## **IDENTIFICATION**

# **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

#### **Typical Application**

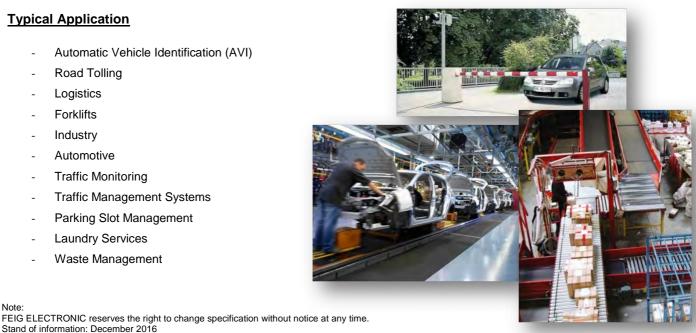
- Automatic Vehicle Identification (AVI)
- Road Tolling
- Logistics
- **Forklifts**
- Industry

Note:

- Automotive
- **Traffic Monitoring**
- Traffic Management Systems
- Parking Slot Management
- **Laundry Services**

Stand of information: December 2016

Waste Management





<sup>\*</sup> The maximum Read Range is depending on the used antenna, the antenna cable, the used transponder and environmental conditions.

### 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 (± 20 %)

**Power Consumption** max. 24 VA\*\*

Operating Frequencies

865 MHz to 868 MHz - Version EU: - 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

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

Inputs

max. 24 V DC / 20 mA - 2 Optocoupler

Interfaces RS232.

Ethernet,

USB (On-The-Go),

Wiegand (Scan Mode Interface)

Protocol-Modes ISO Host Mode,

Scan Mode (HID), Notification Mode, **Buffered Read Mode** 

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

**Features** 

EPC Class1 Gen2 Supported transponder types

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

EN 60068-2-27 Shock

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

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

