



# IECEX Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

Certificate No.: **IECEX FMG 21.0003X** Page 1 of 3 [Certificate history:](#)

Status: **Current** Issue No: 0

Date of Issue: 2021-07-23

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

Equipment: **Load cell SLP84x series, x-6,7,8**

Optional accessory:

Type of Protection: **Intrinsic Safety, Increased Safety, Protection by Enclosure**

Marking: Ex ic IIC T6...T4 Gc IP67  
-40°C ≤ Ta ≤ 60°C T5/T4  
-40°C ≤ Ta ≤ 40°C T6  
Ex ec IIC T6 Gc -40°C ≤ Ta ≤ 60°C IP67  
Ex tc IIIC T80°C Dc IP67  
  
Ex ia IIC T6...T4 Gb IP67  
Ex ia IIIC T80°C Db IP67  
-40°C ≤ Ta ≤ 60°C T5/T4  
-40°C ≤ Ta ≤ 40°C T6

Approved for issue on behalf of the IECEx  
Certification Body:

**J. E. Marquedant**

Position:

**VP, Manager - Electrical Systems**

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.
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Certificate issued by:

**FM Approvals LLC**  
**1151 Boston-Providence Turnpike**  
**Norwood, MA 02062**  
**United States of America**





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

Additional manufacturing locations: **Mettler-Toledo (Changzhou) Precision Instruments Ltd.**  
No.22 Zhengqiang Road  
Xinbei District  
Changzhou, Jiangsu Province 213125  
**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 equipment 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 60079-0:2017** Explosive atmospheres - Part 0: Equipment - General requirements  
Edition:7.0

**IEC 60079-11:2011** Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"  
Edition:6.0

**IEC 60079-31:2013** Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"  
Edition:2

**IEC 60079-7:2017** Explosive atmospheres - Part 7: Equipment protection by increased safety "e"  
Edition:5.1

This Certificate **does not** indicate compliance with 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:

[US/FMG/ExTR21.0003/00](#)

Quality Assessment Report:

[NL/DEK/QAR11.0008/08](#)



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## EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The SLP84x is a series of Load cells which convert a mass force into an electrical signal in a hazardous area. The load cells included are SLP846, SLP847 and SLP848. In each load cell, a resistive bridge consists of compensation resistors on a PCBA and four strain gauges separate from the PCBA.

The SLP846 for 11kg or 22kg loads is 150x50x25mm with 5mm mounting notches on opposite corners and for 60kg or 100kg loads is 150x52x38mm with 6mm mounting notches.

The SLP847 for 60kg, 100kg or 200kg loads is 150x52x38mm with 7.25mm mounting notches on opposite corners.

The SLP848 for 100kg, 250kg, 500kg or 750kg loads is 188x63x62.4mm without mounting notches.

The entire PCBA is assembled into one cavity of the housing which is filled with epoxy glue. The strain gauge cavity and the PCB cavity are sealed by laser welding. Each strain gauge is 350 Ohms. The enclosure has an ingress protection rating of IP67.

The ambient operating temperature range of the SLP84x is -40°C to +60°C for T5/T4 and -40°C to +40°C for T6. The "ia" and "ic" versions are powered by an approved device with entity parameters as follows:  $U_i=20V$ ;  $C_i=6nF$ ;  $L_i=30\mu H$ . For T4,  $P_i = 2.1W$ ,  $I_i = 800mA$ , for T5,  $P_i = 1.2W$ ,  $I_i = 600mA$ , and for T6,  $P_i = 0.6W$ ,  $I_i = 600mA$ .

The "tc" and "ec" versions are powered as follows:  $U_i = 20V$ ,  $I_i = 50mA$

## SPECIFIC CONDITIONS OF USE: YES as shown below:

1. In an explosive atmosphere caused by air/dust moistures, the loose ends of the cable shall be connected outside the hazardous or in a suitable enclosure with a degree of protection of at least IP6X in accordance with IEC/EN 60529.
2. Installation of load cells needs to be done in such a way that enclosure welded caps are physically obstructed from any possible impact.