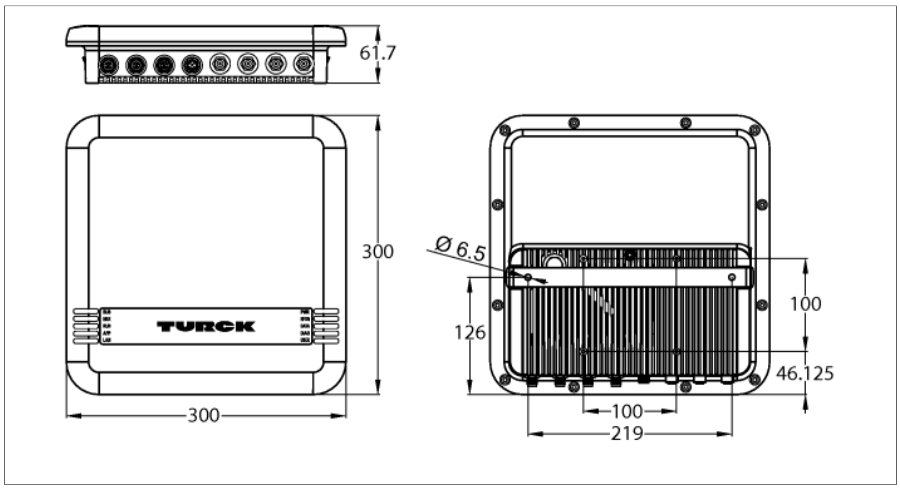
BL ident®

Read/Write Head
TN-UHF-Q300-EU-CDS



- **Rectangular, height 300 mm**
- **Active face in front, UV resistance**
- **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**
- **CODESYS V3 programmable acc.to IEC 61131-3**
- **Codesys V3 PLC Runtime**
- **Codesys OPC-UA Server**
- **PROFINET® device, EtherNet/IP™ device or Modbus® TCP master/slave**
- **"U" data interface for convenient use of the RFID functionality**
- **Controller-compatible integration with PLC systems is possible without a special function module**
- **Integrated web server**
- **LED displays and diagnostics**
- **Device only suitable for operation within the European Union (EU) at 865… 868 MHz**

Type designation	TN-UHF-Q300-EU-CDS
Ident no.	100000895
Approvals	CE
Electrical data	
Operating voltage	18…30 VDC
DC rated operational current	≤ 1000 mA
Data transfer	Alternating electromagnetic field
Technology	UHF (860…960 MHz)
Usage region (UHF)	Europe, India (865…868 MHz)
Radio communication and protocol standards	ISO 18000-6C EPCglobal Gen 2
Channel spacing	200 kHz
Output power	≤ 2 W (ERP), adjustable
Antenna polarization	circular/linear, adjustable
Antenna HPBW	65°
Output function	Read/Write
Network protocol	PROFINET Modbus TCP EtherNet/IP™ TCP/IP
Mechanical data	
Mounting conditions	Non-flush
Ambient temperature	-20…+50 °C
Design	Rectangular
Dimensions	300x 300x 61.7mm
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
Number of channels	4
Electrical connection	RP-TNC
Input impedance	50 Ohm
General Information	
Packaging unit	1
System description	
Processor	ARM Cortex A8, 32 bit, 800 MHz
ROM memory	256 MB Flash
RAM memory	512 MB DDR3

Functional principle

The UHF read/write heads form a transmission zone, the size of which may vary depending on the combination of read/write head and data carrier used.

Attainable distances may vary due to component tolerances, mounting conditions, ambient conditions and material qualities, especially when mounted in metal.

Testing of the application under real operating conditions is therefore essential, especially with on-the-fly reading and writing!

Edition • 2020-01-14T08:46:15+01:00

Programming	CODESYS V3
Released for CODESYS version	V 3.5.11.20
Programming languages	IEC 61131-3 (IL, LD, FBD, SFC, ST)
Application tasks	10
Number of POUs	1024
Programming interface	Ethernet
Cycle time	< 1 ms for 1000 IL commands (without I/O cycle)
Input data	8
Output data	8
RFID data interface	UHF

System data	
Transmission rate Ethernet	10 Mbps/100 Mbps
Connection technology Ethernet	1 x M12, 4-pin, D-coded
Web server	Default: 192.168.1.254

Modbus TCP	
Addressing	Static IP, BOOTP, DHCP
Supported function codes	FC1, FC2, FC3, FC4, FC5, FC6, FC15, FC16, FC23
Number of TCP connections	8
Output Data Size	max. 1024
Input Data Size	max. 2014

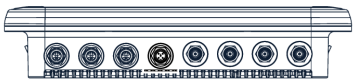
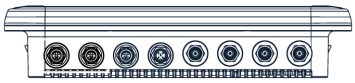
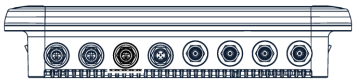
EtherNet/IP™	
Addressing	acc. to EtherNet/IP™ specification
Device Level Ring (DLR)	supported
Input Assembly Instance	103
Input Data Size	248
Output Assembly Instance	104
Output Data Size	248
Class 1 connections (CIP)	10
Class 3 connections (TCP)	3
Configuration Assembly Instance	106

PROFINET	
Addressing	DCP
MinCycleTime	4 ms
Diagnostics	acc. to PROFINET alarm handling
Automatic addressing	supported
Media Redundancy Protocol (MRP)	supported
Input Data Size	max. 512
Output Data Size	max. 512

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

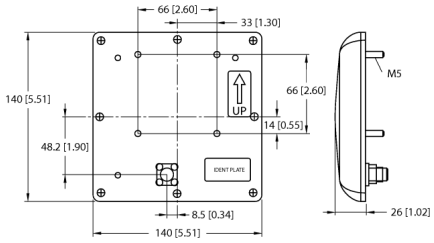
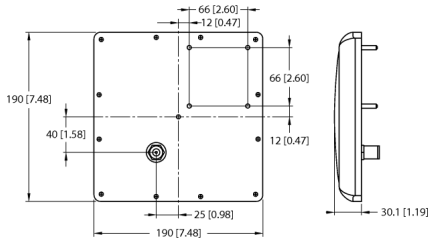
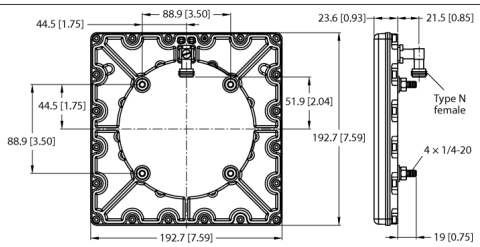
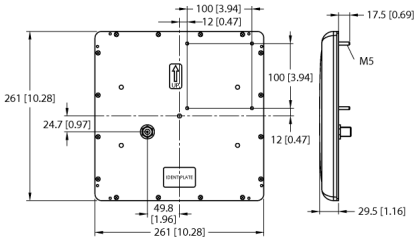
Digital outputs	
Number of channels	4
Connectivity outputs	M12, 5-polig
Output type	PNP
Type of output diagnostics	Channel diagnostics
Dimension drawing	

Edition • 2020-01-14T08:46:15+01:00

	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
	Note Actuator and sensor cable/PUR connection cable (example): RKC4.4T-2-RSC4.4T/TXL Ident. no. 6625608 Connection cable with Y piece for DXPs VBRS4.4-2RKC4T-1/1/TEL Ident. no. 6628199
	Note Ethernet cable (example): RSSD-RJ45S-4416-5M Ident. no. 6441633

Edition • 2020-01-14T08:46:15+01:00

Accessories

Type code	Ident no.	Description	Dimension drawing
TN-UHF-ANT-Q140-EU-NA	100003864	External, passive UHF RFID antenna, dimensions 140 x 140 mm	
TN-UHF-ANT-Q190-EU	100003863	External, passive UHF RFID antenna, dimensions 190 x 190 mm	
TN-UHF-ANT-Q191-EU	100003861	External, passive UHF RFID antenna, dimensions 191 x 191 mm	
TN-UHF-ANT-Q260-EU	100003862	External, passive UHF RFID antenna, dimensions 260 x 260 mm	

Edition • 2020-01-14T08:46:15+01:00