

(1) **TYPE EXAMINATION CERTIFICATE**

(2) Equipment intended for use in potentially explosive atmospheres – Directive 94/9/EC

(3) Type Examination Certificate Number: **KEMA 05ATEX1044 X**

(4) Equipment: **Loop Powered LCD Indicator type 5531B1**

(5) Manufacturer: **PRelectronics A/S**

(6) Address: **Lerbakken 10, 8410 Rønde, Denmark**

(7) This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

(8) KEMA Quality B.V. certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment 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. 2078966-01.


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

EN 60079-15 : 2003

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

(11) This Type Examination Certificate relates only to the design, examination and tests of the specified equipment and not to the manufacturing process and supply of the equipment.

(12) The marking of the equipment shall include the following:

 **II 3 GD EEx nL IIC T6 T 85 °C**

Arnhem, 7 July 2005
KEMA Quality B.V.



C.G. van Es
Certification Manager

* This Certificate may only be reproduced in its entirety and without any change

SCHEDULE

- (13)
- (14) **to Type Examination Certificate KEMA 05ATEX1044 X**

(15) **Description**

The Loop Powered LCD Indicator type 5531B1 converts a 4-20 mA signal into a read out of scaled process units.

Ambient temperature range -20 °C ... +60 °C for equipment category 3G.

Ambient temperature range -5 °C ... +60 °C for equipment category 3D.

The specified maximum surface temperature T 85 °C for applications in explosive atmospheres caused by air/dust mixtures is based upon an ambient temperature of 60 °C. The enclosure has an ingress protection of IP6x in accordance with EN 60529.

Electrical data

Input circuit in type of protection energy limitation EEx nL IIC, only for connection to an energy limited circuit, with the following maximum values:

U_i	=	45	V
I_i	=	500	mA
P_i	=	0,9	W
C_i	=	0	μ F
L_i	=	0	mH

(16) **Report**

KEMA No. 2078966-01.

(17) **Special conditions for safe use**

For applications in explosive atmospheres caused by air/dust mixtures and where category 3D apparatus is required, the Loop Powered LCD Indicator shall be installed in such a way that the risk for mechanical damage is low and shall only be used in environments where UV light can not influence the non-metallic parts.

(18) **Essential Health and Safety Requirements**

Covered by the standard listed at (9).

For the assessment of circuits which may extend into hazardous areas in which category 3 D equipment is required, EN 61241-0 : 2004 + prAA and draft IEC 61241-11 : 2004 have been used as a guide.

(19) **Test documentation**

As listed in Test Report no. 2078966-01.