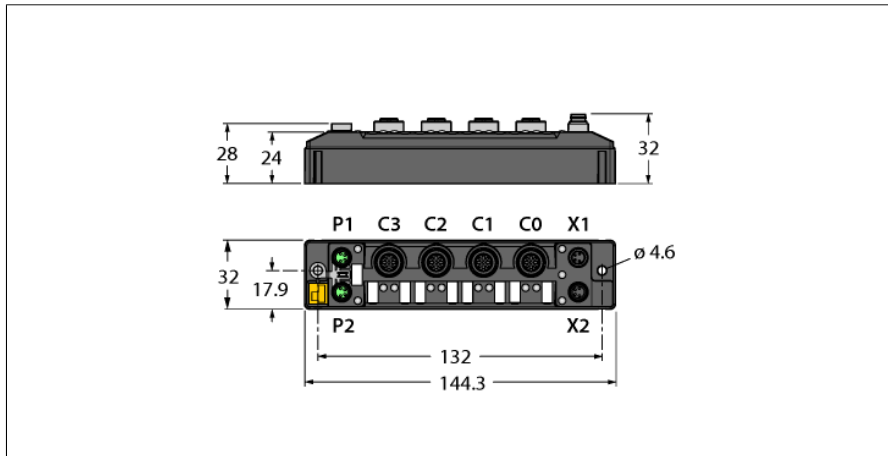


# TBEN-S Multiprotocol Module for Ethernet interface for 2 BL ident read-write heads (HF/UHF)

## TBEN-S2-2RFID-4DXP



- Glass fiber reinforced housing
- Shock and vibration tested
- Fully potted module electronics
- Protection classes IP65, IP67, IP69K
- FLC/ARGEE programmable
- Multiprotocol: EtherNet/IP™ device, Modbus TCP slave or PROFINET device
- Integration in PLC systems without special function module
- Up to 128 bytes of user data per read/write cycle for each channel and use of fragments for larger amounts of data
- Data interface for convenient use of RFID functionality
- Function module in CODESYS available for the data interface
- HF bus mode for static applications
- M8 male connector for power supply, 4-pin
- 2 × M8, 4-pin, Ethernet connection
- 2 channels with M12 connection for RFID
- Mixed operation of HF and UHF read/write heads
- 4 digital channels, configurable as PNP inputs or 0.5 A outputs
- Integrated Ethernet switch allows line topology
- Transmission rate 10 Mbps/100 Mbps
- Integrated web server
- LED displays and diagnostics

<b>Type designation</b>	TBEN-S2-2RFID-4DXP
Ident-No.	6814029
<b>Supply</b>	
Supply voltage	24 VDC
Voltage supply connection	2 × M8, 4-pin
RFID supply $V_{AUX1}$	Ports C0-C1, V1 short-circuit proof, 1.2 A ≤ 55 °C, 55 °C < 0.5 A ≤ 70 °C per channel
Sensor/Actuator supply $V_{AUX2}$	Supply ports C2-C3 from V2 short-circuit proof, 0.14 A ≤ 55 °C, 55 °C < 0.05 A ≤ 70 °C
Electrical isolation	galvanic isolation of the voltage groups V1 and V2, voltages up to 500 VAC
<b>System data</b>	
Transmission rate Ethernet	10 Mbps / 100 Mbps
Connection technology Ethernet	2 × M8, 4-pin, D coded
Protocol detection	automatic
Web server	Default: 192.168.1.254
Service Interface	Ethernet via P1 or P2
<b>Field Logic Controller (FLC)</b>	
Supported from firmware version	3.3.5.0
Released from ARGEE version	2.0.26.0
<b>Modbus TCP</b>	
Addressing	Static IP, BOOTP, DHCP
Supported function codes	FC1, FC2, FC3, FC4, FC5, FC6, FC15, FC16, FC23
Number of TCP connections	8
Input register start address	0 (0x0000 hex)
Output register start address	2048 (0x0800 hex)
<b>EtherNet/IP™</b>	
Addressing	acc. to EtherNet/IP™ specification
Quick Connect (QC)	< 500 ms
Device Level Ring (DLR)	supported
Number of TCP connections	3
Number of CIP connections	10
Input Assembly Instance	103
Output Assembly Instance	104
Configuration Assembly Instance	106
<b>PROFINET</b>	
Addressing	DCP
Conformance class	B (RT)
MinCycleTime	1 ms
Fast Start-Up (FSU)	< 500 ms
Diagnostics	acc. to PROFINET alarm handling
Topology detection	supported
Automatic addressing	supported
Media Redundancy Protocol (MRP)	supported

## TBEN-S Multiprotocol Module for Ethernet interface for 2 BL ident read-write heads (HF/UHF) TBEN-S2-2RFID-4DXP

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### RFID

Number of channels	2
Connectivity	M12
Power supply	1.2 A ≤ +55 °C, +55 °C < 0.5 A ≤ +70 °C per channel, short-circuit proof
Operation per channel	1 × HF or UHF read/write head, up to 32 bus-compatible HF read/write heads ending on /C53 (additional power supply may be needed for static applications)
Mixed operation of RFID data interface	HF and UHF read/write heads
Cable length	max. 50 m

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### Digital inputs

Number of channels	4
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
Input delay	0.05 ms
Potential separation	galvanic isolation to P1/P2 , voltages up to 500 VDC

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### Digital outputs

Number of channels	4
Connection Technology Outputs	M12, 5-pol
Output type	PNP
Type of output diagnostics	channel diagnostics
Output voltage	24V DC from potential group V2
Output current per channel	0.5 A, short-circuit proof
Simultaneity factor	1 (0.03 >55°C)
Load type	EN 60947-5-1: DC-13
Short-circuit protection	yes
Potential separation	galvanic isolation to P1/P2 , voltages up to 500 VDC

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### Standard/Directive conformity

Vibration test	acceleration to 20 g acc. to EN 60068-2-6
Shock test	acc. to EN 60068-2-27
Drop and topple	acc. to EN 60068-2-31/IEC 60068-2-32
Electro-magnetic compatibility	acc. to EN 61131-2
Approvals and certificates	CE
UL conditions	cULus LISTED 21 W2, Encl.Type 1 IND.CONT.EQ.

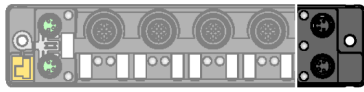
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### General Information

Dimensions (W x L x H)	32 x 144 x 32mm
Operating temperature	-40...+70 °C
Storage temperature	-40 ... +70 °C
Altitude	max.5000 m
Protection class	IP65 IP67 IP69K
MTTF	179 years acc. to SN 29500 (Ed. 99) 20 °C
Housing material	PA6-GF30
Housing color	Black
Material label	Polycarbonate
Halogen-free	yes
Mounting	2 mounting holes □ 4.6 mm

# TBEN-S Multiprotocol Module for Ethernet interface for 2 BL ident read-write heads (HF/UHF)

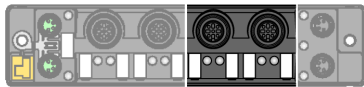
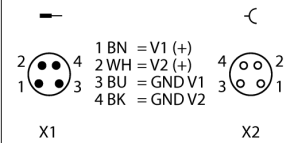
## TBEN-S2-2RFID-4DXP



### Accessories

Power supply cable (example):  
M8-M8 2 m  
PKG 4M-2-PSG 4M  
Ident. no. U99-10815

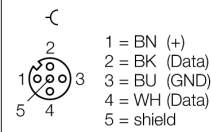
### M8 x 1 Voltage Supply



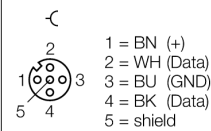
### Accessories

RFID cable (example):  
RK4.5T-5-RS4.5T/S2500  
ID number 6699201  
Connection of TB and TN read/write heads (example):  
TN-CK40-H1147  
ID number 7030006

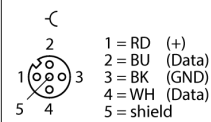
### Connector .../S2500



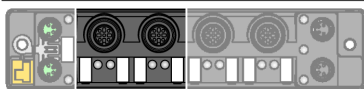
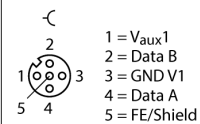
### Connector .../S2501



### Connectors .../S2503



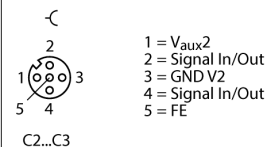
### Wiring Diagram



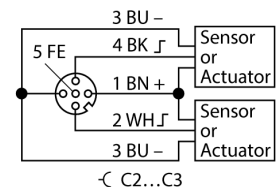
### Accessories

Actuator and sensor cable/PUR cable (example):  
RKC4.4T-2-RSC4.4T/TXL  
ID number 6625608  
Y extension cable for single occupancy  
FSM4-2WAK3-1/1/P00  
ID number 8009560

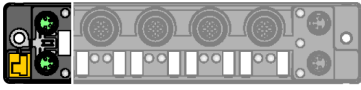
### M12 x 1 I/O Port



C2...C3



**TBEN-S Multiprotocol Module for Ethernet  
interface for 2 BL ident read-write heads (HF/UHF)  
TBEN-S2-2RFID-4DXP**



**Accessories**

It is strongly recommended to use only ready-made Ethernet cables!

Ethernet cable (example):

M8-M8:

PSGS4M-PSGS4M-4413-1M

Ident. no. U-55718

M8-RJ45:

PSGS4M-RJ45S-4413-1M

Ident. no.: U-55725

M8-M12:

RSSD-PSGS4M-4413-1M

Ident. no.: U-58840

M8 x 1 Ethernet

