UHF Mid Range Reader with integrated Antenna
ID ISC.MRU200i-USB / ID ISC.MRU200i-E

SPECIAL FEATURES

→ Housing with protection class IP65 for use in industrial environment

→ 2 integrated Antennas (Nearfield and Farfield), parallel operation possible

→ Read Range of up to 1,5 meters *

→ Low Power Mode for short read ranges up to 30 cm

→ 2 Inputs and 3 Outputs suit industrial needs

→ USB- or LAN Interface

→ Readout of RSSI Values

OBID® – RFID by FEIG ELECTRONIC

Description

The OBID i-*scan*® UHF Mid Range Reader ID ISC.MRU200i identifies UHF Transponders in the frequency range between 865 MHz and 868 MHz or between 902 MHz and 928 MHz. A separate reader version is available for each frequency band.
It is a very flexible and cost-effective reader which can be used for each kind of UHF application with short and medium read ranges of view centimeters up to 1,5 meter*.

With its two integrated antennas (Nearfield and Farfield) the compact UHF Mid Range Reader ID ISC.MRU200i can be used in automatization as well as in desktop applications where single transponders should be identified over short distance, e.g. in Pharmaceuticals or Textile Industry.

The special about this device is the combination of inductive coupling and backscatter principle within one device. The Nearfield antenna is used to eliminate the negative influence of e.g. liquids if smallest UHF single loop transponders should be identified. While the Nearfield Antenna is used for the identification of small objects over short distance (max. 10 cm*) the Farfield Antenna can be used for process control in automatization. The directed electromagnetic antenna field allows an identification of transponders on the spot. By means of the so called Low Power Mode the antenna field can be reduced so it can be ensured that only transponders directly in front of the antenna will be identified. The unwanted reading of transponders on neighboring conveyor belts or work stations can be minimized. The integrated multiplexer allows a parallel operation of both antennas.

The readers is coming in a smart plastic housing and is available in a USB- or Ethernet- Version. Both versions are equipped with an RS232- Interface. The USB- Version has an additional RS485- Interface. This allows an easy adaption to different Host Systems. Next to this a separate hardware is available for the European and FCC Frequency Band.

The reader identifies Transponders according to EPC Class 1 Generation 2. Optional an Upgrade Code can be ordered to enable the reading of transponders according to ISO 18000-6-C.

Applications

The ID ISC.MRU200i can be used in standard UHF applications with read ranges of just a few centimeters up to 1,5 meters*. Its small form factor fits the requirements of desktop application, its high protection class the requirements of industrial applications, e.g. along a conveyor belt. The integrated antennas allow a fast and easy installation of the reader.

Ordering Information

Model	Description	Ordering Number
ID ISC.MRU200i-E-EU	Reader with Ethernet Interface for the European Frequency Band	3119.000.00
ID ISC.MRU200i-USB-EU	Reader with USB and RS485 Interface for the European Frequency Band	3121.000.00
ID ISC.MRU200i-E-FCC	Reader with Ethernet Interface for the FCC Frequency Band	3120.000.00
ID ISC.MRU200i-USB-FCC	Reader with USB and RS485 Interface for the FCC Frequency Band	3122.000.00

* The maximum Read Range is depending on the used antenna, the antenna cable, the used transponder and the environmental conditions.

Technical Data

Mechanical Data

Housing	Plastic ABS, lockable hinged cover
Dimensions	200 mm x 110 mm x 60 mm (7.87 x 4.33 x 2.36 inch)
Weight	650 g
Protection Class	IP 65
Color	RAL 7035

Electrical Data

Power Supply	12 V DC to 24 V DC (+/- 5%) Noise Ripple: max. 150 mV
Power Consumption	max. 15 VA
Operating Frequency	
- Version EU:	865 MHz to 868 MHz
- Version FCC:	902 MHz to 928 MHz
Output Power	50 mW to 300 mW; Low-Power Mode
Antenna Connector	integrated Nearfield Antenna integrated Farfiel Antenna
Outputs	
- 2 Optocoupler	24 V DC / 30 mA
- 1 Relay	24 V DC / 1 A switching current, 24 V DC / 2 A permanent current
Inputs	
- 2 Optocoupler	5 V DC to 10 V DC / 20 mA max. 24 V DC / 20 mA with additional external series resistor
Interfaces	
- MRU200-USB	RS232/RS485, USB
- MRU200-E	RS232, LAN (TCP/IP)
Protocol-Modes	ISO Host Mode, Scan Mode, Buffered Read Mode; Notification Mode (only MRU200-E)

Features

Supported transponder types	EPC Class1 Gen2, ISO 18000-6-C (Upgrade Code)
Signaler	4 LED´s for diagnosis of reader operation and antenna status
Other Features	Anti-Collision RSSI

Environmental Conditions

Temperature Range	
- Operation	-20°C to 45°C
- Storage	-25°C to 85°C
Humidity	5 % to 80 % (non-condensing)
Vibration	
- EN 60068-2-6	10 Hz to 150 Hz: 0,075 mm / 1 g
Shock	
- EN 60068-2-27	Acceleration: 30 g

Applicable Standards

Radio Regulation	
- Europe	EN 302 208
- USA	FCC 47 CFR Part 15
- Canada	IC RSS-GEN, RSS-210
EMC	EN 301 489
Safety	
- Low Voltage	EN 60950 UL 60950-1
- Human Exposure	EN 50364

Note: FEIG ELECTRONIC reserves the right to change specification without notice at any time. Stand of information: December 2011