



(1) EC-TYPE-EXAMINATION CERTIFICATE (Translation)

(2) Equipment and Protective Systems Intended for Use in
Potentially Explosive Atmospheres - **Directive 94/9/EC**



(3) EC-type-examination Certificate Number:

PTB 04 ATEX 1061 X

(4) Equipment: Oneway light-barrier, type .LS 50/... .. Ex-100

(5) Manufacturer: Leuze electronic GmbH + Co KG

(6) Address: 73277 Owen-Teck, Germany

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

(8) The Physikalisch-Technische Bundesanstalt, notified body No. 0102 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the 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 the confidential report PTB Ex 04-14198.

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

EN 50014: 1997 + A1 + A2

EN 50018: 2000

EN 50281-1-1:1998

(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 EC-type-examination Certificate relates only to the design, examination and tests of the specified equipment in accordance to the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate.

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

II 2 G/D EEx d IIC T6 IP 66 T 80 °C

Zertifizierungsstelle Explosionsschutz

Braunschweig, August 05, 2004

By order:

Dr.-Ing. U. Klausmeyer
Regierungsdirektor



SCHEDULE

EC-TYPE-EXAMINATION CERTIFICATE PTB 04 ATEX 1061 X

(15) Description of equipment

The oneway light-barrier , type .LS 50/... .. Ex-100, is used as control and display unit of industrial design. It consists of the flameproof enclosure, which is provided with an inspection window and, optionally, a light conducting rod and/or alignment axis. Connection is made by means of integrated connecting wires (open-ended lines).

Electrical data

Rated insulation voltage	up to	60 V
Rated current	max.	1 A
Power loss for T6		$T_a \leq 60 \text{ }^\circ\text{C}$
Type LS 50/2.8 SE-Ex, min. 90 mm long		2 W
Type ILS 50/4.1 E-Ex, min. 90 mm long		4 W
Ambient temperature		-20 °C to 60 °C
Rated cross section	max.	2.5 mm ²

Rated values are maximum values, the actual electrical values are determined by mounted electrical apparatus. Within these limiting values complying with the appropriate standards the manufacturer specifies the final limiting values dependent on power supply specifications, operating mode, utilization category, etc. Any additional technical features are specified in the test documents.

Test report PTB Ex 04-14198

Special conditions for safe use

The connecting wire (open-ended line) of the oneway light-barrier shall be installed to provide for permanent wiring and adequate protection against thermal and mechanical stress.

If connection is in the potentially explosive area, the connecting wire (open-ended line) of the oneway light-barrier shall be connected in an enclosure that meets the requirements of an approved type of protection as specified in EN 50014, section 1.2. This has to be pointed out in the operating manual.

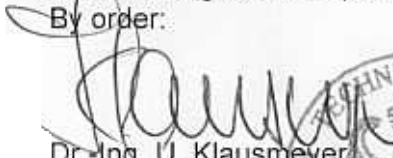
The external connector for the external equipotential bonding or protective conductor may be dispensed with, if the oneway light-barrier is conductively connected to permanently conductive system elements, to which the equipotential bonding conductor is led.

(18) Essential health and safety requirements

met by compliance with the standards mentioned above

Zertifizierungsstelle Explosionsschutz

By order:


Dr.-Ing. U. Klausmeyer
Regierungsdirektor



Braunschweig, August 05, 2004