

UHF Long Range Reader ID ISC.LRU3000 / ID ISC.LRU3500



SPECIAL FEATURES

- Robust metal housing for use in industrial environments
- Read Range up to 16 m (53 ft)
- High detection rate
- 4 Watt Output Power (only LRU3500)
- Power over Ethernet (only LRU3500)
- USB-Port for connection of a WLAN-Stick or an external Memory Stick
- 5 Inputs and 5 Outputs suit industrial needs
- Linux Operating System for installation and operation of custom specific applications directly on the reader
- Full support of new transponder chips with encryption (NXP UCODE DNA)
- Output of RSSI Values



Description

The UHF Long Range Readers ID ISC.LRU3000 and ID ISC.LRU3500 are the most powerful readers of the product line OBID i-scan[®] UHF. ID ISC.LRU3000 and ID ISC.LRU3500 are characterized by the following features:

- High receiver sensitivity cares for an enlarged and at the same time homogeneous tag detection range
- Constant high receive sensitivity, high read range and high reading speed for fast detection of large transponder populations 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 (ISO 18000-6-B possible on demand)
- 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)
- Support of EPCglobal™ Low Level Reader Protocol with special LLRP Library
- Readout of RSSI data e.g. for localization of identified transponders
- Various configuration options for software and hardware
- 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
- Full support for the UHF Multiplexer ID ISC.ANT.UMUX to be used in antenna systems with a maximum number of 2.048 antennas
- ACC (Application Connectivity Controller) with Linux operation system for installation of application software directly on the reader platform
- Hardware interface ports: Ethernet, RS232, RS485, USB and an USB-Host for WLAN dongle or memory stick; additionally the reader offers a Wiegand / Data-Clock interface to be used only in Scan Mode for data transmission from reader to host
- Antenna Port Indication: Display of active antennas (green), read events (blue) and possible antenna mismatching (red) via 4 separate LED's

Versions

	ID ISC.LRU3000	ID ISC.LRU3500
Power Supply	24 V DC (± 5 %)	24 V DC (± 5 %) or Power over Ethernet (PoE)
Output Power	max. 2 W	max. 4 W max. 1 W with PoE
Read Range*	12 m (40 ft)	16 m (53 ft)
Applications	Standard-UHF-Applications with reading distances > 3 m Low / middle tag population	For operation in particularly disturbed and metallic environments High tag population
Radio Licence	EN 302 208, FCC 47 CFR Part 15, IC RSS-GEN und RSS-210	EN 302 208, FCC 47 CFR Part 15, IC RSS-GEN und RSS-210 Ready for upcoming Radio Regulations

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

Note: FEIG ELECTRONIC reserves the right to change specification without notice at any time.
Stand of information: October 2015

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	2.000 g
Protection Class	IP 53, IP 64 (with protection cap)*
Color	RAL9003 Signal-White

Electrical Data

Power Supply	24 V DC (± 10 %) or Power over Ethernet (PoE)**
Power Consumption	max. 35 VA
Operating Frequencies	
- Version EU:	865 MHz to 868 MHz
- Version FCC:	902 MHz to 928 MHz

Output Power	
- LRU3000	300 mW to max. 2 W
- LRU3500	300 mW to max. 4 W 300 mW to max. 1 W (PoE)

Antenna Connector	4 x SMA-Female (50 Ohm); integrated Multiplexer
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RF-Diagnosis	RF-channel monitoring Antenna SWR control internal overheating control
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Outputs	
- 2 Optocoupler	max. 24 V DC / 30 mA
- 3 Relays	max. 24 V DC / 1 A switching current, 2 A permanent current

Inputs	
- 5 Optocoupler	5 V DC to 10 V DC / 20 mA max. 24 V DC / 20 mA with additional external series resistor

Interfaces	RS232, RS485, Ethernet, USB, USB-Host for WLAN-Stick or external Memory-Stick, Data-Clock***
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Protocol-Modes	ISO Host Mode, Scan Mode, Notification Mode, Buffered Read Mode
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Operating System	Linux (Kernel 3.0) (64 MB RAM, 256 MB FLASH)
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Features

Supported transponder types	EPC Class1 Gen2 ISO 18000-6-C (Upgrade Code) ISO 18000-6-B (on demand)
Signaler	16 LEDs for diagnosis of reader operation and antenna status
Supply Voltage on Antenna Outputs (only LRU3500)	24 V DC / 200 mA
Other Features	Anti-Collision Real Time Clock RSSI

Environmental Conditions

Temperature	
- Operation	-25 °C to 55 °C
- Storage	-25 °C to 50 °C (PoE) -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.

** PoE only with ID ISC.LRU3500

*** The reader offers a Wiegand / Data-Clock interface to be used only in Scan Mode for data transmission from reader to host.

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