

[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 00 ATEX 127483**

[4] **Equipment: Hart[®] Transparent Repeater Type 5106BB_ _**

[5] **Manufacturer: PR electronics A/S**

[6] **Address: Lerbakken 10, 8410 Rønde, Denmark**

[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. 127483

[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, EN 50281-1-1:1998 incl. A1**

[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 (1) GD [EEx ia] IIC

On behalf of UL International Demko A/S

**Herlev, 2001-04-20
Revised 2003-12-04**


**Karina Christiansen
Certification Manager**

UL International Demko A/S

Lyskaer 8, P.O. Box 514
DK-2730 Herlev, Denmark
Telephone: +45 44856565
Fax: +45 44856500

Certificate: 00 ATEX 127483

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



**An Affiliate of
Underwriters
Laboratories Inc.®**

Schedule

EC-TYPE EXAMINATION CERTIFICATE No. DEMKO 00 ATEX 127483

[13]

[14]


[15] Description of Equipment or protective system:

The Repeater/Power Supply Type 5106BB__ is designed for mounting on a DIN rail in safe area. The input is a 4-20mA whereas the output may be chosen between 4-20mA or 20-4mA. The product can be delivered in 1 and 2 channel versions. Inputs, outputs and power supply are galvanic separated from each other by means of opto-couplers and a transformer.

Type variants comprised by the certificate:

5106BB

Output	Channels
2: 4 - 20 mA	A: one
9: 20 - 4 mA	B: two

- The Transparent Repeater 5106BB has been evaluated according to EN 50281-1-1: 1998 in order to include D (dust) in this certificate. Therefore the marking plate includes the following:

- Project is updated to EN 50020: 2002 E.

[16]

Report No.:

127483-01 Report
127483-02 Report
127483-03 Report

Drawings:

The Schedule drawings are listed in the document entitled "5106G0".

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.

[17]

Special conditions for safe use:

- For correct installation and use, the manufacturer's manual shall be strictly followed.
- Temperature range: $-20^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$

UL International Demko A/S

Lyskaer 8, P.O. Box 514
DK-2730 Herlev, Denmark
Telephone: +45 44856565
Fax: +45 44856500

Certificate: 00 ATEX 127483
Report: 127483-03

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



An Affiliate of
**Underwriters
Laboratories Inc.®**

P2/3

Schedule

EC-TYPE EXAMINATION CERTIFICATE No. DEMKO 00 ATEX 127483

- Intrinsically safe specifications

Terminals 31, 32 and 33: U_m : 250 V

Terminal 44 to 42,41 and
Terminal 54 to 52,51: U_o : 28 V
 I_o : 91 mA
 P_o : 0,65 W
 L_o : 3 mH
 C_o : 80 nF

Terminal 41 to 42 and
Terminal 51 to 52: U_o : 10 V
 I_o : 2 mA
 P_o : 5 mW
 L_o : 1 H
 C_o : 3 μ F


Terminal nos. 43 and 53 are not connected.

[18] 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.

On behalf of UL International Demko A/S

Herlev, 2003-11-25


Karina Christiansen
Certification Manager

UL International Demko A/S

Lyskaer 8, P.O. Box 514
DK-2730 Herlev, Denmark
Telephone: +45 44856565
Fax: +45 44856500

Certificate: 00 ATEX 127483
Report: 127483-03

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



An Affiliate of
**Underwriters
Laboratories Inc.®**

P3/3