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

Certificate No.: **IECEx BVS 22.0044X**

Certificate history:
Issue 0 (2023-06-29)

Status: **Current**

Issue No: 1

Date of Issue: 2025-01-28

Applicant: **Hans Turck GmbH**
Witzlebenstraße 7
45472 Mülheim an der Ruhr
Germany

Equipment: **Gateway type GEN-2G…**

Optional accessory:

Type of Protection: **Intrinsic Safety "i"**

Marking: Ex ib [ia Ga] IIC T4 Gb
[Ex ia Da] IIIC

Approved for issue on behalf of the IECEx Certification Body: **Deniz Pezzutto**

Position: **Certification Manager**

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:

DEKRA Testing and Certification GmbH
Certification Body
Dinnendahlstrasse 9
44809 Bochum
Germany

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Manufacturer: **Hans Turck GmbH**
Witzlebenstraße 7
45472 Mülheim an der Ruhr
Germany

Manufacturing locations:

Hans Turck GmbH
Witzlebenstraße 7
45472 Mülheim an der Ruhr
Germany

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 60079-11:2023 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:7.0

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/BVS/ExTR23.0019/01

Quality Assessment Report:

DE/PTB/QAR06.0013/11

IECEx Certificate of Conformity

EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

Subject and Type

Gateway type GEN-2G…

In the complete type designation, the dots can be replaced by numbers and letters which characterize variations (e.g. firmware release) or special versions of the device without relevance for explosion protection.

Description of the equipment

The Gateway type GEN-2G… is a plug-in module for use in the Turck I/O-system excom for installation in non-hazardous areas or in gas-explosive areas up to zone 1.
It is exclusively designed for use in the module rack type MT**-2G*** or MT**-3G*** as certified under IECEx PTB 13.0040U.

The Gateway is used as an interface between the internal communication circuits of the excom system and an external Ethernet bus.
Via the module rack, the gateway is powered by the power supply modules in the excom system. Additionally, the Gateway contains internal connection facilities for the system-internal communication lines to a second gateway intended for redundant operation, address lines and an internal CAN-Bus.

For gas-explosive applications, the gateway is an intrinsically safe apparatus for installation in zone 1. The Ethernet circuits can be led into zone 0.

For dust-explosive applications, the gateway is an associated apparatus for installation outside explosive areas without additional measures. The Ethernet circuits can be led into zone 20.

The Ethernet circuits are galvanically separated from the supply lines and the internal data lines.

When used inside gas-explosive areas, the excom system has to be installed into an enclosure that provides at least IP54 in accordance with IEC 60079-0.
When used outside explosive areas, the excom system has to be installed in areas with pollution degree 2 or better. Alternatively, it has to be installed into an enclosure with at least IP54 in accordance with IEC 60079-0.

Listing of all components used referring to older standards

The gateway includes no components

Parameters

See Annex

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. The gateway shall only be used as specified by the manufacturer.
   It shall only be used with module rack MT-**2G*** or MT-**3G***
   (according to IECEx PTB 13.0040U) in excom system of company Turck.
2. If a redundant gateway is used in the excom system, it must be of identical type.
3. For use inside gas-explosive areas:
   The excom system has to be installed in an enclosure that provides a minimum ingress protection of IP54 in accordance with IEC 60079-0.

   For use outside explosive areas:
   The excom system has to be installed in areas with pollution degree 2 or better.
   Alternatively, it has to be installed into an enclosure with min. IP54 according to IEC 60079-0.

IECEx Certificate of Conformity

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
Testing according to IEC 60079-0:2017, Ed. 7.0. and IEC 60079-11:2023, Ed. 7.0.

Component changes to the connections for the Ethernet circuit.

Annex:

BVS_22_0044X_Turck_Annex_issue1.pdf

IECEx Certificate of Conformity

Certificate No.: **IECEx BVS 22.0044X issue No: 1**
Annex

Parameters

Electrical data

I.) **System-internal circuits**

Connectors X1, X2	Type of protection Intrinsic Safety Ex ib IIC
	Only for connection to the module rack of Turck excom®-system certified under IECEx PTB 13.0040U / PTB 00 ATEX 2194 U

II.) **IS-100BASE-TX Ethernet Interfaces**

RJ45 sockets X3 (ETH1), X4 (ETH2)	Type of protection intrinsic safety Ex ia IIC resp. Ex ia IIIC
Maximum output voltage	U_o = 4.1 V
Maximum output current	I_o = 277 mA (each port)
Maximum output power	P_o = 283 mW (each port)
Linear output characteristics	
Effective internal capacitance	C_i negligible
Effective internal inductance	L_i negligible

The Ethernet-ports shall only be connected to devices with identically constructed interfaces, i.e. only to Turck IS-100BASE-TX Ethernet-interfaces or interfaces authorized by Turck.

For the connection cable, the following values shall apply:

Maximum cable length	100 m
Cable inductance	$L_c \leq 0.4$ mH/km
Cable capacitance	$C_c \leq 52$ nF/km

No concentrated external inductances or capacitances are permitted in the Ethernet-System.

The Ethernet-interfaces are safely galvanically isolated from earth and from all other circuits in the Gateway.

Thermal data

Permissible temperature range at the place of installation of the gateway:	T_a: -40 °C…70 °C