer shall inform the notified body concerning all modifications to the technical documentation as described in ANNEX III to Directive 94/9/EC of the European Parliament and the Council of 23 March 1994.

On behalf of UL International Demko A/S

Herlev, 2006-06-08



Karina Christiansen
Certification Manager

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