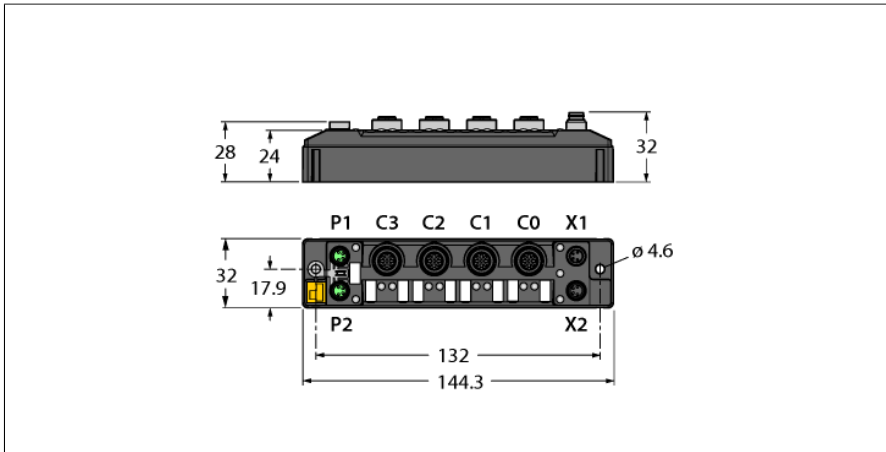


Compact Multiprotocol RFID Module for Ethernet 2 RFID Channels (HF/UHF) and 4 Universal Digital Channels, Configurable as PNP Inputs or 0.5-A Outputs TBEN-S2-2RFID-4DXP



Type	TBEN-S2-2RFID-4DXP
ID	6814029
Supply	
Supply voltage	24 VDC
Admissible range	18...30 VDC total current max. 4 A per voltage group; total current V1 + V2 max. 5.5 A at 70 °C per module
Voltage supply connection	2 x M8, 4-pin, A-coded
Operating current	V1: max. 120 mA V2: max. 30 mA
RFID supply $V_{AUX,1}$	Ports C0-C1, V1 short-circuit proof, 1.2 A \leq 55 °C, 55 °C < 0.5 A \leq 70 °C per channel
Sensor/actuator supply	Supply ports C2-C3 from V2 short-circuit proof, 0.14 A \leq 55 °C, 55 °C < 0.05 A \leq 70 °C
Electrical isolation	galvanic isolation of the voltage groups V1 and V2, voltages up to 500 VAC
Power dissipation, typical	\leq 2 W
System data	
Transmission rate Ethernet	10/100 Mbps
Connection technology Ethernet	2 x M8, 4-pin, D-coded
Protocol detection	automatic
Web server	Default: 192.168.1.254
Service interface	Ethernet via P1 or P2
ARGEE functionality	Supported
Field Logic Controller (FLC)	
ARGEE Firmware Version	3.3.5.0
ARGEE Engineering Version	2.0.26.0

- 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 per read/write cycle per channel and use of fragments with 16 kilobytes 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
- 2 channels with M12 connection for RFID
- 4 universal digital channels, configurable as PNP inputs or 0.5 A outputs
- Programmable ARGEE

Modbus TCP	
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)

Ethernet/IP	
Addressing	acc. to EtherNet/IP specification
Quick Connect (QC)	< 500 ms
Device Level Ring (DLR)	supported
Class 3 connections (TCP)	3
Class 1 connections (CIP)	10
Input Assembly Instance	103
Output Assembly Instance	104
Configuration Assembly Instance	106

PROFINET	
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
System redundancy	S2

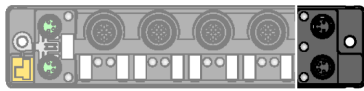
RFID	
Number of channels	2
Connectivity	M12
Power supply	1.2 A ≤ 55 °C, 55 °C < 0.5 A ≤ 70 °C per channel, short-circuit proof
Operation per channel	1 × HF or UHF read/write head, up to 32 bus-compatible HF read/write heads with termination/C53 (additional power supply may be needed)
RFID data interface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

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
Electrical isolation	Galvanically isolated to the fieldbus Voltage proof up 500 VDC

Digital outputs	
Number of channels	4
Connectivity outputs	M12, 5-pin
Output type	PNP
Type of output diagnostics	Channel diagnostics
Output voltage	24 VDC 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
Electrical isolation	Galvanically isolated to the fieldbus Voltage proof up 500 VDC

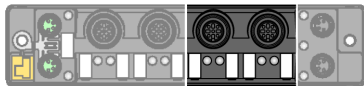
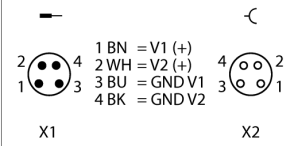
Standard/Directive conformity	
Vibration test	Acc. to EN 60068-2-6 Acceleration up to 20 g
Shock test	acc. to EN 60068-2-27
Drop and topple	acc. to EN 60068-2-31/IEC 60068-2-32
Electromagnetic compatibility	Acc. to EN 61131-2
Approvals and certificates	CE and UKCA FCC statement, UV resistant acc. to 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)	32 x 144 x 32 mm
Ambient temperature	-40...+70 °C
Storage temperature	-40...+85 °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
Connector material	Nickel-plated brass
Material label	Polycarbonate
Halogen-free	yes
Mounting	2 mounting holes □ 4.6 mm



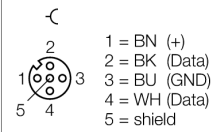
Note
 Power supply cable (example):
 M8-M8
 ID number 6627044 PKG4M-0,2-PSG4M/TXL
 ID number 6626679 PKG4M-4-PSG4M/TXL

M8 x 1 Voltage Supply

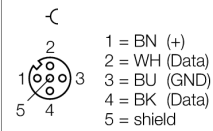


Note
 RFID cable (example):
 RK4.5T-5-RS4.5T/S2500
 ID number 6699201
 Connection of TB and TN read/write heads (example):
 TN-CK40-H1147
 ID number 7030006

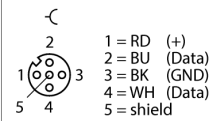
.../S2500 Connectors



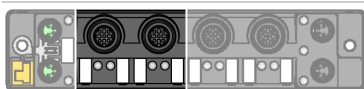
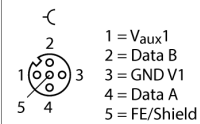
.../S2501 Connectors



Connectors .../S2503

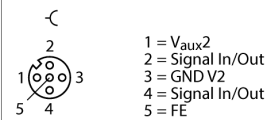


Wiring diagram

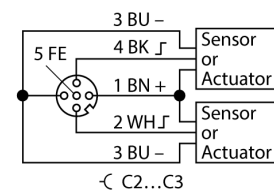


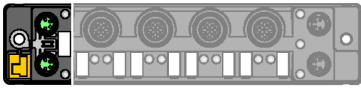
Note
 Actuator and sensor cable/PUR cable (example):
 RKC4.4T-2-RSC4.4T/TXL
 Ident. no. 6625608
 Connection cable with Y piece for single assignment
 VBRS4.4-2RKC4T-1/1/TXL
 Ident-No. 6628112

M12 x 1 I/O Port



C2...C3





Note

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

Ethernet cable (example):

M8-M8:

ID number 6630376 PSG4M-0,2-PSG4M/TXN

ID number 6934033 PSGS4M-PSGS4M-4416-1M

M8-RJ45:

ID number 6935342 PSGS4M-RJ45S-4416-1M

M8-M12:

ID number 6935351 RSSD-PSGS4M-4416-2M

M8 x 1 Ethernet

