

ID MRU400i

UHF MID RANGE READER WITH INTEGRATED ANTENNA

- Robust housing with cable glands & plug-in terminals
- Designed for applications in harsh environments (indoor & outdoor) (IP65/IP67)
- 1 Watt Output Power
- Internal circularly polarized antenna for any orientation of the transponders
- 1 Inputs / 2 Outputs
- Edge Computing Device



Industrial UHF Mid Range reader with integrated antenna for a wide range of applications

With a reading range more than 4 m, an internal antenna, an external antenna connection and 4 cable glands, numerous UHF Mid Range Reader applications in realized industrial environments. Due to the integrated antenna the reader can be installed directly at the reading point, eliminating the need for additional cabling.

Applications in industry and logistics

For applications in harsh environments, the reader offers sealed connections and cable glands as well as plug-in terminals inside the device. This makes it the first choice for use on machines, conveyor systems or other industrial applications.

Various mounting options

The reader can be mounted directly on a flat surface, via a VESA on a post, via an adapter on a DIN rail or via an plastic insulation plate on a vehicle chassis – you have the choice!

Features:

- › Integrated antenna results in an "all-in-one" reading point, so no additional external antenna is needed
- › Support of Transponders according to EPC Class1 Gen2 and ISO 18000-63
- › Allows the realization of secure UHF systems by full support of transponder chips according to EPC Class1 Gen2 specification and ISO 29167 (e. g. NXP UCODE DNA)
- › Secure storage of application keys in a secure memory (Secure Element)
- › 1 Input, 1 Output and 1 Relay Output enable the control of external components and signalization of different events
- › Edge-Computing Platform with Linux OS for installation and operation of custom specific applications directly on the reader
- › Different software applications available e.g. for EPCglobal™ LLRP support
- › Reader protection against fault conditions like antenna shortcut, antenna mismatching and electrostatic discharge

UHF MID-RANGE READER WITH INTEGRATED ANTENNA

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Technical data

Dimensions (w x h x d)

Without Connectors approx. 225 mm x 140 mm x 55 mm

With Connectors ca. 225 mm x 190 mm x 55 mm

Weight approx. 1200 g

Housing Aluminium housing, plastic cover

Color Aluminium, anthracite (cover)

Protection Class IP65, IP67

Power Supply 12 V – 24 V DC $\pm$ 10 %, Power-over Ethernet (PoE+)

Power Consumption max. 12 W

Output Power

intern max. 1 W ERP

extern max. 1 W, adjustable in 100 mW steps

Antenna Connector 1 x R-TNC socket (50 Ohm), multiplexer integrated

RF Diagnosis RF-channel monitoring, Antenna SWR control, internal overheating control

Connections Power supply, RS485, USB, I/Os: plug-in terminals
Ethernet: RJ45 socket on the outside of the housing with the option of sealing

Outputs

1 Optocoupler max. 24 V DC / 20 mA

1 Relays max. 24 V DC / 1 A switching current, 2 A permanent current

Inputs

1 Optocoupler max. 24 V DC / 20 mA

Interfaces RS485, Ethernet (IPv4/IPv6), USB (On-the-Go)

Computing Platform (Linux OS) ARM single Cortex-A7 800 MHz + Cortex-M4 (RFID), 1 GB Flash, 512 MB RAM

Reader Modes Host Mode, Buffered Read Mode, Notification Mode

Supported Transponders EPC Class1 Gen2, ISO 18000-63, ISO/IEC 29167

Indicator Highly visible status display (green/red/blue; customizable indication)

Others Anti-Collision, Output of RSSI values and phase angle, Secure Key Storage, Web-Interface

Temperature Range

Operation -40 °C to +55 °C

Extended temperature range -40 °C to +70 °C*

Temperature Range

Storage -40 °C to +85 °C

Relative Air Humidity 5 % up to 95 % (non-condensing)

Vibration EN 60068-2-6 10 Hz up to 150 Hz: 0.075 mm / 1 g

* At operating temperatures above 55°C, the configured transmit power must not exceed 1.0W, and power supply via PoE is not permitted in this case.

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Versions

EU	865 MHz to 868 MHz
FCC	902 MHz to 928 MHz

Standard Conformity

Radio License	
Europe, UK	EN 302 208
USA	FCC 47 CFR Part 15
Canada	IC RSS-247
EMC	EN 301 489
Safety & Health	EN 62368-1, EN 50364
Cyber Security	EN 18031-1



ID MRU400i, front view



ID MRU400i, antenna connections



ID MRU400i, connections for VCC, interfaces, I/Os