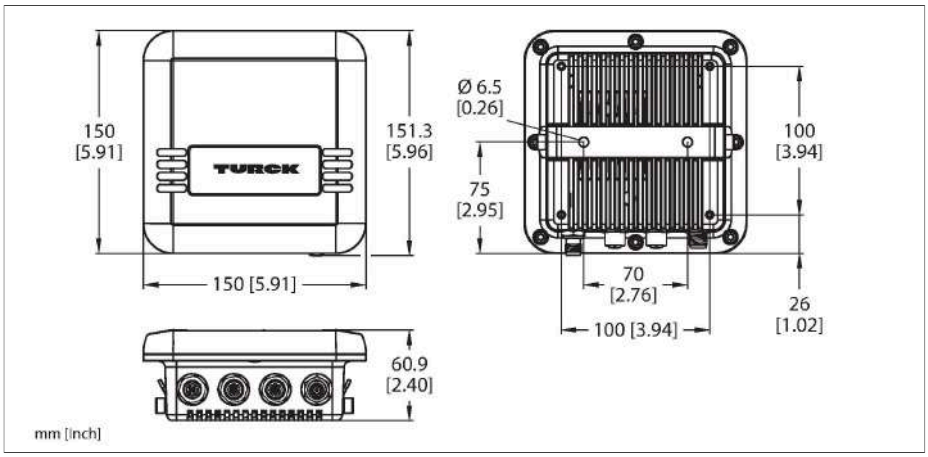
TN-UHF-Q150-EU-EC
UHF Reader





Technical data

Type	TN-UHF-Q150-EU-EC
ID	100018054
Approvals	CE
Electrical data	
Operating voltage U_B	12…30 VDC
DC rated operating current I_e	≤ 1200 mA
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	≤ 0.5 W (ERP), adjustable
Antenna polarization	RHCP/LHCP, adjustable
Antenna HPBW	90°
Output function	Read/Write
Mechanical data	
Mounting conditions	Non-flush
Ambient temperature	-30…+50 °C
Design	Rectangular
Dimensions	150 x 150 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

Features

- Integrated web server with reader parameterization
- EtherCAT slave according to Modular Device Profile
- Web-based UHF RFID test tool for easy air interface evaluation
- Active face in front, UV resistance
- 1 connection for passive UHF RFID antennas
- "U" data interface for convenient use of the RFID functionality
- Close-to-control integration in PLC systems without the use of a special function module
- LEDs and diagnostics
- 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

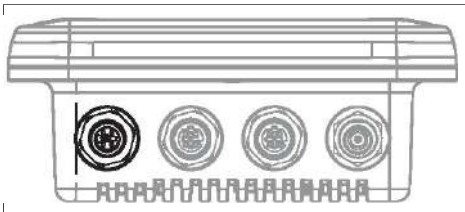
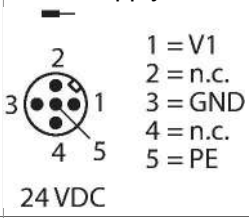
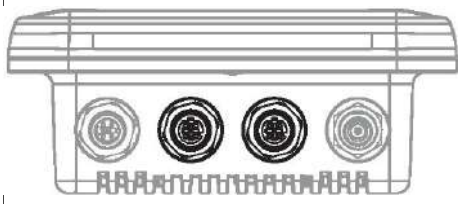
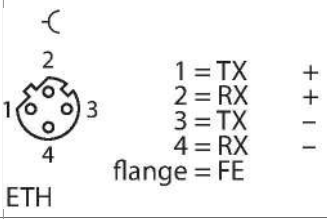
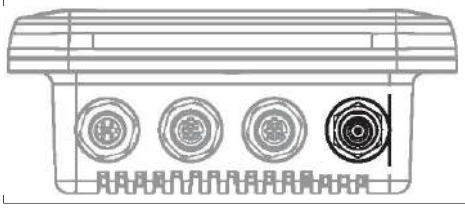
Functional principle

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!

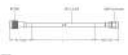
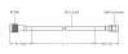
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Technical data

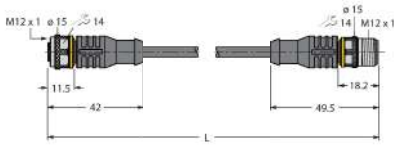
Input impedance	50 Ohm
MTTF	49 years acc. to SN 29500 (Ed. 99) 20 °C
Network protocol	EtherCAT
RFID data interface	UHF
System data	
Transmission rate Ethernet	10/100 Mbps
Connection technology Ethernet	2 x M12, 4-pin, D-coded
EtherCAT	
CAN over EtherCAT	acc. to modular device profile (ETG.5001.1)
Diagnostics	CoE Emergencies, DiagnosisHistory
Address allocation	automatic
Packaging unit	1

	Note Power cable: For connection to e.g. 24 VDC	Power supply M12 × 1 
	Note Ethernet cable (example): XF1 = EC_In XF2 = EC_Out	Ethernet M12 × 1 
	Note Coaxial cable (example): TN-UHF-CBL-HF240-RPTNC-2-SMA	RP-TNC (male)

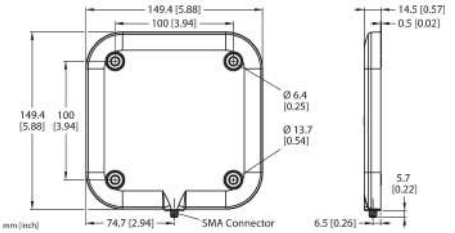
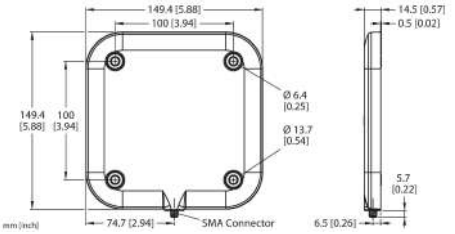
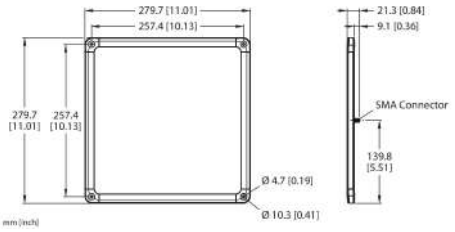
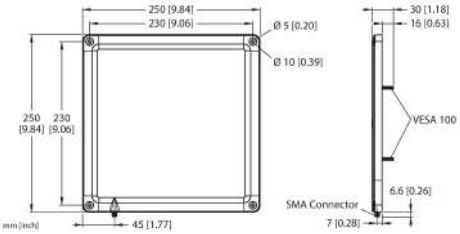
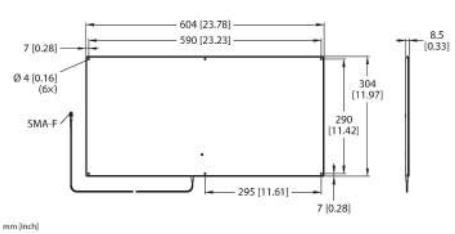
Accessories

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

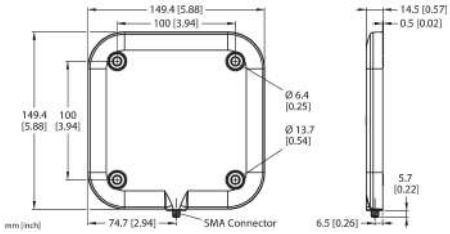
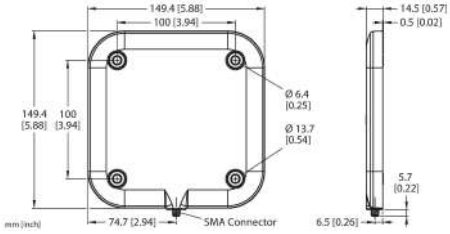
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Dimension drawing	Type	ID	
	TN-UHF-CBL-HF240-RPTNC-10-SMA	100028196	HF240 coaxial cable, length 10 m
	TN-UHF-CBL-HF240-RPTNC-12-SMA	100028197	HF240 coaxial cable, length 12 m
	RKC5T-2-RSC5T/TXL	6625616	Extension cable, M12 female connector to M12 male 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
	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	

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Dimension drawing	Type	ID	
	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

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