

# (1) TYPE EXAMINATION CERTIFICATE

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

(3) Type Examination Certificate Number: **KEMA 09ATEX0004 X** Issue Number: 1

(4) Equipment: **Load Cell Model MT1022, MT1041, MT1241 and MT1260**

(5) Manufacturer: **Mettler-Toledo Measurement Technology Ltd.**

(6) Address: **111 West TaiHu Road, Chang Zhou, Jiangsu, 213125 P.R. China**

(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 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 no. 212084000/2.

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

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

**EN 60079-15 : 2005**  
**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 Type Examination Certificate relates only to the design, examination and tests of the specified equipment and not to the manufacturing process and supply of this equipment.

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



**II 3 G Ex nA II T4 or**  
**II 3 G Ex nL IIC T4 or**  
**II 3 D Ex tD A22 IP 66 T 135 °C**

This certificate is issued on April 29, 2009 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.

KEMA Quality B.V.



C.G. van Es  
Certification Manager



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(13) **SCHEDULE**

(14) **to Type Examination Certificate KEMA 09ATEX0004 X**

Issue No. 1

(15) **Description**

The Load Cells Model MT1022, MT1041, MT1241 and MT1260 are used to convert a mechanical force or load into an electrical signal. The load cell is of a sealed construction and is provided with a permanently connected cable with a maximum length of 12 m. The enclosure of the load cell provides a degree of protection of at least IP66 in accordance with EN 60529.

Ambient temperature range -40 °C to +50 °C.

The maximum surface temperature T135 °C is based upon an ambient temperature of 50 °C.

**Electrical data**

Signal and supply circuits:

in type of protection energy limitation Ex nL IIC only for connection to an associated energy limited circuit, with the following maximum total values (combining the parameters of all circuits):

$U_i = 20 \text{ V}$ ;  $I_i = 600 \text{ mA}$ ;  $P_i = 1,25 \text{ W}$ ;  $C_i = 5 \text{ nF}$ ;  $L_i = 30 \text{ }\mu\text{H}$

The values of  $C_i$  and  $L_i$  include the capacitance and inductance of the permanently connected cable for a length of maximum 12 m. For longer cables the additional capacitance and inductance have to be taken into account;

When used in type of protection Ex nA or Ex tD, the maximum supply voltage  $U = 20 \text{ V}$ .

**Installation instructions**

The manual provided with the equipment shall be followed in detail to assure safe operation.

**Routine tests**

A routine dielectric strength test, in accordance with EN 60079-11 Clause 10.3 shall be conducted on each unit between the signal/supply circuits and the enclosure of the unit using a minimum test voltage of 500 Vac for at least 1 minute or 600 Vac for at least 1 s.

(16) **Test Report**

KEMA No. 212084000/2.

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

1. In an explosive atmosphere caused by air/dust mixtures, the loose ends of the cable shall be connected in an enclosure in type of protection Ex tD suitable for the environment, with a degree of protection of at least IP6X in accordance with EN 60529.
2. On application of the Load Cell in an explosive gas atmosphere, precautions shall be taken to avoid danger of ignition due to electrostatic charges on the enclosure.
3. The Load Cell shall be installed such, that there is no risk of mechanical danger and that exposure to light is avoided.
4. Provisions must be made externally to prevent the rated supply voltage being exceeded by transient disturbances of more than 40%.



(13) **SCHEDULE**

(14) **to Type Examination Certificate KEMA 09ATEX0004 X**

Issue No. 1

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

Covered by the standards listed at (9).

(19) **Test documentation**

As listed in Test Report No. 212084000/2.