


## HF Long Range Reader ID ISC.LR(M)2500



**FEATURES**

- Powerful reader for a wide range of applications
- Numerous communication interfaces: Ethernet (TCP/IP), USB, RS232, RS485, Data Clock
- Available as module or housing version
- 5 outputs / 3 inputs
- 4 different reader modes
- Different possibilities for diagnostics
- Compatible with the previous version ID ISC.LR(M)2000



## Description

The HF Long Range Readers ID ISC.LR(M)2500-A and ID ISC.LRM2500-B are the most powerful products of the product line OBID i-scan HF. They are the successors of the previous version ID ISC.LR(M)2000. The readers ID ISC.LR(M)2500-A and ID ISC.LRM2500-B are licensed according to ETSI, FCC and IC and are characterized by the following features:

- High receiver sensitivity cares for an enlarged and at the same time homogeneous tag detection range
- Transmitter architecture with high resistance against incorrect cable length and disturbed power supply
- Write/Read ranges up to 2 m (depends on the used antennas)
- Integrated diagnostic possibilities e.g. SWR meter and temperature control
- Reader protection against fault conditions like antenna shortcut and antenna mismatching
- Optical diagnostics: 5 LEDs for indication of correct function, interface communication, read events and error conditions
- Full support of all function units like multiplexer and antenna tuner for designing a gate application and constructing antenna systems of different sizes
- Supply of connected function units directly over the antenna cable
- Various configuration options for software and hardware
- Readout of RSSI data for localization of identified transponders

Due to its large number of interfaces and the flexible configuration the HF Long Range Readers ID ISC.LR(M)2500-A and ID ISC.LRM2500-B are suitable outstandingly to be used in fields of applications like retail, logistics and industry.

## Variants

	ID ISC.LR2500-A	ID ISC.LRM2500-A	ID ISC.LRM2500-B
Version	housing	module	
Dimensions	320 mm x 180 mm x 110 mm 12,6 inch x 7,1 inch x 4,3 inch	160 mm x 120 mm x 46 mm 6,3 inch x 4,7 inch x 1,8 inch	
Interfaces	Ethernet (TCP/IP), USB 2.0, RS232, RS485, USB-Host for WLAN dongle or memory stick		Ethernet (TCP/IP), RS232, USB 2.0 (HID-Interface), RS485, Data Clock
Operation system	Embedded Linux (64 MB RAM, 256 MB Flash) allows installation of individual application software		n/a
Supported transponders	ISO 15693 (ISO 18000-3 MODE 1) HF EPC Gen2 (prospective)		ISO 15693 (ISO 18000-3 MODE 1) NXP I-Code 1
Buffer size Buffered Read Mode Notification Mode	10 000 data sets		100 data sets
Real Time Clock	accuracy: $\pm 1$ s/day; power reserve: 1 day		n/a
Anticollision	60 tags/s		40 tags/s
Applications	High tag population (> 25)		Low up to middle tag population (< 25)



**DESCRIPTION ID ISC.LR2500-A**

The HF Long Range Reader ID ISC.LR2500-A identifies transponders according to ISO 15693 with an operating frequency of 13.56 MHz. The reader combines a powerful reader with the functionality of an industrial PC in one device.

The reader ID ISC.LR2500-A is licensed according to ETSI, FCC and IC and is characterized by the following features:

- Embedded Linux system allows installation of individual application software directly on the reader platform
- High receiver sensitivity cares for an enlarged and at the same time homogeneous tag detection range
- Transmitter architecture with high resistance against incorrect cable length and disturbed power supply
- Integrated diagnostic possibilities e.g. SWR meter and temperature control
- Various configuration options for software and hardware
- Supply of connected function units directly over the antenna cable

Due to its fast data processing and the outstanding anticollision performance the reader ID ISC.LR2500-A is suitable for applications with a high number of tags inside the reading area (e.g. smart cabinet, tunnel, etc.).

**TECHNICAL DATA**

Order description	ID ISC.LR2500-A
Dimensions (W x H x D)	320 mm x 180 mm x 110 mm (12,6 inch x 7,1 inch x 4,3 inch)
Weight	ca. 1.9 kg
Enclosure rating	IP 54
Colour	black
Operating frequency	13.56 MHz
Transmitting power	2 W - 12 W (adjustable)
Modulation	10 % - 30 % (adjustable)
Power supply	24 V DC
Power consumption	typ. 35 W
Antenna connection	1 x SMA connector (50 Ω)
Supply voltage on antenna output	8 V DC (max. 150 mA)
Outputs	2 Optocoupler (24 V, 30 mA) 3 Relays (24 V, 1 A)
Inputs	3 Optocoupler (5V 24 V, 20 mA)
Interfaces	Ethernet (TCP/IP), USB 2.0, RS232, RS485, USB-Host for WLAN dongle or memory stick
Indicators, optical	5 LEDs for diagnosis
Supported transponders	ISO 15693 (ISO 18000-3 MODE 1)* ISO Host Mode, Scan Mode,
Reader modes	Buffered Read Mode, Notification Mode Anticollision function
Others	Real time clock RSSI data readout
Temperature range	
Operation	. 25 °C up to 55 °C (-13 °F up to 131 °F)
Storage	. 25 °C up to 85 °C (-13 °F up to 185 °F)
Relative Humidity	50 - 80 % (non-condensing)
* e.g. EM HF ISO Chips, Fujitsu HF ISO Chips, IDS Sensor Chips, Infineon my-d, KSW Sensor Chips, NXP I-Code, STM ISO Chips, TI Tag-it	
<b>STANDARD CONFORMITY</b>	
Radio license	
Europe	EN 300 330
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
Vibration	EN 60068-2-6 100 150 Hz: 0,075 mm / 1 g EN 60068-2-27
Shock resistance	Acceleration: 30 g

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



#### DESCRIPTION ID ISC.LRM2500-A

The HF Long Range Reader Module ID ISC.LRM2500-A identifies transponders according to ISO 15693 with an operating frequency of 13.56 MHz. The reader module combines a powerful reader with the functionality of an industrial PC in one device.

The reader module ID ISC.LRM2500-A is licensed according to ETSI, FCC and IC and is characterized by the following features:

- Embedded Linux system allows installation of individual application software directly on the reader platform
- High receiver sensitivity cares for an enlarged and at the same time homogeneous tag detection range
- Transmitter architecture with high resistance against incorrect cable length and disturbed power supply
- Integrated diagnostic possibilities e.g. SWR meter and temperature control
- Various configuration options for software and hardware
- Supply of connected function units directly over the antenna cable

Due to its fast data processing and the outstanding anticollision performance the reader module ID ISC.LRM2500-A is suitable for applications with a high number of tags inside the reading area (e.g. smart cabinet, tunnel, etc.).

#### TECHNICAL DATA

Order description	ID ISC.LRM2500-A
Dimensions (W x H x D)	160 mm x 120 mm x 46 mm (6,3 inch x 4,7 inch x 1,8 inch)
Weight	ca. 0.6 kg
Operating frequency	13.56 MHz
Transmitting power	2 W . 12 W (adjustable)
Modulation	10 % - 30 % (adjustable)
Power supply	24 V DC
Power consumption	typ. 35 W
Antenna connection	1 x SMA connector (50 Ω)
Supply voltage on antenna output	8 V DC (max. 150 mA)
Outputs	2 Optocoupler (24 V, 30 mA) 3 Relays (24 V, 1 A)
Inputs	3 Optocoupler (50 24 V, 20 mA)
Interfaces	Ethernet (TCP/IP), USB 2.0, RS232, RS485, USB-Host for WLAN dongle or memory stick
Indicators, optical	5 LEDs for diagnosis
Supported transponders	ISO 15693 (ISO 18000-3 MODE 1)*
Reader modes	ISO Host Mode, Scan Mode, Buffered Read Mode, Notification Mode
Others	Anticollision function Real time clock RSSI data readout
Temperature range	
Operation	. 25 °C up to 55 °C (-13 °F up to 131 °F)
Storage	. 25 °C up to 85 °C (-13 °F up to 185 °F)
Relative Humidity	50 - 80 % (non-condensing)

\* e.g. EM HF ISO Chips, Fujitsu HF ISO Chips, IDS Sensor Chips, Infineon my-d, KSW Sensor Chips, NXP I-Code, STM ISO Chips, TI Tag-it

#### STANDARD CONFORMITY

Radio license	
Europe	EN 300 330
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
Vibration	EN 60068-2-6 100 150 Hz: 0,075 mm / 1 g EN 60068-2-27
Shock resistance	Acceleration: 30 g

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#### DESCRIPTION ID ISC.LRM2500-B

The HF Long Range Reader Module ID ISC.LRM2500-B identifies transponders according to ISO 15693 with an operating frequency of 13.56 MHz. The reader module combines compact design with powerful electronic in one device.

The reader module ID ISC.LRM2500-B is licensed according to ETSI, FCC and IC and is characterized by the following features:

- High receiver sensitivity cares for an enlarged and at the same time homogeneous tag detection range
- Transmitter architecture with high resistance against incorrect cable length and disturbed power supply
- Integrated diagnostic possibilities e.g. SWR meter and temperature control
- Various configuration options for software and hardware
- Supply of connected function units directly over the antenna cable

Due to its large number of interfaces and the flexible configuration the reader module ID ISC.LRM2500-B is suitable to be used in fields of applications like retail, logistics and industry.

#### TECHNICAL DATA

Order description	ID ISC.LRM2500-B
Dimensions (W x H x D)	160 mm x 120 mm x 46 mm (6,3 inch x 4,7 inch x 1,8 inch)
Weight	ca. 0.6 kg
Operating frequency	13.56 MHz
Transmitting power	2 W - 12 W (adjustable)
Modulation	10 % - 30 % (adjustable)
Power supply	24 V DC
Power consumption	typ. 35 W
Antenna connection	1 x SMA connector (50 Ω)
Supply voltage on antenna output	8 V DC (max. 150 mA)
Outputs	2 Optocoupler (24 V, 30 mA) 3 Relays (24 V, 1 A)
Inputs	3 Optocoupler (50 24 V, 20 mA)
Interfaces	Ethernet (TCP/IP), USB 2.0, RS232, RS485, Data clock
Indicators, optical	5 LEDs for diagnosis
Supported transponders	ISO 15693 (ISO 18000-3 MODE 1)* NXP I-Code 1 ISO Host Mode, Scan Mode, Buffered Read Mode, Notification Mode Anticollision function
Reader modes	RSSI data readout
Others	
Temperature range	
Operation	. 25 °C up to 55 °C (-13 °F up to 131 °F)
Storage	. 25 °C up to 85 °C (-13 °F up to 185 °F)
Relative Humidity	50 - 80 % (non-condensing)

\* e.g. EM HF ISO Chips, Fujitsu HF ISO Chips, IDS Sensor Chips, Infineon my-d, KSW Sensor Chips, NXP I-Code, STM ISO Chips, TI Tag-it

#### STANDARD CONFORMITY

Radio license	
Europe	EN 300 330
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
Vibration	EN 60068-2-6 100 150 Hz: 0,075 mm / 1 g
Shock resistance	EN 60068-2-27 Acceleration: 30 g

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