



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

Ex COMPONENT CERTIFICATE

Certificate No.: **IECEX PTB 13.0040U** Page 1 of 4 **Certificate history:**
Status: **Current** Issue No: 2 **Issue 1 (2014-07-04)**
Issue 0 (2013-10-24)
Date of Issue: 2022-06-08
Applicant: **Hans Turck GmbH & Co. KG**
Witzlebenstr. 7
45472 Mülheim an der Ruhr
Germany
Ex Component: Module rack, types MT08-2G.., MT16-2G.., MT16-2G/MSA.., MT08-3G.., MT16-3G.., MT24-3G..
This component is NOT intended to be used alone and requires additional consideration when incorporated into other equipment or systems for use in explosive atmospheres (refer to IEC 60079-0).
Type of Protection: **Increased safety "e", Intrinsic safety "i"**
Marking: Type MT08-2G.., MT16-2G.., MT16-2G/MSA..: Ex eb ib [ia Ga] IIC T4 Gb
Type MT08-3G.., MT16-3G.., MT24-3G..: Ex ec ib ic [ia Ga] IIC T4 Gc

Approved for issue on behalf of the IECEx
Certification Body:

Dr.-Ing. Martin Thedens

Position:

**Head of Department "Explosion Protection in Sensor Technology
and Instrumentation"**

Signature:
(for printed version)

Date:
(for printed version)

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 www.iecex.com or use of this QR Code.



Certificate issued by:

Physikalisch-Technische Bundesanstalt (PTB)
Bundesallee 100
38116 Braunschweig
Germany





IECEX Certificate of Conformity

Certificate No.: **IECEX PTB 13.0040U**

Page 2 of 4

Date of issue: 2022-06-08

Issue No: 2

Manufacturer: **Werner Turck GmbH & Co. KG**
Goethestr. 7
58553 Halver
Germany

Manufacturing locations: **Werner Turck GmbH & Co. KG**
Goethestr. 7
58553 Halver
Germany

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 component 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 60079-7:2017](#) 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 component listed has successfully met the examination and test requirements as recorded in:

Test Report:

[DE/PTB/ExTR13.0056/02](#)

Quality Assessment Report:

[DE/PTB/QAR06.0013/08](#)



IECEX Certificate of Conformity

Certificate No.: **IECEX PTB 13.0040U**

Page 3 of 4

Date of issue: 2022-06-08

Issue No: 2

Ex Component(s) covered by this certificate is described below:

The excom module rack consist of a backplane and the carrier system mounted in front of it. The backplane is used for power distribution and data transport and contains the connection level for the field devices.

The module rack is designed in a combined Ex e and Ex i protection class. On the backplane, the module supply is limited in such a way that sparking is avoided.

Up to two power supply modules, two gateways and 8, 16 or 24 separately certified excom modules may be connected in the module racks. All components of the excom fieldbus system may be plugged or unplugged during operation.

The module rack shall be operated only within this system.

The associated gateways and modules shall only be supplied from the power supply units certified for this system.

A system description valid for all components of the system is part of the test documents of the module rack. The basic conditions for connection technique and operation of all components of the excom system in the hazardous area are specified in this system description.

For further information see schedule.

SCHEDULE OF LIMITATIONS:

Use of device in safe areas:

- A pollution degree 2 must be maintained
- Alternatively, an enclosure with a degree of protection of IP 54 must be used.

Use of devices in Zone 1 and Zone 2:

- An external housing must be used which meets at least the IP 54 degree of protection in accordance with EN IEC 60079-0



IECEX Certificate of Conformity

Certificate No.: **IECEX PTB 13.0040U**

Page 4 of 4

Date of issue: 2022-06-08

Issue No: 2

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Update to new generation of standards IEC 60079-0 Ed. 7.0 and IEC 60079-7 Ed. 5.1.

IEC 60079-15 Equipment protection by type of protection "n" has been included in the standard IEC 60079-7 for increased safety "e" and is therefore not applicable.

No technical changes.

The evaluation of reduced separation distances for solid insulation applied to intrinsic safety was carried out in accordance with the new generation of the standard CDV IEC 60079-11 Ed. 7.0.

The ambient temperature range was extended to -40°C. The used materials have been evaluated according to the data sheet.

The electrical parameters for input and output circuits have been reduced to the essential circuits that are only accessible by the user.

Annex:

[COCA130040-02.pdf](#)



Applicant: Hans Truck GmbH & Co. KG
Witzlebenstr. 7, 45472 Mülheim an der Ruhr, Germany

Electrical Apparatus: Modul rack
types MT08-2G., MT16-2G., MT16-2G/MSA,
MT08-3G., MT16-3G., MT24-3G..

Description of equipment

The excom module rack consist of a backplane and the carrier system mounted in front of it. The backplane is used for power distribution and data transport and contains the connection level for the field devices. The module rack is designed in a combined Ex e and Ex i protection class. On the backplane, the module supply is limited in such a way that sparking is avoided.

Up to two power supply modules, two gateways and 8, 16 or 24 separately certified excom modules may be connected in the module racks. All components of the excom fieldbus system may be plugged or unplugged during operation.

The module rack shall be operated only within this system. The associated gateways and modules shall only be supplied from the power supply units certified for this system.

A system description valid for all components of the system is part of the test documents of the module rack. The basic conditions for connection technique and operation of all components of the excom system in the hazardous area are specified in this system description.

The basic IP protection class of the module rack is IP 20.

The permissible range of the ambient temperature is -40 °C to + 70 °C.
Associated modules with lower temperature range can lead to a limitation.

Module rack variants:

MT08-2G	Zone 1 module rack to accommodate up to 8 I/O modules, 1 gateway and 1 power supply
MT16-2G	Zone 1 module rack to accommodate up to 16 I/O modules, 2 gateways and 2 power supplies.
MT16-2G /MSA	Zone 1 module rack to accommodate up to 16 I/O modules, 2 gateways and 2 power supplies
MT08-3G	Zone 2 module rack to accommodate up to 8 I/O modules, 2 gateways and 2 power supplies
MT16-3G	Zone 2 module rack to accommodate up to 16 I/O modules, 2 gateways and 2 power supplies
MT24-3G	Zone 2 module rack to accommodate up to 24 I/O modules, 2 gateways and 2 power supplies



Electrical data

Device types MT08-3G, MT16-3G, MT24-3G:

Supply voltage: in type of protection Ex ec IIC

Terminals Pwr 1, Pwr 2

Maximum values:

Pins 1,3 (U+), 2,4 (U-)

$$U_m = 60 \text{ V}$$

$$U_{in} \leq 40 \text{ V}$$

$$I_{in} \leq 6 \text{ A}$$

$$P_{in} \leq 100 \text{ W}$$

Potential equalization PA:

for EMC purposes only

Connect the equipotential bonding conductor
(PA) to the ground connecting bolt. \perp

Profibus coupling:

Power and characteristic depend on the
respective associated by gateway module

SUB-D connector

Terminals GW1 or GW2

Pins 8 (Data Line A), 3 (Data Line B)

Auxiliary voltage:

Power and characteristic depend on the
respective associated by gateway module

SUB-D connector

Terminals GW1 or GW2

Pins 6 (VCC), 5 (GND), 1/ case (PA)

Field circuits:

in type of protection Ex ia IIC

Terminals JF011...JF014 (Module 1) to
JF081...JF084 (Module 8) resp.
JF161...JF164 (Module 16) resp.
JF241...JF164 (Module 24)

Maximum output values:

$$U_o = 30 \text{ V}$$

$$I_o = 200 \text{ mA}$$

Channels 4 Channels each module

Maximum input values:

$$U_i = 30 \text{ V}$$

$$I_i = 200 \text{ mA}$$

Pins 1...4
(Assignment according to associated module)

Power and characteristic depend on the
respective associated module



Electrical data

Device types MT08-2G, MT16-2G, MT16-2G/MSA:

Supply voltage: in type of protection Ex eb IIC

Terminals Pwr 1, Pwr 2

Pins 1...2, 7...8 (U+)
3...4, 9...10 (U-)

Maximum values:

$U_m = 60 \text{ V}$
 $U_{in} \leq 32 \text{ V}$
 $I_{in} \leq 11 \text{ A}$
 $P_{in} \leq 100 \text{ W}$

Potential equalization PA:

Connect the equipotential bonding conductor
(PA) to the ground connecting bolt. \perp

for EMC purposes only

Profibus coupling:

SUB-D connector
Terminals GW1 or GW2

Power and characteristic depend on the
respective associated by gateway module

Pins 8 (Data Line A), 3 (Data Line B)

Auxiliary voltage:

SUB-D connector
Terminals GW1 or GW2

Power and characteristic depend on the
respective associated by gateway module

Pins 6 (VCC), 5 (GND), 1/ case (PA)

Field circuits:

in type of protection Ex ia IIC

Terminals J3-M1-A...J3-M1-D (Module 1) to
J3-M8-A...J3-M8-D (Module 8) resp.
J3-M16-A...J3-M16-D (Module 16)

Maximum output values:

$U_o = 30 \text{ V}$
 $I_o = 200 \text{ mA}$

Channels 4 Channels each module

Maximum input values:

$U_i = 30 \text{ V}$
 $I_i = 200 \text{ mA}$

Pins 1...4
(Assignment according to associated module)

Power and characteristic depend on the
respective associated module



Special conditions for safe use

Use of device in safe areas:

- A pollution degree 2 must be maintained
- Alternatively, an enclosure with a degree of protection of IP 54 must be used.

Use of devices in Zone 1 and Zone 2:

- An external housing must be used which meets at least the IP 54 degree of protection in accordance with EN IEC 60079-0