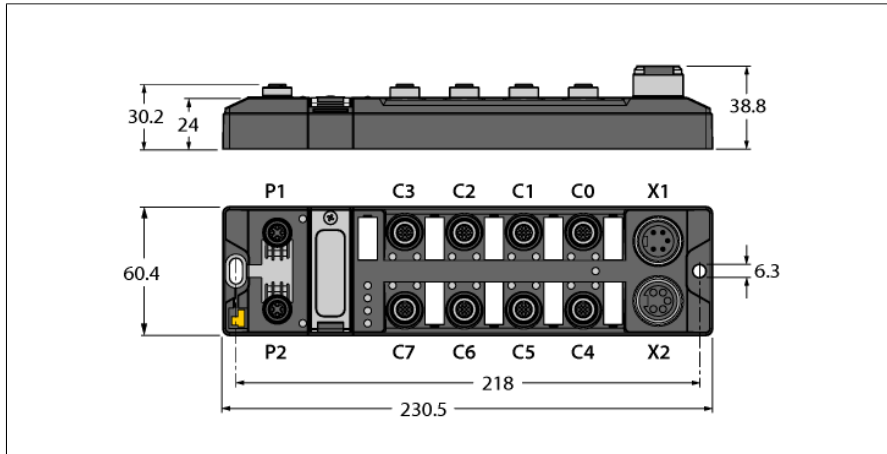


Compact RFID Module for Ethernet Linux for Implementation by System Integrators TBEN-L5-4RFID-8DXP-LNX



- TCP/IP
- Glass fiber reinforced housing
- Shock and vibration tested
- Fully potted module electronics
- Protection classes IP65, IP67, IP69K
- ATEX Zone 2/22
- Freely programmable compact module based on Linux
- Programming language C, C++, NodeJS, Python
- Software components: SSH, SFTP, HTTP, IBTP, MTXP, DHCP, SNTP, Node.js 6.9.5 (LTS), Python 3.x
- 4 channels with M12 connection for RFID
- 8 universal digital channels, configurable as PNP inputs or 2 A outputs

Type	TBEN-L5-4RFID-8DXP-LNX
ID	6814124
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. 200 mA V2: max. 50 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
system description	
Processor	ARM Cortex A8, 32 Bit, 800 MHz
Memory	512 MB Flash
RAM memory	512 MB DDR3
Real time clock	yes
Operating system	Linux
System data	
Transmission rate Ethernet	10/100 Mbps
Connection technology Ethernet	2 x M12, 4-pin, D-coded

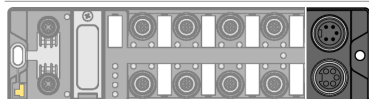
RFID	
Number of channels	4
Connectivity	M12
Power supply	2 A per channel at 70 °C [UL: 1.74 A per channel at 55 °C], short-circuit proof
Operation per channel	1x HF or UHF read/write head
Cable length	Max. 50 m

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.

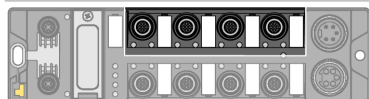
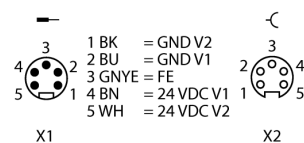
General Information	
Dimensions (W x L x H)	60.4 x 230.4 x 38.8 mm
Ambient temperature	-40...+70 °C
	UL: +55 °C
Storage temperature	-40...+85 °C
Altitude	Max. 5000 m
Protection class	IP65
	IP67
	IP69K
MTTF	75 years acc. to SN 29500 (Ed. 99) 20 °C
Housing material	PA6-GF30
Housing color	Black
Male connector 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):
RKM52-1-RSM52
Ident. no. 6914149

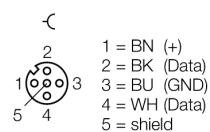
7/8" Power Supply



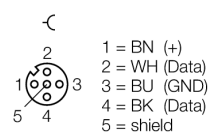
Note

RFID cable (example):
RK4.5T-5-RS4.5T/S2500
Ident. no. 6699201
Connection of TB and TN read/write heads (example):
TN-CK40-H1147
Ident. no. 7030006

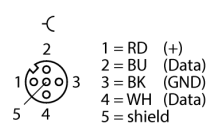
.../S2500 Connectors



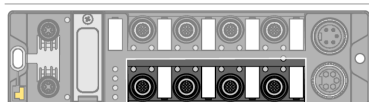
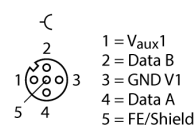
.../S2501 Connectors



.../S2503 Connectors



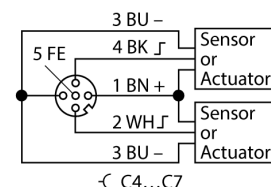
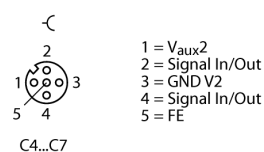
Wiring Diagram

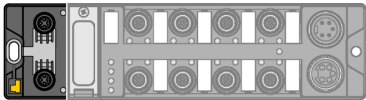


Note

Actuator and sensor cable/PUR connection 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

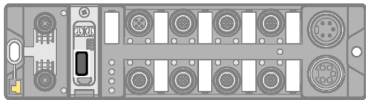
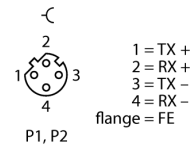
M12 × 1 I/O port





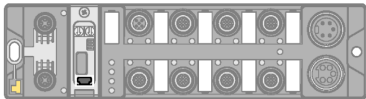
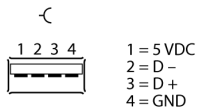
Note
Ethernet cable (example):
RSSD-RJ45S-4416-2M
Ident. no. 6441631

M12 × 1 Ethernet



USB Host Interface
For use with USB sticks

USB 2.0 A Jack



USB Device Interface
For use as a programming interface (alternative to Ethernet)
USB cable (example):
MINI USB 2.0 CABLE 1.5 M (ident. no. 6827388)
USB 2.0 extension A-male on A-female:
USB 2.0 EXTENSION 5 M (ident. no. 6827389)
USB 2.0 EXTENSION ACTIVE 5 M (ident. no. 6827390)

USB 2.0 Mini-B Jack

