



Zertifikat - Certificate

(1) **EC Type Examination Certificate**

(2) Equipment or protective system intended for use in
potentially explosive atmospheres – Directive 94/9/CE

(3) Nr.: TÜV-A 05ATEX0004

(4) Equipment: Laser Distance-/ Level-/ Speed Meter
LD90-x-ATEX

(5) Applicant: Riegler Laser Measurement Systems GmbH

(6) Address: A-3580 Horn, Riedenburgstraße 48



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

(8) TÜV Austria, notified body number 0408 in accordance with article 9 of Directive 94/9/CE of the European Parliament and Council of 23 March 1994, certifies that this equipment or protective system has been found to comply with the design and construction of equipment and protective system intended for use in potentially explosive atmospheres, given in Annex II of the Directive. The examination and test results are recorded in confidential report 2005-ET/PZW-EX-281.

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

EN 50014:1997+A1/1999+A2/1999	EN 50018:2000	EN 50019:2000
EN 50281-1-1:1998	EN 50281-1-2:1998+corr. 1999	

(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 and construction of this specified equipment or protective system in accordance with the Directive 94/9/EG. Further requirements of the Directive applies to the manufacture and supply of this equipment or protective system.

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

II 2 G
II 2 D

EEx ed IIC T6
T 85°C

T_{amb} = -10°C ... +50°C

20.06.2005
Datum der Ausstellung
Date of issue

Dipl.-Ing. D. Engel
Zertifizierungsbeauftragter
Certification representative

Ende der Gültigkeit
End of validity

„Auszugsweise Vervielfältigung nur mit Genehmigung des TÜV Österreich gestattet“
„The duplication of this document in parts is subject to the approval by TÜV Austria.“



(13)

SCHEDULE

(14)

EC Type Examination Certificate TÜV-A 05ATEX0004

(15) Description of Equipment:

The laser meter type LD90-x-ATEX consists of a cylindrical housing, type flameproof enclosure, with a terminal-box type EEx e II on the one front side, and a glass pane for laser beam transmission on the other one.

Description	Type	Manufacturer	EC Type Examination Certificate	Type of protection
Empty enclosure	8214/123	Stahl	PTB 02ATEX1101 U	II2G / EEx de IIC
Cable gland	8161/5	Stahl	PTB 00ATEX3119 X	II2G / EEx e II
			LCIE 02ATEX6237 X	II2D / IP6X
Stopping Plug	8290/3	Stahl	PTB 99ATEX3133	II2G / EEx e II / IP66
Bushing	8171/20-ZL	Stahl	PTB 00ATEX1066 U	II2G / EEx de II

The measuring laser works at wavelength 905nm (infrared – not visible) and complies with laser class 1 / 1M according IEC60825-1.

The emitted laser power is <1mW, the power density <0,2mW/cm².

The visible laser pointer works within the wavelength area 630...680nm (red) with emitted laser power ≤4mW and power density of 0,25mW/mm². It complies with laser class 3R according IEC60825-1.

Type Variations

L90-3200HiP-ATEX

L90-31K-HiP-ATEX

L90-450-ATEX

By choice without visible laser pointer (category II 2 G/D) or with visible laser pointer (category II 2 G - GAS ONLY).



Electrical Data:

Power supply:	11 ... 28 VDC
Power consumption:	max. 10 W
External fuse:	max. 1 A (characteristic see Technical Documentation)

(16) Test report

TÜV-A 2005-ET/PZW-EX-281

(17) Special conditions

The special conditions of the EC Type Examination Certificates of components and apparatus used are still valid.

(18) Basic safety and health requirement

Covered by application of above mentioned standards

Additional indication for use:

The laser meter conforms to category II 2 G/D, therefore it is suitable for use in zone 1 and zone 21.

According to PTB- report W-67/1996, the laser beam is due to its power specification not able to ignite explosive atmospheres gas/damp with air.

Therefore it is possible for the laser beam to penetrate also zone 0 and zone 20 (e. g. internal area of a tank).

The use of laser meters with laser pointer is allowed in gas areas only (category II 2 G): these types of laser meters are marked with a label "GAS ONLY" additionally.