



# 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 PTB 19.0043X** Page 1 of 3 [Certificate history:](#)

Status: **Current** Issue No: 0

Date of Issue: 2019-12-10

Applicant: **Hans Turck GmbH & CO KG**  
Witzlebenstraße 7  
D-45472 Mülheim an der Ruhr  
Germany

Equipment: **Gateway, type GDP-NI...**

Optional accessory:

Type of Protection: **Intrinsic Safety "i", Increased Safety "e"**

Marking: Ex ec ic [ib Gc] IIC T4 Gc

Approved for issue on behalf of the IECEx  
Certification Body:

**Dr. Ing. F. Lienesch**

Position:

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

Signature:  
(for printed version)

Date:

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Certificate issued by:

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





# IECEx Certificate of Conformity

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Manufacturer: **Hans Turck GmbH & CO KG**  
Witzlebenstraße 7  
D-45472 Mülheim an der Ruhr  
**Germany**

Additional manufacturing locations: **Werner Turck GmbH & Co. KG**  
Goethestraße 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 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 60079-7:2015** Explosive atmospheres – Part 7: Equipment protection by increased safety "e"  
Edition:5.0

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:

[DE/PTB/ExTR19.0046/00](#)

Quality Assessment Report:

[DE/PTB/QAR06.0013/05](#)



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**EQUIPMENT:**

Equipment and systems covered by this Certificate are as follows:

Refer to attachment to this certificate.

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

Refer to attachment to this certificate.

**Annex:**

[CoCA190043X-00\\_1.pdf](#)



Applicant: Hans Turck GmbH & Co. KG  
Witzlebenstraße 7  
45472 Mülheim an der Ruhr  
Germany

Electrical Apparatus: Gateway, type GDP-NI...

### Description of equipment

The Gateway, type GDP-NI... is intended as a plug-in module only for use in the remote I/O system excom® from company Turck. Its use is intended for system installation in non-hazardous areas and Zone 2.

The gateway type GDP-NI serves among other things as an interface between the internal intrinsically safe communication lines of the system and the external RS485 standard bus (Profibus DP) and is only operated in connection with the module rack MT...-3G (IECEX PTB 13.0040U) in non-hazardous areas or in Zone 2.

By plugging the gateway into the module carrier MT...-3G, it is awarded protection class IP20 according to EN 60529.

The permissible ambient temperature range is -20 °C to +70 °C.

### Electrical data

#### **I.) AC-supply circuit**

type of protection Intrinsic Safety Ex ib IIC  
System internal circuit, only for connection to the module rack type MT...-3G according to IECEx PTB 13.0040U  
 $P = 1 \text{ W}$  (power consumption)

The intrinsically safe AC supply circuit is electrically isolated from earth and from all other intrinsically safe circuits up to a peak value of the nominal voltage of 50 V.

#### **II.) Signal circuit (CAN-Bus)**

type of protection Intrinsic Safety Ex ib IIC  
System internal circuit, only for connection to the module rack type MT...-3G according to IECEx PTB 13.0040U

#### **III.) Address coding**

type of protection Intrinsic Safety Ex ic IIC  
System internal circuit, only for connection to the module rack type MT...-3G according to IECEx PTB 13.0040U



**IV.) Gateway communication**

type of protection Intrinsic Safety Ex ic IIC  
System internal circuit, only for connection to  
the module rack type MT...-3G according to  
IECEX PTB 13.0040U

**V.) Service interface**

type of protection Intrinsic Safety Ex ic IIC  
System internal circuit, only for connection to  
the module rack type MT...-3G according to  
IECEX PTB 13.0040U

**VI.) Profibus DP (RS485)**

Nominal voltage

type of protection Increased Safety Ex ec IIC  
5 V

(Connection D-Sub socket pin 3, 5, 6, 8)

safety-related maximum voltage  
 $U_m = 5.6 \text{ V}$

The Profibus DP (RS485) is electrically isolated from earth and all other circuits up to a peak value of the nominal voltage of 300 V.

Special conditions for safe use

1. The module support type MT...-3G with the gateway type GDP-NI... must be mounted in a housing that meets the requirements of EN IEC 60079-0 and a minimum degree of protection of IP 54.
2. If the RS485 fieldbus is fed from mains, a safety extra-low voltage (SELV) or a functional extra-low voltage (PELV) shall be used which meet the design requirements of IEC 60364-4-41.