TURCK

Industrial Automation

RFID SYSTEM FOR THE EX AREA

BLident®

Sense it! Connect it! Bus it! Solve it!

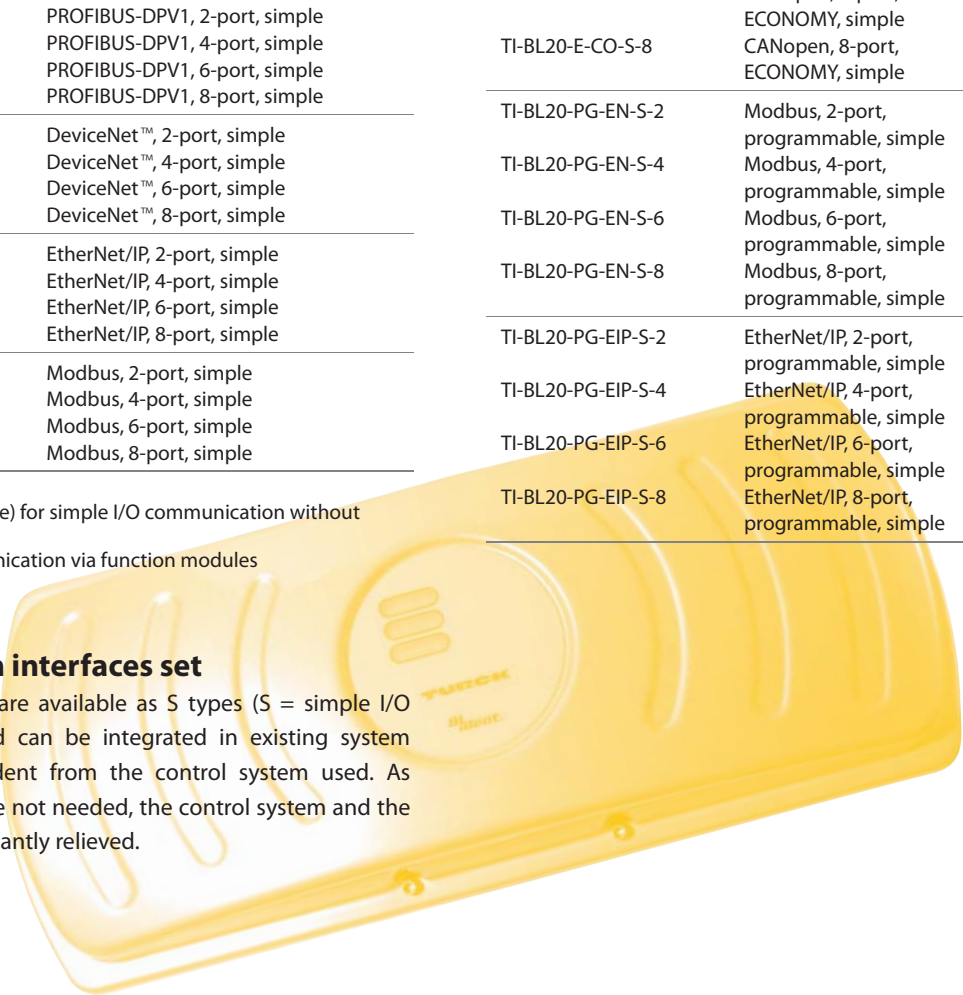# *BL ident®* – modular RFID system, components for the Ex-area

BL20 interface sets

Type	Description
TI-BL20-DPV1-2	PROFIBUS-DPV1, 2-port
TI-BL20-DPV1-4	PROFIBUS-DPV1, 4-port
TI-BL20-DPV1-6	PROFIBUS-DPV1, 6-port
TI-BL20-DPV1-8	PROFIBUS-DPV1, 8-port
TI-BL20-EN-PN-2	PROFINET IO, 2-port
TI-BL20-EN-PN-4	PROFINET IO, 4-port
TI-BL20-EN-PN-6	PROFINET IO, 6-port
TI-BL20-EN-PN-8	PROFINET IO, 8-port
TI-BL20-E-DPV1-2	PROFIBUS-DPV1, 2-port, ECONOMY
TI-BL20-E-DPV1-4	PROFIBUS-DPV1, 4-port, ECONOMY
TI-BL20-E-DPV1-6	PROFIBUS-DPV1, 6-port, ECONOMY
TI-BL20-E-DPV1-8	PROFIBUS-DPV1, 8-port, ECONOMY
TI-BL20-PG-EN-2	Ethernet Modbus TCP, 2-port, programmable
TI-BL20-PG-EN-4	Ethernet Modbus TCP, 4-port, programmable
TI-BL20-PG-EN-6	Ethernet Modbus TCP, 6-port, programmable
TI-BL20-PG-EN-8	Ethernet Modbus TCP, 8-port, programmable
TI-BL20-PG-EIP-2	EtherNet/IP, 2-port, programmable
TI-BL20-PG-EIP-4	EtherNet/IP, 4-port, programmable
TI-BL20-PG-EIP-6	EtherNet/IP, 6-port, programmable
TI-BL20-PG-EIP-8	EtherNet/IP, 8-port, programmable
TI-BL20-DPV1-S-2	PROFIBUS-DPV1, 2-port, simple
TI-BL20-DPV1-S-4	PROFIBUS-DPV1, 4-port, simple
TI-BL20-DPV1-S-6	PROFIBUS-DPV1, 6-port, simple
TI-BL20-DPV1-S-8	PROFIBUS-DPV1, 8-port, simple
TI-BL20-DN-S-2	DeviceNet™, 2-port, simple
TI-BL20-DN-S-4	DeviceNet™, 4-port, simple
TI-BL20-DN-S-6	DeviceNet™, 6-port, simple
TI-BL20-DN-S-8	DeviceNet™, 8-port, simple
TI-BL20-EIP-S-2	EtherNet/IP, 2-port, simple
TI-BL20-EIP-S-4	EtherNet/IP, 4-port, simple
TI-BL20-EIP-S-6	EtherNet/IP, 6-port, simple
TI-BL20-EIP-S-8	EtherNet/IP, 8-port, simple
TI-BL20-EN-S-2	Modbus, 2-port, simple
TI-BL20-EN-S-4	Modbus, 4-port, simple
TI-BL20-EN-S-6	Modbus, 6-port, simple
TI-BL20-EN-S-8	Modbus, 8-port, simple

Type	Description
TI-BL20-EN-PN-S-2	PROFINET IO, 2-port, simple
TI-BL20-EN-PN-S-4	PROFINET IO, 4-port, simple
TI-BL20-EN-PN-S-6	PROFINET IO, 6-port, simple
TI-BL20-EN-PN-S-8	PROFINET IO, 8-port, simple
TI-BL20-E-DPV1-S-2	PROFIBUS-DPV1, 2-port, ECONOMY, simple
TI-BL20-E-DPV1-S-4	PROFIBUS-DPV1, 4-port, ECONOMY, simple
TI-BL20-E-DPV1-S-6	PROFIBUS-DPV1, 6-port, ECONOMY, simple
TI-BL20-E-DPV1-S-8	PROFIBUS-DPV1, 8-port, ECONOMY, simple
TI-BL20-E-DN-S-2	DeviceNet™, 2-port, ECONOMY, simple
TI-BL20-E-DN-S-4	DeviceNet™, 4-port, ECONOMY, simple
TI-BL20-E-DN-S-6	DeviceNet™, 6-port, ECONOMY, simple
TI-BL20-E-DN-S-8	DeviceNet™, 8-port, ECONOMY, simple
TI-BL20-E-CO-S-2	CANopen, 2-port, ECONOMY, simple
TI-BL20-E-CO-S-4	CANopen, 4-port, ECONOMY, simple
TI-BL20-E-CO-S-6	CANopen, 6-port, ECONOMY, simple
TI-BL20-E-CO-S-8	CANopen, 8-port, ECONOMY, simple
TI-BL20-PG-EN-S-2	Modbus, 2-port, programmable, simple
TI-BL20-PG-EN-S-4	Modbus, 4-port, programmable, simple
TI-BL20-PG-EN-S-6	Modbus, 6-port, programmable, simple
TI-BL20-PG-EN-S-8	Modbus, 8-port, programmable, simple
TI-BL20-PG-EIP-S-2	EtherNet/IP, 2-port, programmable, simple
TI-BL20-PG-EIP-S-4	EtherNet/IP, 4-port, programmable, simple
TI-BL20-PG-EIP-S-6	EtherNet/IP, 6-port, programmable, simple
TI-BL20-PG-EIP-S-8	EtherNet/IP, 8-port, programmable, simple

Type TI-BL-20…S (simple) for simple I/O communication without function module
other types for communication via function modules

Information on interfaces set

BL ident® interfaces are available as S types (S = simple I/O communication) and can be integrated in existing system structures, independent from the control system used. As function modules are not needed, the control system and the periphery are significantly relieved.

BL ident® – modular RFID system:
The complete RFID solution for the explosion hazardous area

BL ident® – Make use of the advantages in the Ex area!

The advantages of RFID are now also available for the Ex area with *BL ident*® the modular RFID system by TURCK. The optimally composed RFID system consisting of remote I/Os, read/write heads and data carriers, is mounted easily and safely in the Ex area.

Many fieldbus interfaces (PROFIBUS-DPV1, DeviceNet™, CANopen, PROFINET IO, Ethernet Modbus TCP, EtherNet/IP™) as well as the modular concept (up to 16 read/write heads per gateway) provide unprecedented flexibility for project planning. The possibility to plug further I/O modules on the same gateway makes the distribution of signals very easy. Moreover, programmable gateways enable peripheral pre-processing of signals, thus relieving the bus and control system.

Use *BL ident*® to profit from the RFID advantages in zone 1 – with HF as well as with UHF. It is implemented in the higher level control system of zone 1 just as in non-Ex area systems. HF and UHF can be connected to the same interface module (mixed operation).

Safe transmission of process data, also in rough industrial ambients, is provided through the digital communication interface at the read/write head. Active read/write heads guarantee interference-free and safe operation (electronics and antenna in the same housing, no coaxial cable) RFID for process automation – Profit from the advantages!

Device identification

Data carriers:
- II 2 G Ex ia IIC T4/T6
- II 2 D Ex iaD 21 T110 °C

Read/write heads:
- Zone 1
  II 2 G Ex d II B...
- Zone 2
  II 3 G Ex nA II T4
  II 3 D Ex tD A22 IP67 T135 °C

Remote-IO (BL20):
- II 3 D Ex tD A22 IP67 T135 °
- II 3 G Ex nA II T4 (T_{amb} = 0...+55 °C)
- II 3 D Ex nA nC T4 (T_{amb} = 0...+55 °C, only relay modules)

PROFIBUS
PROCESS FIELD BUS

PROFINET
INDUSTRIAL ETHERNET

CANopen

SPS

Address switch/
Service interface

Spring terminal
for read/write heads

ZONE 2

ZONE 1

TURCK
BL ident.
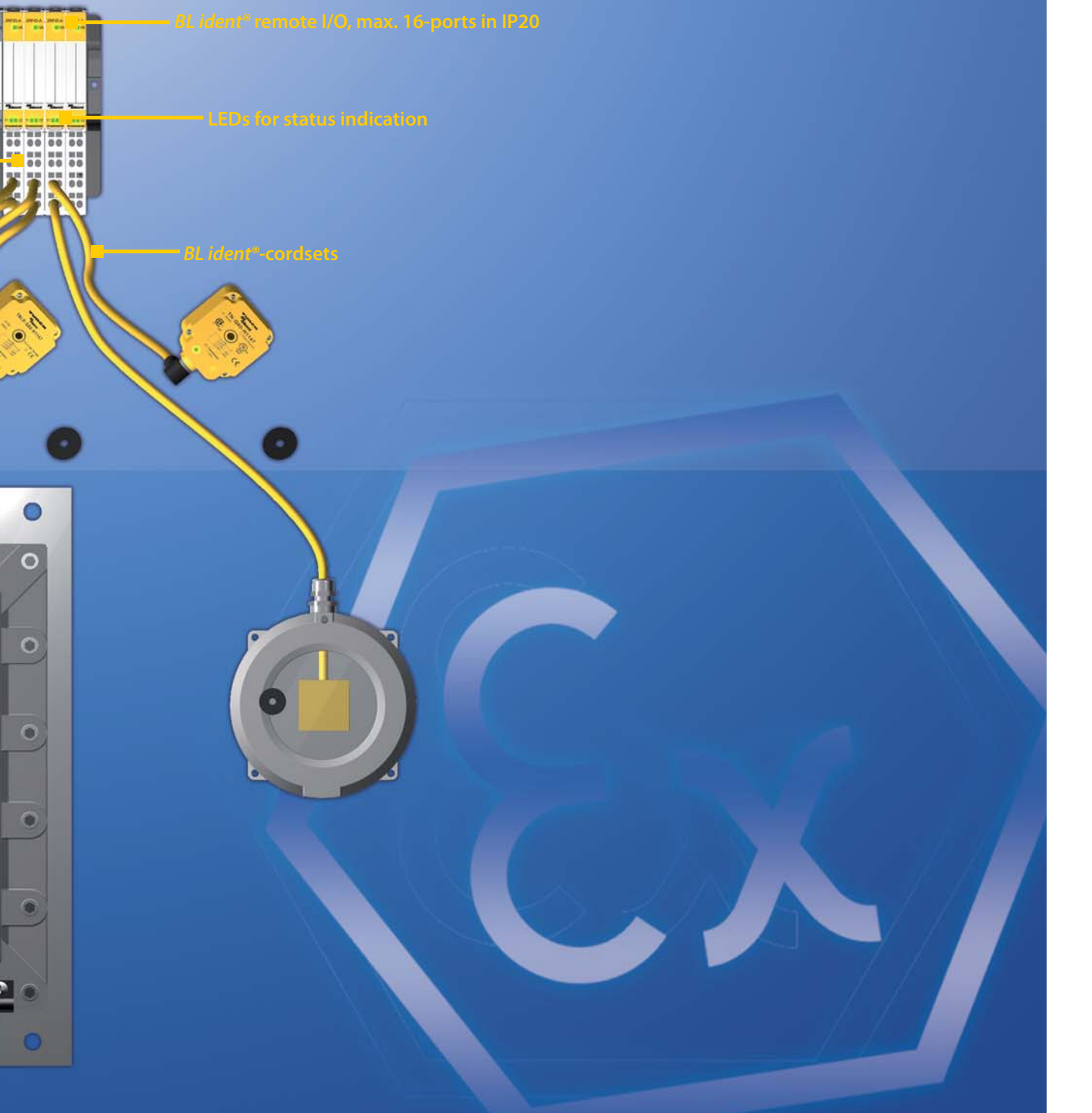
Standard function block

Power supply

EtherNet/IP™

Modbus TCP

DeviceNet™

BL ident® remote I/O, max. 16-ports in IP20

LEDs for status indication

BL ident®-cordsets

BL ident® – modular RFID system: Components for the Ex-area

Data carriers

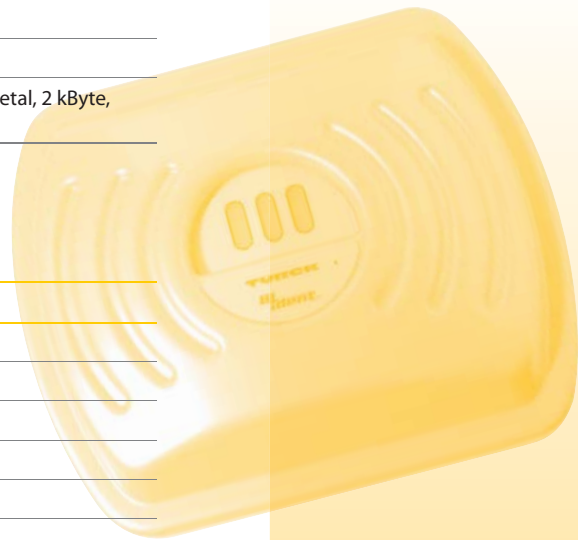| Type	Description
TW-R16-B128-EX	Ø 16 mm, standard, 128 Byte, EEPROM
TW-R20-B128-EX	Ø 20 mm, standard, 128 Byte, EEPROM
TW-R20-K2-EX	Ø 20 mm, standard, 2 kByte, FRAM
TW-R30-B128-EX	Ø 30 mm, standard, 128 Byte, EEPROM
TW-R30-K2-EX	Ø 30 mm, standard, 2 kByte, FRAM
TW-R50-B128-EX	Ø 50 mm, standard, 128 Byte, EEPROM
TW-R50-K2-EX	Ø 50 mm, standard, 2 kByte, FRAM
TW-R50-K8-EX	Ø 50 mm, standard, 8 kByte, FRAM
TW-R50-MF-K2-EX	Ø 50 mm, for direct mounting on metal, 2 kByte, FRAM

Read/write heads

Type	Description
TB-EM18WD-H1147-Ex	flush M18[1]
TB-EM18WD-H1147/S1126-Ex	flush M18[1]
TN-EM18WD-H1147-Ex	non-flush M18[1]
TN-EM18WD-H1147/S1126-Ex	non-flush M18[1]
TB-EM30WD-H1147-Ex	flush M30[1]
TB-EM30WD-H1147/S1126-Ex	flush M30[1]
TN-EM30WD-H1147-Ex	non-flush M30[1]
TN-EM30WD-H1147/S1126-Ex	non-flush M30[1]
TN-Q80-H1147-EX	Rectangular, M12 x 1 connector[2]
TNLR-Q80-H1147-EX	Rectangular, M12 x 1 connector, extended read/write distance[2]
TN-CK40-R130H93-2M-Ex	II 2 G Ex D II B...
TNLR-Q80-R192H132-2M-Ex	II 2 G Ex D II B...
TNLR-Q80-R234H172-2M-Ex	II 2 G Ex D II B...
TN865-Q480H340-Q300H400-2M-Ex	II 2 G Ex D II B...

[1] Approval: II 3 G Ex nA II T4 Gc bzw. II 3 D Ex t IIIB T135 ˚C Dc
[2] Approval: II 3 G Ex nA II T4 bzw. II 3 D Ex t IIIB T135 ˚C

Read/write heads, mounting accessories

Type	Description
SC-M12/3GD	Safety clip for M12 x 1 connectors

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