

UHF Long Range Reader ID ISC.LRU1002



SPECIAL FEATURES

- Robust metal housing for use in industrial environment
- 2 Watt Output Power
- High Receive Sensitivity
- 4 Antenna ports (internal Multiplexer), support of external UHF Multiplexer ID ISC.ANT.UMUX
- 6 Inputs / Outputs
- Output of RSSI values and phase angle
- Full support of new transponder chips with encryption (NXP UCODE DNA)
- Secure Key Storage (Secure Element)
- Support of EPC Low Level Reader Protocol (LLRP) with Software Library
- Optimum price performance ratio



IDENTIFICATION

Description

The UHF Long Range Reader ID ISC.LRU1002 is a high performance Long Range Reader that can be used in different kind of applications. The reader convinces with an excellent price performance ratio and is characterized by the following features:

- High receiver sensitivity cares for an enlarged and at the same time homogeneous tag detection range
- Possible secure read range of up to 12 m (40 ft) *
- Constant high receive sensitivity and high read range also in disturbed environments and applications with a large number of readers operating at the same time
- Support of Transponders according to EPC Class1 Gen2 and ISO 18000-6-C
- Allows the realization of secure UHF systems by full support of new transponder chips according to EPC Class1 Gen2 V2 specification and ISO 29167 (e.g. NXP UCODE DNA)
- Secure storage of application keys in a secure memory (Secure Element)
- Support of EPCglobal™ Low Level Reader Protocol with special software library
- Readout of RSSI data and phase angle of identified transponders (e.g. for localization of transponders)
- Various configuration options for software and hardware
- Support of 4 hardware interface ports: Ethernet, RS232, USB and Wiegand
- Reader protection against fault conditions like antenna shortcut, antenna mismatching and electrostatic discharge
- Robust aluminum die case housing for usage in rough and industrial environments
- Increase of enclosure rating to IP 64 due to optional available connector sealing cap for the connector block
- Quick installation due to easy access to interfaces and antenna ports
- 2 Inputs, 2 outputs and 2 relay outputs suit industrial needs and allow control of external components and signalization of different events
- Antenna Port Indication: Display of active antennas (green), read events (blue) and possible antenna mismatching (red) via 4 separate LED's

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

Typical Application

- Automatic Vehicle Identification (AVI)
- Road Tolling
- Logistics
- Forklifts
- Industry
- Automotive
- Traffic Monitoring
- Traffic Management Systems
- Parking Slot Management
- Laundry Services
- Waste Management



Note:
FEIG ELECTRONIC reserves the right to change specification without notice at any time.
Stand of information: December 2016

IDENTIFICATION

Technical Data

Mechanical Data

Housing	Aluminum, powder coated
Dimensions	260 mm x 157 mm x 65 mm (10,23 x 6,18 x 2,56 inch)
Weight	1.800 g
Protection Class	IP 53, IP 64 (with protection cap)*
Color	RAL9003 Signal white

Electrical Data

Power Supply	24 V DC ($\pm 20\%$)
Power Consumption	max. 24 VA**
Operating Frequencies	
- Version EU:	865 MHz to 868 MHz
- Version FCC:	902 MHz to 928 MHz
Output Power	100 mW to max. 2 W configurable in steps of 100 mW
Antenna Connector	4 x SMA-Female (50 Ohm), integrated Multiplexer, support of external Multiplexer ID ISC.ANT.UMUX
RF-Diagnosis	RF-channel monitoring, Antenna SWR control, internal overheating control
Outputs	
- 2 Optocoupler	max. 24 V DC / 20 mA
- 2 Relays	max. 24 V DC / 1 A switching current, 2 A permanent current
Inputs	
- 2 Optocoupler	max. 24 V DC / 20 mA
Interfaces	RS232, Ethernet, USB (On-The-Go), Wiegand (Scan Mode Interface)
Protocol-Modes	ISO Host Mode, Scan Mode (HID), Notification Mode, Buffered Read Mode

Features

Supported transponder types	EPC Class1 Gen2 EPC Class1 Gen2 V2 ISO 18000-6-C (Upgrade Code)
Indicator	16 LEDs for diagnosis of reader operation and antenna status
Other Features	Anti-Collision, Output of RSSI values and phase angle, Battery assisted Real Time Clock Supports encrypted transponder communication, Secure Key Storage, „Config Cloning“ function

Environmental Conditions

Temperature	
- Operation	-25 °C to 55 °C
- Storage	-25 °C to 85 °C
Humidity	5 % to 95 % (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
- Human Exposure	EN 50364

* Optionally a connector sealing cap is available which covers the connectors, offers a pull relief for the connected cables and guarantees enclosure rate IP 64.

** not including power consumption due to external Multiplexer

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