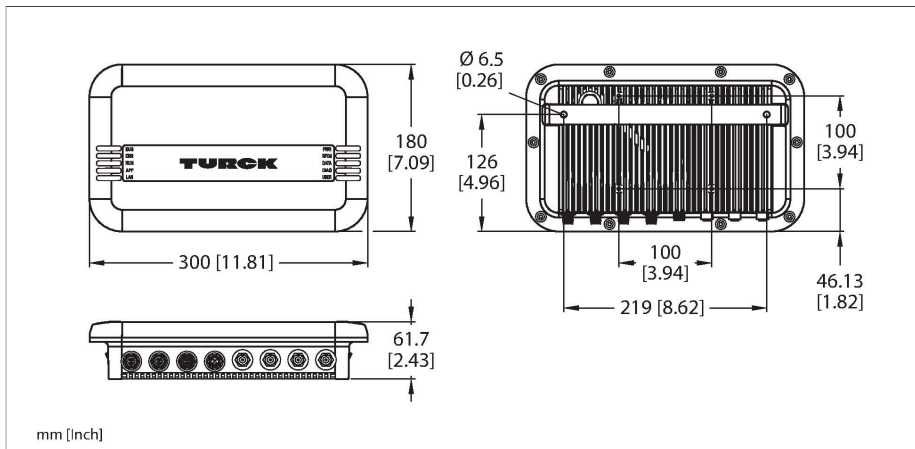


# TN-UHF-Q180L300-EU-LNX

## UHF Reader



### Technical data

|  |   |
|--|---|
| Type                                       | TN-UHF-Q180L300-EU-LNX                              |
| ID   | 100000932   |
| Approvals                                  | CE  |
| <b>Electrical data</b>                     |   |
| Operating voltage                          | 18...30 VDC   |
| DC rated operational current               | ≤ 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<br>EPCglobal Gen 2                     |
| Channel spacing                            | 200 kHz   |
| Output power                               | Conducted power: ≤ 2 W, adjustable                  |
| Output function                            | Read/Write  |
| <b>Mechanical data</b>                     |   |
| 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

- TCP/IP
- Freely programmable Ethernet-based read/write head 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
- Implementation of the protocol is required
- 4 RP-TNC connections for passive, external UHF antennas
- 4 digital channels, configurable as PNP inputs and/or 0.5 A outputs
- 10 Mbps/100 Mbps transfer rate
- Integrated web server
- LED displays and diagnostics
- Device only suitable for operation in the European Union (EU), India, Turkey and South Africa at 865...868 MHz

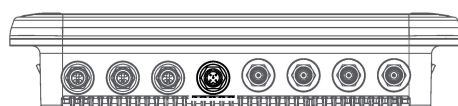
### Functional principle

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

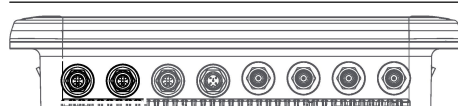
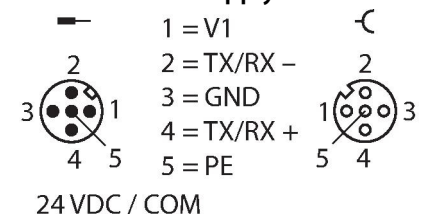
MTTF 49 years acc. to SN 29500 (Ed. 99) 20 °C

| System description             |                                |
|--------------------------------|--------------------------------|
| Processor                      | ARM Cortex A8, 32 Bit, 800 MHz |
| Memory                         | 512 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                              |



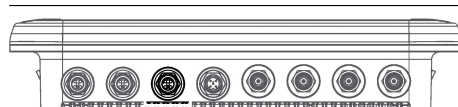
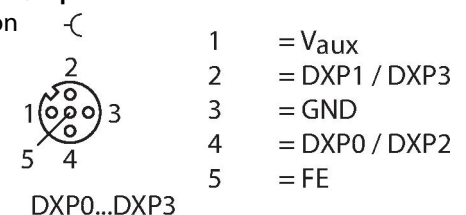
**Note**  
Power cable:  
UX18415 RKC 4.4T-0.5-RSM 40/S3520  
UX18416 RKC 4.4T-2-RSM 40/S3520  
UX14184 RKC 4.4T-3-RSM 40/S3520  
UX14185 RKC 4.4T-5-RSM 40/S3520

### M12 × 1 Power Supply



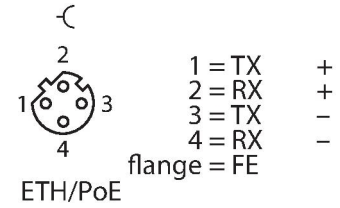
**Note**  
Actuator and sensor cable/PUR connection cable (example):  
RKC4.4T-2-RSC4.4T/TXL  
ID no. 6625608  
Y-piece for DXPs  
VBS2-FSM4.4-2FKM4  
ID no. 6930560

### I/O port M12 × 1



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

### M12 × 1 Ethernet



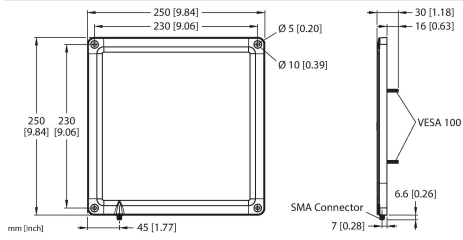
## Accessories

| 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 |

## 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 |

## Dimension drawing



## Type

TN-UHF-ANT-Q250-ETSI

## ID

100028599

Passive UHF RFID antenna with dimensions of 250 × 250 mm