



MPR Series HF & UHF RFID Devices Hardware Description

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1 Introduction

1.1 MPR Series · Devices

RFID	Housing	Antenna(s)	Host Interface	Order Code	Communication Protocol
HF	Small Housing	Internal	RS232	R-MP-HF-IA-232	HF DESFire
HF	Small Housing	Internal	RS485	R-MP-HF-IA-485	HF DESFire
HF	Small Housing	Internal	CANopen	R-MP-HF-IA-CAN	CANopen read UID
HF	Small Housing	Internal	Ethernet	R-MP-HF-IA-ET	HF DESFire
HF	Small Housing	Internal	Modbus	R-MP-HF-IA-MB	Modbus read UID
HF	Small Housing	Internal	USB	R-MP-HF-IA-USB	HF DESFire
UHF	Small Housing	Internal	RS232	R-MP-UHF-IA-232	UHF MPR
UHF	Small Housing	Internal	RS485	R-MP-UHF-IA-485	UHF MPR
UHF	Small Housing	Internal	CANopen	R-MP-UHF-IA-CAN	CANopen read UID
UHF	Small Housing	Internal	Ethernet	R-MP-UHF-IA-ET	UHF MPR
UHF	Small Housing	Internal	Modbus	R-MP-UHF-IA-MB	Modbus read UID
UHF	Small Housing	Internal	USB	R-MP-UHF-IA-USB	UHF MPR
HF	Large Housing	4 × external	RS232	R-MP-HF-4CH-232	HF DESFire
HF	Large Housing	4 × external	Ethernet	R-MP-HF-4CH-ET	HF DESFire
HF	Large Housing	8 × external	RS232	R-MP-HF-8CH-232	HF DESFire
HF	Large Housing	8 × external	Ethernet	R-MP-HF-8CH-ET	HF DESFire
UHF	Large Housing	Internal	RS232	R-MP-UHF-IA-232	UHF MPR
UHF	Large Housing	Internal	RS485	R-MP-UHF-IA-485	UHF MPR
UHF	Large Housing	Internal	CANopen	R-MP-UHF-IA-CAN	CANopen read EPC
UHF	Large Housing	Internal	Ethernet	R-MP-UHF-IA-ET	UHF MPR
UHF	Large Housing	Internal	Modbus	R-MP-UHF-IA-MB	Modbus read UID
UHF	Large Housing	Internal	USB	R-MP-UHF-IA-USB	UHF MPR
UHF	Large Housing	2 × external	RS232	R-MP-UHF-2CH-232	UHF MPR
UHF	Large Housing	2 × external	RS485	R-MP-UHF-2CH-485	UHF MPR
UHF	Large Housing	2 × external	CANopen	R-MP-UHF-2CH-CAN	CANopen read EPC
UHF	Large Housing	2 × external	Ethernet	R-MP-UHF-2CH-ET	UHF MPR
UHF	Large Housing	2 × external	Modbus	R-MP-UHF-2CH-MB	Modbus read UID
UHF	Large Housing	2 × external	USB	R-MP-UHF-2CH-USB	UHF MPR
HF	M30	Internal	RS232	R-MP-HF-M30-232	HF DESFire
HF	M30	Internal	Ethernet	R-MP-HF-M30-ET	HF DESFire
UHF	M30	Internal	RS232	R-MP-UHF-M30-232	UHF MPR
UHF	M30	Internal	Ethernet	R-MP-UHF-M30-ET	UHF MPR

1.2 Reference Documents

Communication Protocol	
HF DESFire	OEM-DES Devices Communication Protocol_x.yy_EN.pdf
UHF MPR	MPR UHF Series Communication Protocol_x.yy_EN.pdf
CANopen read UID	TBD
CANopen read EPC	TBD
Modbus read UID	TBD
Modbus read EPC	TBD

1.3 Intended Use

These devices can communicate with RFID data tags for the purpose of data transfer. To achieve this these devices intentionally emit radio frequencies as part of their normal function.

1.4 Safety Notes

The device may only be used for the intended purpose designed by the manufacturer. The operation manual should be always kept available for each user.

The liability-prescriptions of the manufacturer in the issue valid at the time of purchase are valid for the device. The manufacturer shall not be held legally responsible for inaccuracies, errors, or omissions in the manual or automatically set parameters for a device or for an incorrect application of a device.

Repairs may be executed by the manufacturer only.

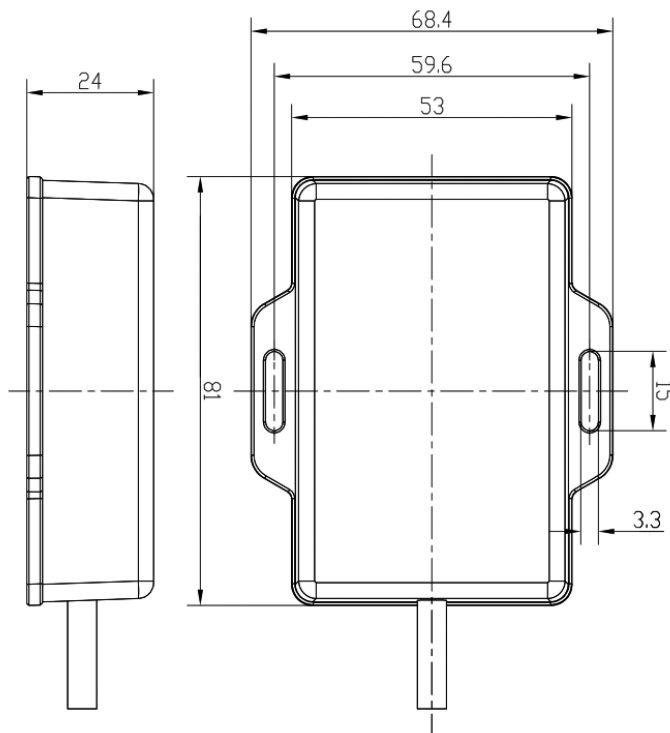
The device is intended for storage and operation in office conditions.

1.5 Hardware Settings

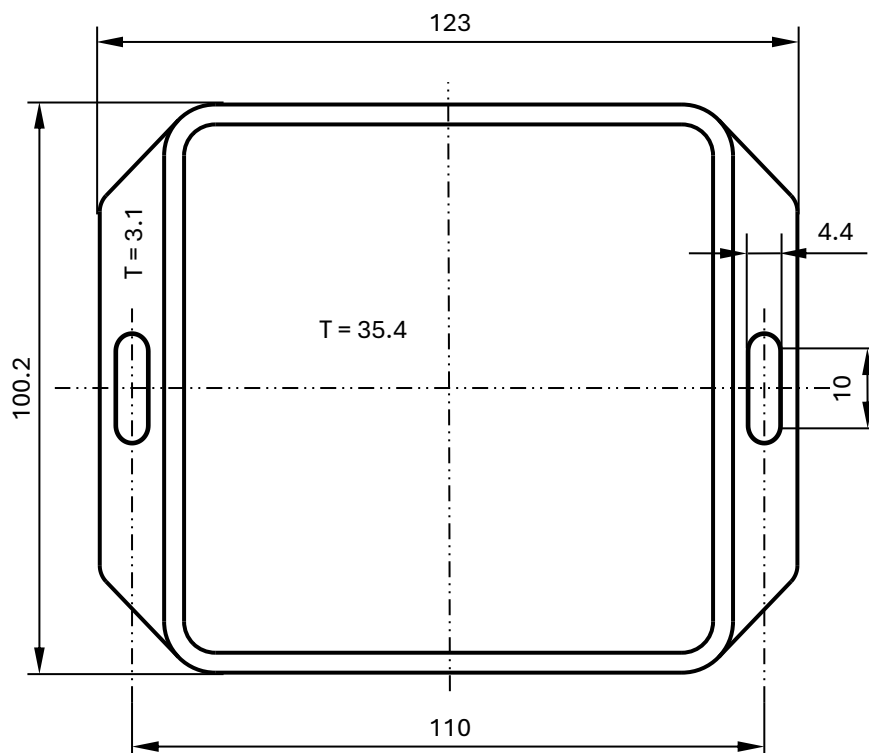
There are no hardware settings to be done. All configuration is done using configuration software or via binary commands.

2 Mechanical Installation

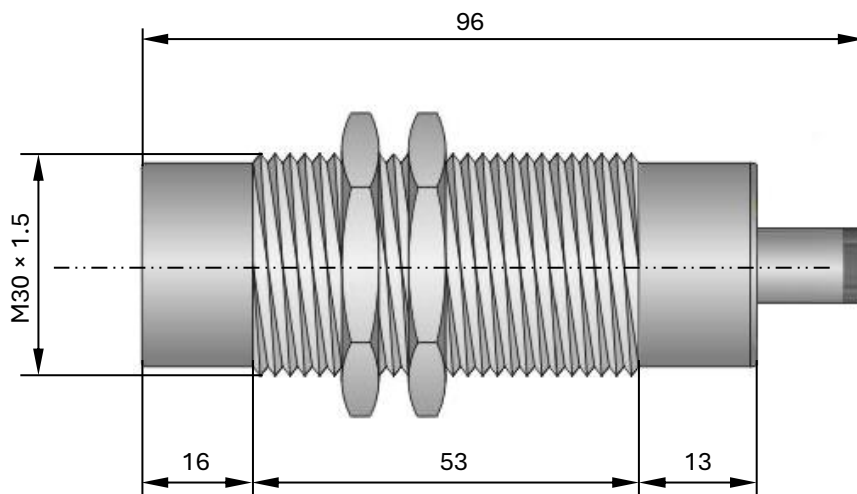
2.1 Small Housing



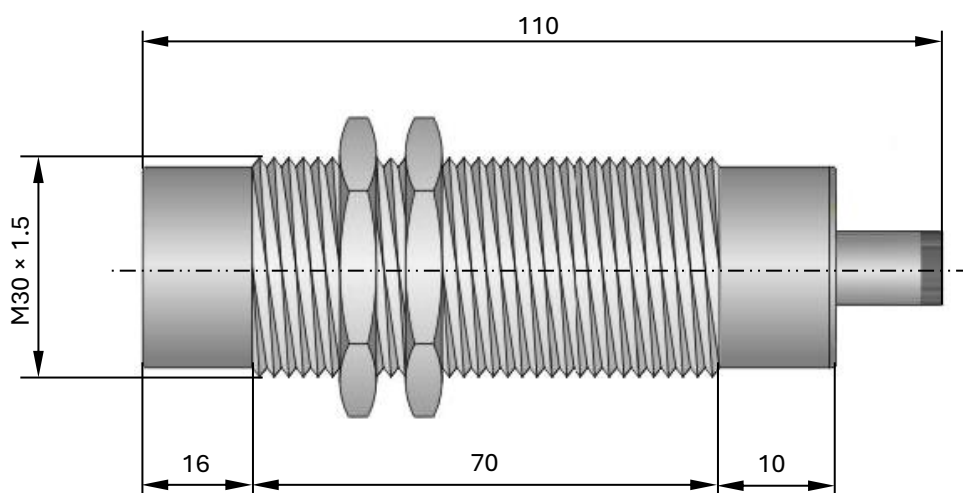
2.2 Large Housing



2.3 M30 HF (Standard Size)



2.4 M30 UHF (Longer Size)



3 Electrical Installation

3.1 Pinout USB, M12 4 pin, A-coded

Pin	Signal	Description	Wire Color
1	VCC	+5 Vdc	Red
2	D–	USB Data –	White
3	D+	USB Data +	Green
4	GND	0 V	Black

3.2 Pinout RS232, M12 4 pin, A-coded

Pin	Signal	Description	Wire Color
1	VCC	+7...24 Vdc	Brown
2	TxD	Data Output	White
3	RxD	Data Input	Blue
4	GND	0 V	Black

3.3 Pinout RS485, M12 4 pin, A-coded

Pin	Signal	Description	Wire Color
1	VCC	+7...24 Vdc	Brown
2	+	RS485 A wire	White
3	–	RS485 B wire	Blue
4	GND	0 V	Black

3.4 Pinout CANOpen, M12 4 pin, A-coded

Pin	Signal	Description
1	VCC	+7...24 Vdc
2	CANL	Can low
3	CANH	Can high
4	GND	0 V

3.5 Pinout Modbus, M12 4 pin, A-coded

Pin	Signal	Description	Wire Color
1	VCC	+7...24 Vdc	Brown
2	TxD		White
3	RxD		Blue
4	GND	0 V	Black

3.6 Pinout Ethernet, M12 8 pin, A-coded

Pin	Signal	Description
1	RJ45-5	POE power supply
2	RJ45-7	POE power supply
3	RJ45-8	POE power supply
4	RJ45-2	TX-
5	RJ45-3	RX+
6	RJ45-1	TX+
7	RJ45-4	POE power supply-
8	RJ45-6	RX-

4 Maintenance, Repair and Disposal

4.1 Maintenance

The electronics are maintenance-free. Protect it against dirt and liquids.

4.2 Repair

There are no user-serviceable parts. Do not attempt repairs. Do not allow any unauthorized service centre or personnel to repair or modify the product.

In the event your electronics fail, contact iDTRONIC GmbH via the service e-mail address: helpdesk@idtronic.de

4.3 Disposal

After use dispose of the device in an environmentally friendly way in accordance with the applicable national regulations.

Do not dispose of this device in normal household waste. Contact your local council for information on disposal options for electronic devices in your area.