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 TUN 20.0010X**

Certificate history:

Status: **Current**

Issue No: 0

Date of Issue: 2020-08-04

Applicant: **Hans Turck GmbH & Co KG**
Witzlebenstrasse 7
45472 Mülheim
Germany

Equipment: **Block I/O modules type TB**-L*-Y****-(Y****)-(***), TBIL-M1-Y****-(Y****)-(***), TBEN-S*-Y****-(Y****)-(***)**

Optional accessory:

Type of Protection: **Increased Safety "e", Equipment dust ignition protection by enclosure "t"**

Marking: Ex ec IIC T4 Gc

Ex tc IIIC T115 °C Dc

Approved for issue on behalf of the IECEx Certification Body: **Thomas Heinen**

Position: **Deputy Head of IECEx Certification Body**

Signature: (for printed version)

Date: 2020-08-04

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:

TÜV NORD CERT GmbH
Hanover Office
Am TÜV 1, 30519 Hannover
Germany

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Certificate No.: **IECEx TUN 20.0010X**

Date of issue: 2020-08-04

Issue No: 0

Manufacturer: **Hans Turck GmbH & Co KG**
Witzlebenstrasse 7
45472 Mülheim
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 60079-31:2013 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:

DE/TUN/ExTR20.0012/00

Quality Assessment Reports:

DE/PTB/QAR06.0012/04 DE/PTB/QAR06.0013/05

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

The Block I/O modules type TB**-L*-Y****-(Y****)-(***), TBIL-M1-Y****-(Y****)-(***), TBEN-S*-Y****-(Y****)-(***)

are used for factory automation and are prepared for fieldbus PROFIBUS-DP, CANopen, Modbus TCP, Ethernet/IP™ and PROFINET. The IP67-modules are for use in harsh environments have glass-fiber reinforced plastic housings and metal-connectors, are fully potted, vibration and shock-proof.

The permissible ambient temperature range is -25 °C … +60 °C.

See attachment for details.

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. The apparatus may be installed in an area of not more than pollution degree 2.
2. The connecting and disconnecting of energized circuits and the operation of switches is only permitted, if no explosion hazardous atmosphere is available.
3. The metallic protective cover must be connected to the potential equalization in the explosion hazardous area.
4. The installation of the apparatus must not be performed in areas with critical influence of UV light.
5. The equipment has to be installed in such a way, that, under normal conditions of use, dangers from electrostatic charges are avoided.
6. All plug connectors have to be installed; not used connectors have to be protected with blind plugs.

Annex:

_attachment_TUN 20.0010X_TBxx modules.pdf

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Product:

The Block I/O modules
type TB**-L*-Y****-(Y****)-(***), TBIL-M1-Y****-(Y****)-(***), TBEN-S*-Y****-(Y****)-(***)
are used for factory automation and are prepared for fieldbus PROFIBUS-DP, CANopen, Modbus TCP, Ethernet/IP™ and PROFINET. The IP67-modules are for use in harsh environments have glass-fiber reinforced plastic housings and metal-connectors, are fully potted, vibration and shock-proof.

The permissible ambient temperature range is -25°C … +60°C.

Type designation:

TBXX XX YXXXX YXXXX XXX

Software Firmware	Not relevant for licensing		
Y -> Numberl I-O / Technologie Type:	DIN: digital in NPN;		RFID
	DIP: digital in PNP;		IOL
	DON: digital out NPN;		EN1: HW von 16DIP
	DOP: digital out PNP;		FDIO1: Safe digital In-Out
Y -> Number I-O / Technologie Type	DXN: digital crossfunc. NPN;		PLC; SE: switch ethernet
	DXP: digital crossfunc: PNP;		FDX: safe digital crossfunc.
	FDI: safe digital in		
Housing / Style	L	Large	4: 7/8 4Pol; 5: 7/8 5Pol; L: M12 5Pol; 1: (as 5) old version. 2: (as 5) with serial com.
	M	Medium	1:
	S	Small	4: 4xM12; 8xM8
Turck Box/Protocol	DP	Profibus	
	EC	Ethercat	
	EN	Ethernet Multiprotocol	
	IL	I/O Link	
	IP	Ethernet IP	
	PN	Profinet	

Electrical data

TB**-L*-Y****-(Y****)-(***):

P-switching:
U_n =24 VDC ±10 %
I_{max} (total per module)= 9 A
I_{max} = 1.5 A (per output) DI(P), DOP, DX(P), RFID, IOL, PLC, SE
The electrical data for the Safety-Modules have to be taken from the data sheet

N-switching:
U_n =24 VDC ±10 %
Imax (total per module)= 9 A
Imax = 1.0 A (per output) DIN, DON, DXN

TBIL-M1-Y****-(Y****)-(***):

U_n =24 VDC
I_{max} (total per module)= 4 A
I_{max} (per channel DIP, DOP, DXP) = 0.5 A;
for TBIL-M1-16DXP-B variant: I_{max} (per connector) = 1.5 A

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TBEN-S*-Y****-(Y****)-(***)

with digital I/Os:
U_n =24 VDC
I_{max} (total per module)= 5.5 A
I_{max} (per output) for DIP, DOP, DXP, RFID, IOL = 0.5 A

with analog I/Os:
I_{max} (total per module)= 5.5A
I_{max} (C0-C3 Supply of sensors or actuators per connector) = 1 A

Special conditions for safe use

1. The equipment may be installed in an area of not more than pollution degree 2.
2. The connecting and disconnecting of all energized electrical circuits and the operation of switches is only permitted, if no explosion hazardous atmosphere is available.
3. The metallic protective cover must be connected to the potential equalization in the explosion hazardous area.
4. The installation of the apparatus must not be performed in areas with critical influence of UV light.
5. The equipment has to be installed in such a way, that, under normal conditions of use, dangers from electrostatic charges are avoided.
6. All plug connectors have to be installed; not used connectors have to be protected with blind plugs.