



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: IECEx DEK 16.0031X Issue No: 0 Certificate history:
Issue No. 0 (2016-08-05)

Status: **Current** Page 1 of 3

Date of Issue: **2016-08-05**

Applicant: **Mettler-Toledo GmbH**
Im Langacher 44, CH-8606 Greifensee
Switzerland

Equipment: **Load Cell Type MTB-5kg, MTB-10kg, MTB-20kg, MTB-30kg, MTB-50kg,
MTB-75kg, MTB-100kg, MTB-200kg, MTB-300kg and MTB-500kg**

Optional accessory:

Type of Protection: **Ex ib IIC, ib IIIC, ic IIC, nA IIC, tc IIIC**

Marking: Ex ib IIC T4 Gb
Ex ib IIIC T135 °C Db
Ex ic IIC T4 Gc
Ex nA IIC T4 Gc
Ex tc IIIC T135 °C Dc

Approved for issue on behalf of the IECEx
Certification Body:

R. Schuller

Position:

Certification Manager

Signature:
(for printed version)

Date:

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

DEKRA Certification B.V.
Meander 1051,
6825 MJ Arnhem
The Netherlands





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Manufacturer: **Mettler-Toledo GmbH**
Im Langacher 44, CH-8606 Greifensee
Switzerland

Additional Manufacturing
location(s):

Mettler-Toledo (Changzhou) Precision Instrument Ltd.
No. 5, Middle Huashan Road, Xinbei District
Changzhou, Jiangsu 213022
China

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2011 Edition:6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-11 : 2011 Edition:6.0	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
IEC 60079-15 : 2010 Edition:4	Explosive atmospheres - Part 15: Equipment protection by type of protection "n"
IEC 60079-31 : 2013 Edition:2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:

[NL/DEK/ExTR16.0038/00](#)

Quality Assessment Report:

[NL/DEK/QAR11.0008/04](#)



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The load cells Model MTB-5kg, MTB-10kg, MTB-20kg, MTB-30kg, MTB-50kg, MTB-75kg, MTB-100kg, MTB-200kg, MTB-300kg and MTB-500kg are used to convert a mechanical force or load into an electrical signal.

The load cells are provided with a permanently connected cable. The signal and supply circuits of the load cell are considered as one intrinsically safe circuit.

The enclosure of the load cell provides a degree of protection of at least IP64 in accordance with IEC 60079-0.

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

The maximum surface temperature T135 °C, for applications in explosive atmospheres caused by air/dust mixtures, is based upon an ambient temperature of 50 °C and a layer of dust thickness of maximum 5 mm.

Electrical data

Apparatus in type of protection intrinsic safety "i"

Signal and supply:

in type of protection intrinsic safety Ex ib IIC, ib IIIC or ic IIC, only for connection to a certified intrinsically safe circuit, with the following maximum values (combining the parameters of all circuits):

$U_i = 25 \text{ V}$; $I_i = 600 \text{ mA}$; $P_i = 1.25 \text{ W}$; $C_i = 0.2 \text{ nF/m}$; $L_i = 1 \text{ } \mu\text{H/m}$.

Apparatus in type of protection Ex nA or tc

Signal and supply:

$U_n = 25 \text{ V}$, $P_n = 0.55 \text{ W}$

CONDITIONS OF CERTIFICATION: YES as shown below:

For type of protection Ex n and Ex t:

The load cell and cable gland had been tested for the low risk of mechanical danger (drop height 0.4 m with 1 kg mass). The load cell shall therefore be protected against higher impact energy levels.

For type of protection Ex n:

Provisions shall be made to prevent the rated voltage from being exceeded by transient disturbances of more than 40% for the type of protection Ex nA IIC.