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 16.0068X	Issue No: 0	Certificate history: Issue No. 0 (2017-02-28)
Status:	**Current**	Page 1 of 3	
Date of Issue:	**2017-02-28**		

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

Equipment:
Load Cell Model GD… or 0782, Model GDN… or 0782A, Model GD Pro… or 0782 Pro, Model GDN Pro… or 0782A Pro

Optional accessory:

Type of Protection:
Ex ib, Ex ic, Ex nA, Ex tc

Marking:

Ex ib IIC T6 … T4 Gb
Ex ib IIIC T55 °C ... T60 °C Db
Ex ic IIC T6 ... T4 Gc
Ex nA IIC T6 Gc
Ex tc IIIC T60 °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.

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/ExTR16.0097/00

Quality Assessment Report:

NL/DEK/QAR11.0008/05

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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

Load Cells Model GD… or 0782, Model GDN… or 0782A, Model GD Pro… or 0782 Pro and Model GDN Pro… or 0782A Pro are used to convert a mechanical force or load into an electrical signal. The load cells are of a sealed construction and are provided with a permanently connected cable.

Refer to Annex 1.

SPECIFIC CONDITIONS OF USE: YES as shown below:

The permanently connected power supply and signal cable of the load cell shall, if connected in a hazardous location endangered by the presence of combustable dust, be connected in a EPL Db certified weighing terminal or junction box.

For Load Cells Model GD... or 0782, Model GDN... or 0782A 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.

Annex:

219730500-ExTR16.0097.00-IECEx_DEK_16.0068_0.Annex1.pdf

Annex 1 to Certificate of Conformity IECEx DEK 16.0068X, issue 0
Annex 1 to NL/DEK/ExTR11.0097/00

Description

Load Cells Model GD… or 0782, Model GDN… or 0782A, Model GD Pro… or 0782 Pro and Model GDN Pro… or 0782A Pro are used to convert a mechanical force or load into an electrical signal. The load cells are of a sealed construction and are provided with a permanently connected cable.

The enclosure of the load cell provides a degree of protection of IP68 in accordance with IEC 60079-0.

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

The maximum surface temperature T60 °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 circuits:
in type of protection intrinsic safety Ex ib IIC, ib IIIC or ic IIC, only for connection to a certified intrinsically safe circuit, with following maximum values (combining the parameters of all circuits):
U_i = 25 V; I_i = 600 mA.

Depending on the temperature class / enclosure surface temperature, the input power P_i is listed in the following table:

Temperature class	Enclosure surface temperature	P_i
T4	T60 °C	1.25 W
T5	T57 °C	0.86 W
T6	T55 °C	0.57 W

Depending on the type and length of the permanently attached cable, the values of C_i and L_i are listed in the following table:

Cable type	Maximum cable length	C_i	L_i
Unarmored	13 m	2,6 nF	13 µH
Unarmored	20 m	4 nF	20 µH
Unarmored	30 m	6 nF	30 µH
Armored	50 m	3.28 nF	10.25 µH

From the safety point of view the circuits of load cells Model GD Pro… or 0782 Pro and Model GDN Pro… or 0782A Pro shall be considered to be connected to earth.

Apparatus in type of protection nA or tc
Signal and supply:
U_n = 25 V, P_n = 0.55 W.

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