



## Translation

# EC-Type Examination Certificate

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2)

**- Directive 94/9/EC -**

**Equipment and protective systems intended for use  
in potentially explosive atmospheres**

## DMT 03 ATEX E 029

- (4) **Equipment:** Photoelectric Sensor Type \* 92/3 \* Ex
- (5) **Manufacturer:** Leuze electronic GmbH & Co.
- (6) **Address:** D 73277 Owen-Teck
- (7) The design and construction of this equipment and any acceptable variation thereto are specified in the schedule to this type examination certificate.
- (8) The certification body of Deutsche Montan Technologie GmbH, notified body no. 0158 in accordance with Article 9 of the Directive 94/9/EC of the European Parliament and the Council 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 test and assessment report BVS PP 03.2015 EG.
- (9) The Essential Health and Safety Requirements are assured by compliance with:
- |                     |                      |
|---------------------|----------------------|
| EN 50014:1997+A1-A2 | General requirements |
| EN 50020:1994       | Intrinsic safety 'i' |
- 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 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 2G EEx ia IIC T6

**Deutsche Montan Technologie GmbH**  
Essen, dated 24. January 2003

Signed: Jockers

DMT-Certification body

Signed: Eickhoff

Head of special services unit

(13) Appendix to

(14) **EC-Type Examination Certificate**

**DMT 03 ATEX E 029**

(15) 15.1 Subject and type

Photoelectric Sensor Type \* 92/3 \* Ex

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FRK	-300 L	Diffuse reflection light scanners with background suppression
PRK	L	Retro-reflective Photoelectric Sensor
LS	E-L	Throughbeam Photoelectric Sensor
LS	SE-L	Throughbeam Photoelectric Sensor

15.2 Description

The Photoelectric Sensor Type \* 92/3 \* Ex comprises a light alloy enclosure containing printed circuit boards with electronic components. The intrinsically safe supply- and signal circuit is connected to a plug.

15.3 Parameters

15.3. Supply and signal circuits

Voltage	$U_i$	DC	13	V
Current	$I_i$		40	mA
Power	$P_i$		90	mW
Effective internal capacitance	$C_i$	≤	70	nF
Effective internal inductance	$L_i$	≤	200	μH

15.3.2 Optical signal

Wave length		680 nm to 880 nm
Radiated power	≤	1,1 mW/mm <sup>2</sup>
Light pulse duration	≤	21 μs
Pulse rate	≤	3,5 ms

15.3.3 Ambient temperature range  $-20^{\circ}\text{C} \leq T_a \leq +50^{\circ}\text{C}$

(16) Test and assessment report

BVS PP 03.2015 EG, as of 24.01.2003

(17) Special conditions for safe use

None

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We confirm the correctness of the translation from the German original.  
In the case of arbitration only the German wording shall be valid and binding.

45307 Essen, 13.03.2003  
BVS-Scha/Ar E 0260/03

**Deutsche Montan Technologie GmbH**



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DMT-Certification body



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Head of special services unit



Translation

# 1<sup>st</sup> Supplement

(Supplement in accordance with Directive 94/9/EC Annex III number 6)


## to the EC-Type Examination Certificate DMT 03 ATEX E 029

**Equipment:** Photoelectric Sensor type \* 92/3 \* Ex  
**Manufacturer:** Leuze electronic GmbH & Co.  
**Address:** D - 73277 Owen-Teck

### Description

The Photoelectric Sensor type \* 92/3 \* Ex meets as well category 2D.

The new marking is as follows:

 **II 2G EEx ia IIC T6**  
**II 2D Ex iaD 21 T 80 °C**

The Essential Health and Safety Requirements of the modified equipment are assured by compliance with.

EN 50014:1997+A1-A2	General requirements
EN 50020:2002	Intrinsic Safety 'i'
prEN 61241-0:2002	Dust explosion protection General requirements
3IH/160/NP (IEC 61241-11)	Intrinsically safe apparatus 'iD'

### Test and assessment report

BVS PP 03.2015 EG as of 26.01.2004

**EXAM BBG Prüf- und Zertifizier GmbH**  
Bochum, dated 26. January 2004

Signed: Wittler

Signed: Schumann

Certification body

Special services unit

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We confirm the correctness of the translation from the German original.  
In the case of arbitration only the German wording shall be valid and binding.

44809 Bochum, 26.01.2004  
BVS-Hk/Mi A 20030912

EXAM BBG Prüf- und Zertifizier GmbH

  
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Certification body

  
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Special services unit