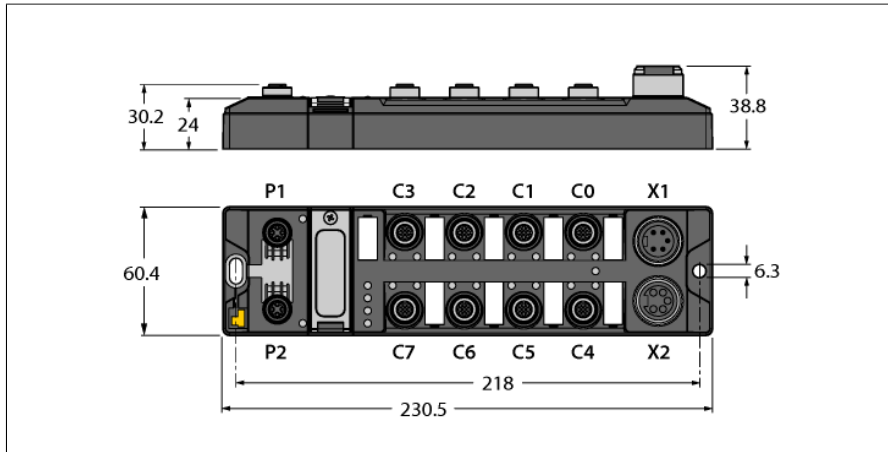


Compact Multiprotocol RFID Module for Ethernet

4 RFID Channels (HF/UHF) and 8 Universal Digital Channels, Configurable as PNP Inputs or 2-A Outputs

TBEN-L5-4RFID-8DXP



Type	TBEN-L5-4RFID-8DXP
ID	100000836
Supply	
Supply voltage	24 VDC
Admissible range	18...30 VDC Total current V1 max. 8 A [UL: 7 A] + V2 max. 9 A at 70 °C [UL: 55 °C] per module
Voltage supply connection	5-pin male 7/8" connector X1
Operating current	V1: max. 150 mA V2: max. 100 mA
RFID supply $V_{AUX 1}$	Slots C0...C3 from V1 Short-circuit proof, 2 A per channel at 70 °C [UL: 1.74 A per channel at 55 °C]
Sensor/actuator supply	Slots C4...C7 powered by V2 Power supply Pin1 switchable for each slot Short-circuit proof, 2 A per slot at 70 °C [UL: 55 °C]
Electrical isolation	galvanic isolation of the voltage groups V1 and V2, voltages up to 500 VAC
Power dissipation, typical	≤ 6.5 W
Transmission rate Ethernet	
Transmission rate Ethernet	10/100 Mbps
Connection technology Ethernet	2 x M12, 4-pin, D-coded
Web server	Default: 192.168.1.254
Service interface	Ethernet via P1 oder P2
Field Logic Controller (FLC)	
ARGEES Firmware Version	3.3.2.0
ARGEES Engineering Version	2.0.25.0
Modbus TCP	
Addressing	Static IP, BOOTP, DHCP
Supported function codes	FC1, FC2, FC3, FC4, FC5, FC6, FC15, FC16, FC23
Number of TCP connections	8

- PROFINET device, EtherNet/IP device or Modbus TCP slave
- PROFINET S2 system redundancy
- Integrated Ethernet switch
- Supports 10 Mbps/100 Mbps
- Glass fiber reinforced housing
- Shock and vibration tested
- Fully potted module electronics
- Protection classes IP65, IP67, IP69K
- ATEX Zone 2/22
- Up to 128 bytes of user data (EtherNet/IP: up to 80 bytes) per read/write cycle per channel and use of fragments with 16 kilo-bytes of FIFO memory each
- Data interface for convenient use of the RFID functions
- Continuous HF bus mode with up to 32 HF read/write heads per channel
- 4 channels with M12 connection for RFID
- 8 universal digital channels, configurable as PNP inputs or 2 A outputs
- Programmable ARGEE

Ethernet/IP	
Addressing	acc. to EtherNet/IP specification
Device Level Ring (DLR)	supported
Class 3 connections (TCP)	3
Class 1 connections (CIP)	10
Input Assembly Instance	103
Input Data Size	248 INT
Output Assembly Instance	104
Output Data Size	248 INT
Configuration Assembly Instance	106

PROFINET	
Addressing	DCP
MinCycleTime	1 ms
Diagnostics	acc. to PROFINET alarm handling
Automatic addressing	supported
Media Redundancy Protocol (MRP)	supported

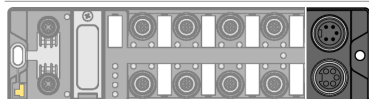
RFID	
Number of channels	4
Connectivity	M12
Power supply	2 A per channel at 70 °C [UL: 1.74 A per channel at 55 °C], short-circuit proof
Operation per channel	1x HF or UHF read/write head, up to 32 bus-compatible HF read/write heads with ending /C53 (additional power supply may be needed)
RFID data interface	HF und UHF
Cable length	Max. 50 m

Digital inputs	
Number of channels	8
Connectivity inputs	M12, 5-pin
Input type	PNP
Type of input diagnostics	Channel diagnostics
Switching threshold	EN 61131-2 Typ 3, PNP
Low-level signal voltage	< 5 V
High level signal voltage	> 11 V
Low level signal current	< 1.5 mA
High level signal current	> 2 mA
Electrical isolation	Galvanically isolated to the fieldbus Voltage proof up 500 VDC

Digital outputs	
Number of channels	8
Connectivity outputs	M12, 5-pin
Output type	PNP
Type of output diagnostics	Channel diagnostics
Output voltage	24 VDC from potential group
Output current per channel	2.0 A, short-circuit proof, max. 4.0 A per port
Simultaneity factor	0.56
Load type	EN 60947-5-1: DC-13
Short-circuit protection	yes
Electrical isolation	Galvanically isolated to the fieldbus Voltage proof up 500 VDC

Standard/Directive conformity	
Vibration test	Acc. to EN 60068-2-6 Acceleration up to 20 g
Shock test	acc. to EN 60068-2-27
Drop and topple	acc. to EN 60068-2-31/IEC 60068-2-32
Electromagnetic compatibility	Acc. to EN 61131-2
Approvals and certificates	CE FCC statement, FM class I, zone 2, UV resistant acc. to DIN EN ISO 4892-2A (2013)
UL Certificate	cULus LISTED 21 W2, Encl.type 1 IND.CONT.EQ.
Note on ATEX/IECEx	The Quick Start Guide with information on use in Ex Zones 2 and 22 must be observed.

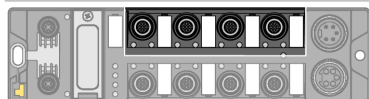
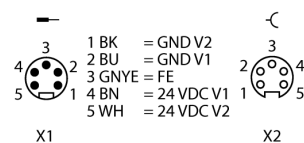
General Information	
Dimensions (W x L x H)	60.4 x 230.4 x 38.8 mm
Ambient temperature	-40...+70 °C UL: +55 °C
Storage temperature	-40...+85 °C
Altitude	Max. 5000 m
Protection class	IP65 IP67 IP69K
MTTF	88 years acc. to SN 29500 (Ed. 99) 20 °C
Housing material	PA6-GF30
Housing color	Black
Male connector material	Nickel-plated brass
Window material	Lexan
Material screw	303 stainless steel
Material label	Polycarbonate
Halogen-free	yes
Mounting	2 mounting holes Ø 6.3 mm



Note

Power supply cable (example):
RSM RKM 50-2M
Ident. no. U2282-0

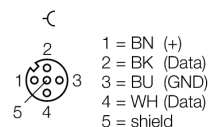
7/8" Power Supply



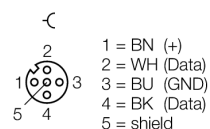
Note

RFID cable (example):
RK4.5T-2-RS4.5T/S2501
Ident. no. U3-01243
Connection of TB and TN read/write heads (example):
TN-CK40-H1147
Ident. no. 7030006

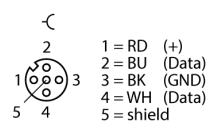
.../S2500plug connectors



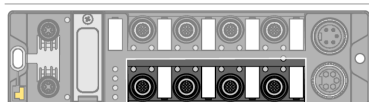
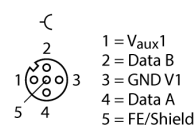
.../S2501 Connectors



.../S2503 Connectors



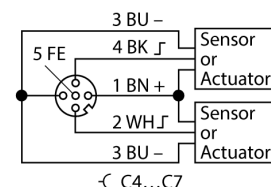
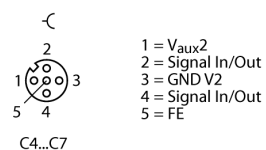
Wiring diagram

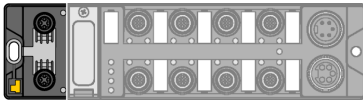


Note

Actuator and sensor cable/PUR connection cable (example):
RK4.4T-2-RS4.4T
Ident. no. U2445
Connection Y piece for single assignment
YB2-FSM4.5-2FKM4.5
Ident-No. U0875-78

M12 × 1 I/O port





Note

Ethernet cable (example):
RSSD RSSD 441-2M
Ident. no. U-02482

M12 × 1 Ethernet

