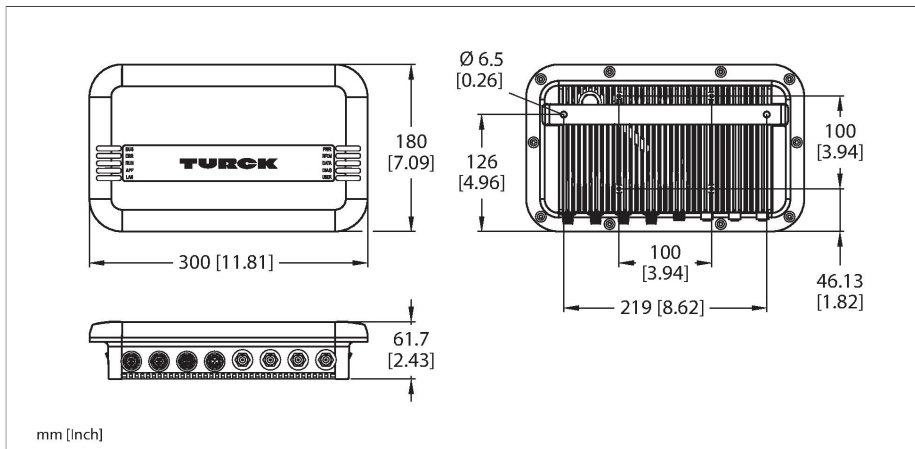


TN-UHF-Q180L300-EU-OPC-UA

UHF Reader



Technical data

Type	TN-UHF-Q180L300-EU-OPC-UA
ID	100000933
Approvals	CE
Electrical data	
Operating voltage U_b	18...30 VDC
DC rated operating current I_o	≤ 3500 mA
PoE standard	IEEE 802.3at (PoE+)
Data transfer	Alternating electromagnetic field
Technology	UHF RFID
Region (UHF)	Europe, India, Turkey, South Africa (865...868 MHz)
Radio communication and protocol standards	ISO 18000-63 EPCglobal Gen 2
Channel spacing	200 kHz
Output power	Conducted power: ≤ 2 W, adjustable
Output function	Read/Write
Mechanical data	
Mounting conditions	Non-flush
Ambient temperature	-20...+50 °C
Design	Rectangular
Dimensions	300 x 180 x 61.7 mm
Housing material	Aluminium, AL, Silver
Active area material	Glass fiber-reinforced polyamide, PA6-GF30, black
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP67
Electrical connection	RP-TNC
Input impedance	50 Ohm

Features

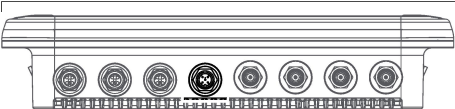
- Integrated OPC UA server standardized in accordance with AutoID Companion Specification
- Calling of data via OPC UA clients
- Universal interface offers interoperability
- Supports security mechanisms and authentication
- Resistant to UV radiation
- 4 connections for passive UHF RFID antennas
- 4 configurable digital channels as PNP inputs and/or outputs with 0.5 A per channel
- 2-W (ERP) maximum output power
- Support VDA 5050
- Device only suitable for operation in the European Union (EU), Great Britain (GBR), India (IND), Türkiye (TUR) and South Africa (ZAF) at 865...868 MHz

Functional principle

The UHF readers form a transmission zone, the size of which may vary depending on the combination of reader and tag used. The achievable distances may be different due to component tolerances, mounting location in the application, ambient conditions and the effect of materials (particularly metal). Testing of the application under real operating conditions is therefore essential, especially with on-the-fly reading and writing!

Technical data

MTTF	49 years acc. to SN 29500 (Ed. 99) 20 °C
System description	
Network protocol	OPC UA
Processor	ARM Cortex A8, 32 Bit, 800 MHz
Memory	MB Flash
RAM memory	512 MB DDR3
System data	
Transmission rate Ethernet	10/100 Mbps
Connection technology Ethernet	1 x M12, 4-pin, D-coded
Digital inputs	
Number of channels	4
Connectivity inputs	M12, 5-pin
Input type	PNP
Switching threshold	EN 61131-2 type 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
Type of input diagnostics	Channel diagnostics
Digital outputs	
Number of channels	4
Connectivity outputs	M12, 5-pin
Output type	PNP
Type of output diagnostics	Channel diagnostics
General Information	
Packaging unit	1



Note
Power cable:
UX18415 RKC 4.4T-0.5-RSM 40/S3520
UX18416 RKC 4.4T-2-RSM 40/S3520
UX14184 RKC 4.4T-3-RSM 40/S3520
UX14185 RKC 4.4T-5-RSM 40/S3520

M12 × 1 Power Supply

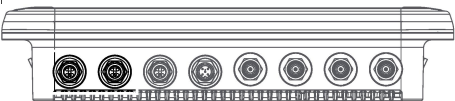
1 = V1
2 = TX/RX -
3 = GND
4 = TX/RX +
5 = PE

24 VDC / COM

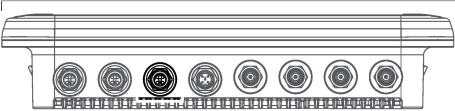
I/O port M12 × 1

1 = Vaux
2 = DXP1 / DXP3
3 = GND
4 = DXP0 / DXP2
5 = FE

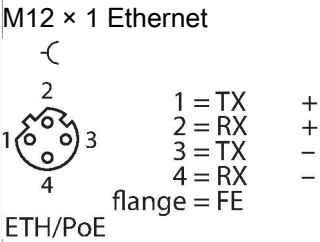
DXP0...DXP3



Note
Actuator and sensor cable/PUR
connection cable (example):
RKC4.4T-2-RSC4.4T/TXL
ID no. 6625608
Y-piece for DXPs
VBS2-FSM4.4-2FKM4
ID no. 6930560



Note
Ethernet cable (example):
RSSD-RJ45S-4416-5M
Ident. no. 6441633



Accessories

Dimension drawing	Type	ID	
	TN-UHF-CBL-HF240-RPTNC-1-SMA	100028191	HF240 coaxial cable, length 1 m
	TN-UHF-CBL-HF240-RPTNC-2-SMA	100028192	HF240 coaxial cable, length 2 m
	TN-UHF-CBL-HF240-RPTNC-4-SMA	100028193	HF240 coaxial cable, length 4 m
	TN-UHF-CBL-HF240-RPTNC-6-SMA	100028194	HF240 coaxial cable, length 6 m
	TN-UHF-CBL-HF240-RPTNC-8-SMA	100028195	HF240 coaxial cable, length 8 m
	TN-UHF-CBL-HF240-RPTNC-10-SMA	100028196	HF240 coaxial cable, length 10 m
	TN-UHF-CBL-HF240-RPTNC-12-SMA	100028197	HF240 coaxial cable, length 12 m
	RSSD-RSSD-4422-2M	6635150	Cable for Industrial Ethernet, M12 male connector, D-coded, straight to M12 male connector, D-coded, straight, cable length: 2 m, jacket material: PUR, green
	RKC5T-2-RSC5T/TXL	6625616	Extension cable, M12 female connector to M12 male connector, straight, 4-pin + PE, cable length: 2 m, jacket material: PUR, black; cULus approval

Accessories

Dimension drawing	Type	ID	
	TN-UHF-ANT-Q150-ETSI	100028595	Passive UHF RFID antenna with dimensions of 150 × 150 mm

Dimension drawing	Type	ID	
	TN-UHF-ANT-NF-Q150-ETSI-FCC	100028594	Passive UHF RFID near-field antenna with dimensions of 150 × 150 mm
	TN-UHF-ANT-Q280-ETSI	100028601	Passive UHF RFID antenna with VESA100 pins and dimensions of 280 × 280 mm
	TN-UHF-ANT-Q250-ETSI	100028599	Passive UHF RFID antenna with dimensions of 250 × 250 mm
	TN-UHF-ANT-Q300L600-ETSI	100047592	
	TN-UHF-ANT-Q150-MR-ETSI	100047588	Passive UHF RFID antenna with dimensions of 150 × 150 mm
	TN-UHF-ANT-Q150-LX-ETSI	100047590	Passive UHF RFID antenna with dimensions of 150 × 150 mm