

(1) **TYPE EXAMINATION CERTIFICATE**

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

(3) Type Examination Certificate Number: **KEMA 03ATEX1373 X**

(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) 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. 2030292.

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

EN 50021 : 1999 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.

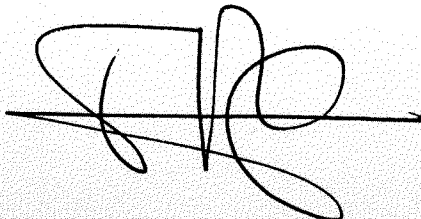
(11) This Type Examination Certificate relates only to the design and construction of the specified equipment and not to the manufacturing process and supply of the equipment.

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



**II 3 G EEx nL IIC T4 or T6
II 3 D T 70 °C**

Arnhem, 7 July 2003
KEMA Quality B.V.



T. Pijpker
Certification Manager

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(13)

SCHEDULE

(14)

to Type Examination Certificate KEMA 03ATEX1373 X

Routine tests

A routine dielectric strength test shall be conducted on each unit between the signal/supply circuits and the base of the unit, using a test voltage of 500 Vac during one minute.

(16)

Report

KEMA No. 2030292.

(17)

Special conditions for safe use

1. When the load cell is considered as non-sparking, the flying wires of the cable shall be connected outside the hazardous area or when connected inside the hazardous area, the connection shall be made in an enclosure in accordance with clause 6 of EN 50021.
2. For applications in explosive atmospheres caused by air/dust mixtures the flying wires of the cable shall be connected outside the hazardous area or when connected inside the hazardous area, the connection shall be made in an enclosure in accordance with clause 6 of EN 50281-1-1.
3. For the electrical data and ambient temperature see (15).

(18)

Essential Health and Safety Requirements

Essential Health and Safety Requirements not covered by the standards listed at (9)	
Clause	Subject
2.3.2.1 and 2.3.2.2.	Explosive atmospheres caused by air/dust mixtures

These Essential Health and Safety Requirements are examined and positively judged.
The results are laid down in the report listed at (16)

(19)

Test documentation

1. EC-Type Examination Certificate KEMA 00ATEX1132 X
signed
2. Drawing No. 16936100A)
 TN800877)

signed

30.06.2003

(13)

SCHEDULE

(14)

to Type Examination Certificate KEMA 03ATEX1373 X

(15) **Description**

The load cell Model RLC converts a mass force into an electrical signal.

The load cell is provided with a permanently connected cable.

The circuits to the load cell are considered as one energy limited circuit as specified below.

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

For category 3 D, the specified temperature T 70 °C is based upon an ambient temperature of 40 °C. The protection of the load cell is at least IP66 in accordance with EN 60529.

Electrical data

Signal/supply circuits in type of explosion protection energy limitation EEx nL IIC, with the following maximum total values under normal operating conditions (combining the parameters of all circuits):

$$\begin{aligned}U_i &= 19,1 \text{ V} \\I_i &= 323 \text{ mA} \\P_i &= 1,25 \text{ W for temperature class T6} \\P_i &= 2,75 \text{ W for temperature class T4} \\C_i &= 0,4 \text{ nF} \\L_i &= 0 \text{ }\mu\text{H}\end{aligned}$$

The C_i and L_i includes the permanently connected cable for a length of maximum 15 m. For longer cables the additional capacitance and inductance has to be taken into account.

For applications in explosive atmospheres caused by air/dust mixtures, the load cell may also be used without connection to energy limited circuits.

In that case 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)

Installation instructions

The load cell can only be considered energy limited when connected to a circuit in type of protection energy limitation.

The load cell can also be considered as non-sparking. In that case the load cell shall be provided with the marking

 II 3 G EEx nA T6

The electrical data as specified above also apply to the non-sparking versions (except for the C_i and L_i).