

CERTIFICATE

(1) EC-Type Examination

(2) **Equipment and protective systems intended for use in potentially explosive atmospheres - Directive 94/9/EC**

(3) EC-Type Examination Certificate Number: **KEMA 03ATEX1372 X** Issue Number: 2

(4) Equipment: **Load Cell Model RLC**

(5) Manufacturer: **Mettler-Toledo Inc.**

(6) Address: **1900 Polaris Parkway, Columbus, OH 43240, U.S.A.**

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

(8) DEKRA Certification B.V., notified body number 0344 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 confidential test report number 214501500/01.

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

EN 60079-0 : 2006
EN 61241-0 : 2006

EN 60079-11 : 2007
EN 61241-1 : 2004

(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 according 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 Ex ib IIC T6 ... T4
II 2 D Ex tD A21 IP 6X T70 °C

This certificate is issued on 16 June 2011 and, as far as applicable, shall be revised before the date of cessation of presumption of conformity of (one of) the standards mentioned above as communicated in the Official Journal of the European Union.

DEKRA Certification B.V.

C.G. van Es.
Certification Manager

Page 1/3

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(13) **SCHEDULE**

(14) **to EC-Type Examination Certificate KEMA 03ATEX1372 X**

Issue No. 2

(15) **Description**

The Load Cell Model RLC is used to convert a mechanical force or load into an electrical signal. The Load Cell is of a hermetically sealed or sealed construction and is provided with a permanently connected cable with a maximum length of 25 m.

The enclosure of the Load Cell provides a degree of protection of IP66, in accordance with EN 60529.

Ambient temperature range -20 °C to +40 °C.

The maximum surface temperature of the enclosure T70 °C is referred to a maximum ambient temperature of 40 °C.

Electrical data

Excitation circuit (grey and pink wires) in type of protection intrinsic safety Ex ib IIC.

Signal output circuit (white and brown wires) in type of protection intrinsic safety Ex ib IIC.

Sense output circuit (optional) (yellow and blue wires) in type of protection intrinsic safety Ex ib IIC.

The excitation circuit, the signal output circuit and the optional sense output circuit are galvanically connected and may only be connected to certified intrinsically safe circuits. Voltage, current and power addition of the circuits must be taken into account.

The total maximum values for the above mentioned circuits, with exception of the circuits for loads of 60 kg, 130 kg, 28 t and 60 t, are:

$U_i = 25 \text{ V}$; $I_i = 1 \text{ A}$; $P_i = 1,3 \text{ W}$ for temperature class T6; $P_i = 2,75 \text{ W}$ for temperature class T4;
 $C_i = 0,4 \text{ nF}$; $L_i = 0 \text{ }\mu\text{H}$.

For loads of 60 kg, 130 kg, 28 t and 60 t, the maximum values for the above mentioned circuits are:

$U_i = 30 \text{ V}$; $I_i = 1 \text{ A}$; $P_i = 1,3 \text{ W}$ for temperature class T6; $P_i = 2,75 \text{ W}$ for temperature class T4;
 $C_i = 2,5 \text{ nF}$; $L_i = 0 \text{ }\mu\text{H}$.

For longer cables than specified in the description, the capacitance and inductance of the additional cable must be taken into account.

For use in a potentially explosive atmosphere caused by combustible dust, the Load Cell may be used without connection to energy limited circuits.

The electrical data are:

Maximum excitation voltage: 15 ... 30 Vdc (depending on version of model RLC)
Bridge impedance: 350 ... 1450 Ω (depending on version of model RLC)

(13) **SCHEDULE**

(14) **to EC-Type Examination Certificate KEMA 03ATEX1372 X**

Issue No. 2

(16) **Test Report**

No. 214501500/01.

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

If a Load Cell is not connected to certified intrinsically safe circuits, the free end of the permanently connected cable must be connected outside the hazardous area or, when inside the hazardous area, in an enclosure with a suitable type of protection and in accordance with the requirements of the type of protection applied.

For the parameters of the intrinsically safe circuits, refer to the electrical data mentioned before.

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

Covered by the standards listed at (9).

(19) **Test documentation**

As listed in Test Report No. 214501500/01.