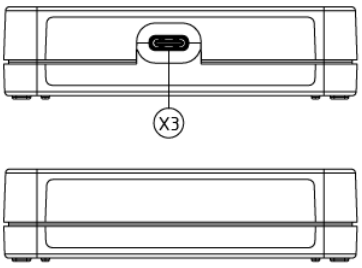
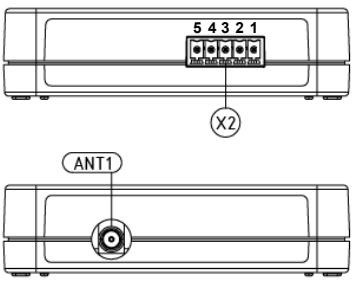
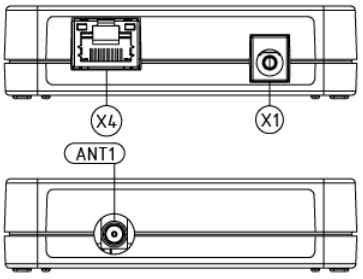
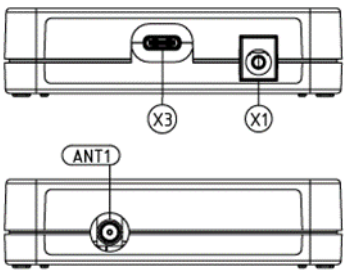
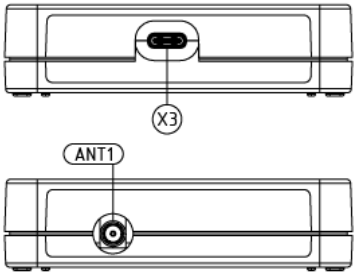
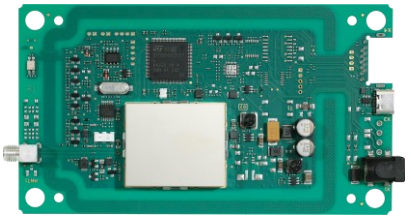
INSTALLATION

ID PR(M)103-USB
ID MR(M)103-A, -USB, -USBC
ID MR103-E

FW-Version: V01.01.00

ID PR103-USB	ID MR103-A	ID MR103-E
		
ID MR103-USB	**ID MR103-USBC**	**ID MRM103-USB**
		

NOTE

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Identification-support@feig.de

With this edition of the document, all previous editions become void. Indications made in this manual may be changed without previous notice.

Composition of the information in this document has been done to the best of our knowledge.
FEIG ELECTRONIC GmbH does not guarantee the correctness and completeness of the details given in this manual and may not be held liable for damages ensuing from incorrect or incomplete information. Since, despite all our efforts, errors may not be completely avoided, we are always grateful for your useful tips.

The instructions given in this manual are based on advantageous boundary conditions.
FEIG ELECTRONIC GmbH does not give any guarantee promise for perfect function in cross environments and does not give any guarantee for the functionality of the complete system which incorporates the subject of this document.

FEIG ELECTRONIC GmbH calls explicit attention that devices which are subject of this document are not designed with components and testing methods for a level of reliability suitable for use in or in connection with surgical implants or as critical components in any life support systems whose failure to perform can reasonably be expected to cause significant injury to human health. To avoid damage, injury or death the user or application designer must take reasonably prudent steps to protect against system failures.

FEIG ELECTRONIC GmbH assumes no responsibility for the use of any information contained in this document and makes no representation that they are free of patent infringement.
FEIG ELECTRONIC GmbH does not convey any license under its patent rights nor the rights of others.

Safety Instructions

- The device may only be used for the intended purpose designed by for the manufacturer.
- The operation manual should be conveniently kept available at all times for each user.
- Unauthorized changes and the use of spare parts and additional devices which have not been sold or recommended by the manufacturer may cause fire, electric shocks or injuries. Such unauthorized measures shall exclude any liability by the manufacturer.
- 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 only be executed by the manufacturer.
- Installation, operation, and maintenance procedures have to be carried out by professional and qualified personnel.
- Use of the device and its installation must be in accordance with national legal requirements and local electrical codes.
- When working on devices the valid safety regulations must be observed.
- Before touching the device, the power supply must always be interrupted. Make sure that the device is without voltage by measuring. The fading of an operation control (LED) is no indicator for an interrupted power supply or the device being out of voltage!

NOTE:	
	**Wearers of pacemakers** Although this device does not exceed the permissible limits for electromagnetic fields, you should keep a minimum distance of 25 cm between the device and your pacemaker and not stay in the immediate vicinity of the device or the antenna for long periods of time.

History of documentation

Revision	Data	Description
0e	August 2025	Initial Version
1e	October 2025	Bug fix

Supported documents

No.	Supported documents	Doc.No.
[1]	Further Information https://www.feig.de/en/login/	
[2]	Manual	H50420-xe-ID-B
[3]	Quick Start PR(M)103-USB	M50630-xde-ID-B
[4]	Quick Start MR(M)103-A	M50628-xde-ID-B
[5]	Quick Start MR103-E	M50629-xde-ID-B
[6]	Quick Start MR(M)103-USBC	M50627-xde-ID-B

Explanation of symbols

Symbol	Explanation
VDC/ ⎓	Direct voltage symbol

Content

1 Performance feature

1.1 General Information

All reader variants described here have been developed for contactless data exchange with transponders whose operating frequency is 13.56 MHz.

- The ID PR103 has an integrated antenna and works with a transponder-dependent, typical reading range of 20 cm.
  The reader is equipped with a USB interface for communication with the host.

- The ID MR103 variants are equipped with a connection for an external antenna and work with a transponder-dependent, typical reading range of 40 cm.
  The following interfaces are available for communication with the host:
  RS232, USB, USBC, Ethernet.

- The "Anticollision" function enables the simultaneous reading of up to 100 x ISO15693 or 20 x I-CODE1 transponders.

- The reader variants are available as a housing version and as a module version.

1.2 Reader type code

Reader type	Version	Interface
79 **(Hex.: 0x4F)**	A	RS232
	USB	USB 2.0
	USBC	USBC
	E (Ethernet)	LAN

Tab 1: Reader type

Overview

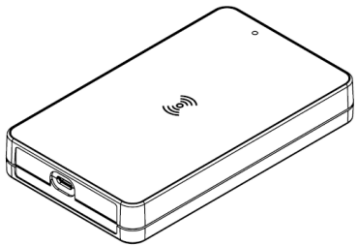
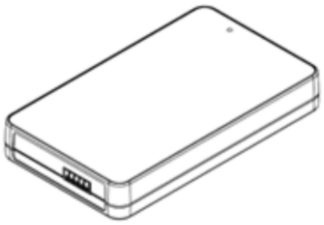
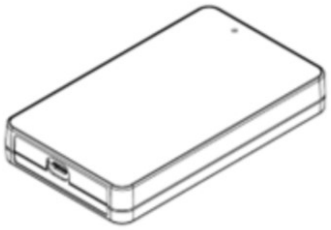
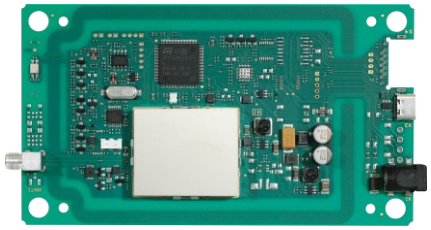
ID PR103-USB	ID MR103 A	ID MR103 E
		
ID MR103 USB	**ID MR103 USBC**	**ID MRM103-USB**
		

Fig. 1: Device variants overview

1.3 Reader versions

Reader Type	Firmware	Version	Interface
ID MR103-USB	Standard	Housing	USB
ID MRM103-USB	Standard	Modul	USB
ID MR103-USBC	Standard	Housing	USBC
ID MR103-A	Standard	Housing	RS232
ID MRM103-A	Standard	Modul	RS232
ID MR103-E	Ethernet	Housing	LAN
ID PR103-USB	Standard	Housing	USB
ID PRM103-USB	Standard	Modul	USB

Tab 2: Reader version

1.4 Supported operating modes

Operating Mode	RS232	USB	Ethernet
Host Mode	✓	✓	✓
Scan Mode	✓	✓ + HID-Mode	
Notification Mode			✓

Tab 3: Operating Mode

1.5 Scope of delivery

1 x Device

1 x Quick Start document

2 Cyber Security (MR103-E)

2.1 Commissioning of the device

IMPORTANT NOTICE

In order to comply with the requirements of the European Radio Equipment Directive (RED) 2014/53/EU article 3 (3), points (d), the following points must be taken into account for the product ID MR103-E:

- When using the network interface (Ethernet), it may be necessary to create at least one user to enable various functions such as changing the configuration. The user and the password MUST be set by the person who puts the device into operation on first use before it is logically connected to a network or by an authorized entity within a network where access is limited to authorized entities.
- When security and/or network assets (keys, certificates, ethernet configuration parameters) are transferred via network interface (Ethernet) TLS encryption must be used to secure the communication.

2.2 Cyber Security related Firmware Updates

IMPORTANT NOTICE

In order to comply with the requirements of the European Radio Equipment Directive (RED) 2014/53/EU article 3 (3), points (d), you are required to register in the FEIG download area under https://www.feig.de/en/ and subscribe to notifications for cyber security-related firmware and software updates for the product ID MR103-E.

2.3 Firmware downgrade

IMPORTANT NOTICE

A firmware downgrade to older major release versions is not possible in order to prevent old major versions with known cyber security vulnerabilities from being executed on the device.

3 Installation

3.1 Housing version

The readers are designed for indoor applications.
Wall and under-counter mounting are possible with the optionally available mounting kit.

See 8.1 Wall mounting or under counter mounting

Dimensions

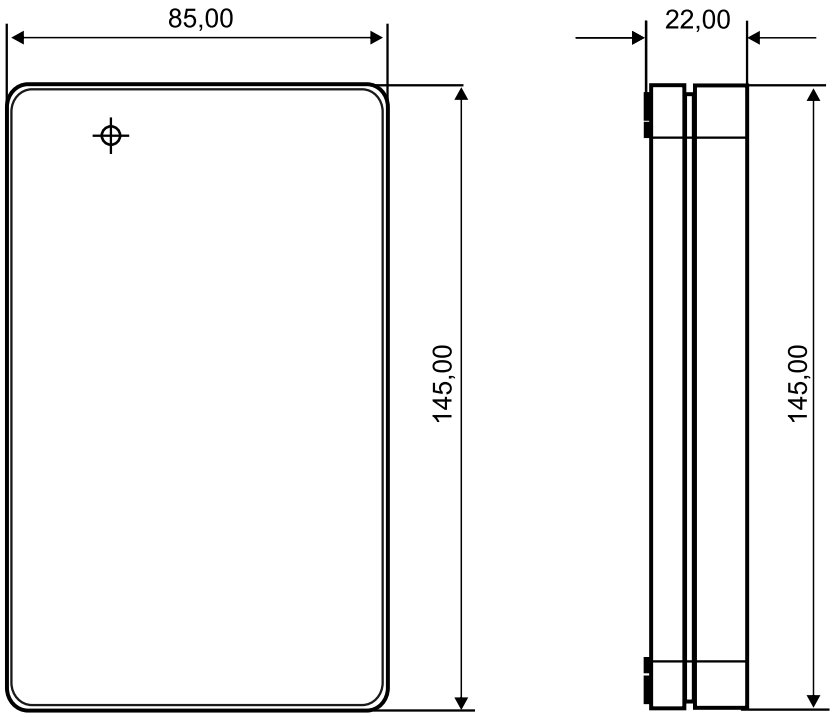


Fig. 2: Dimensions

3.2 Modul version

The Module version is intended for installation in customer housings.

3.2.1 Modul dimension [mm]

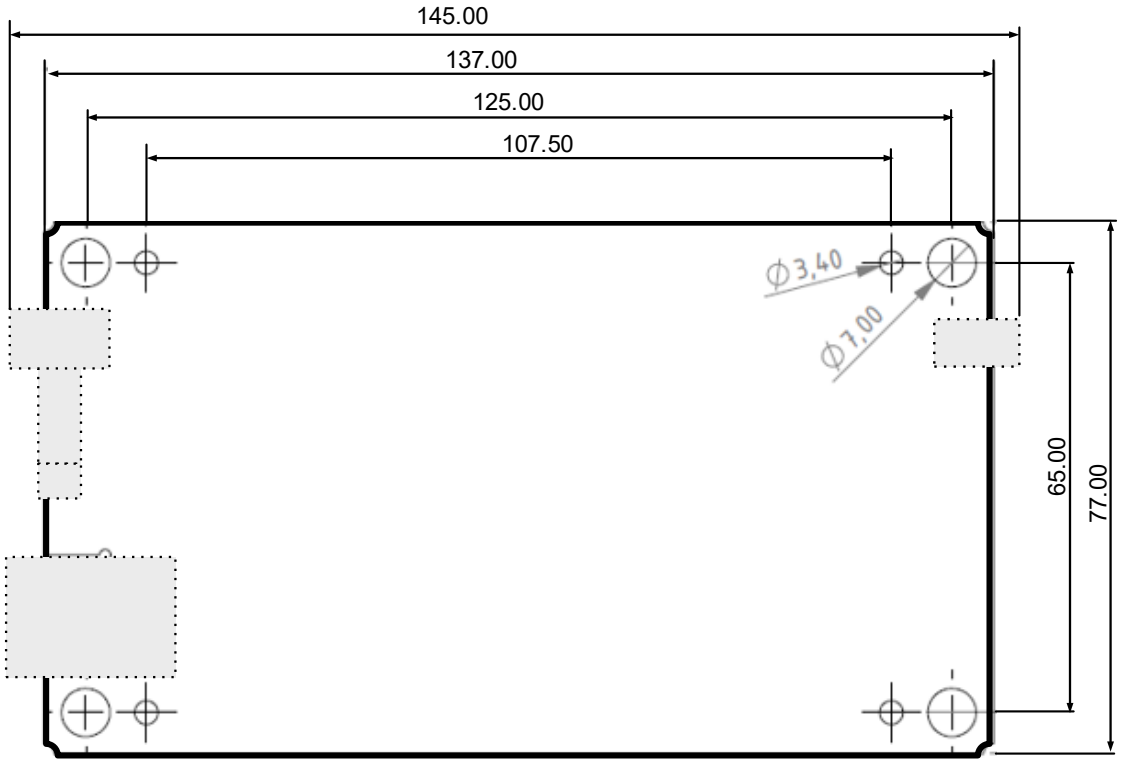


Fig. 3: Modul version

4 Interface Overview and Connections

Depending on the reader variant, different connections and interfaces are available.

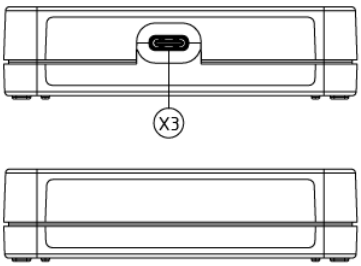
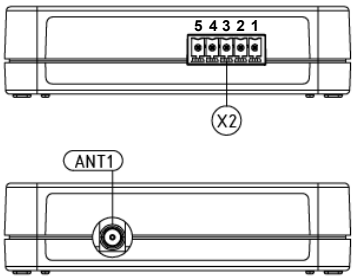
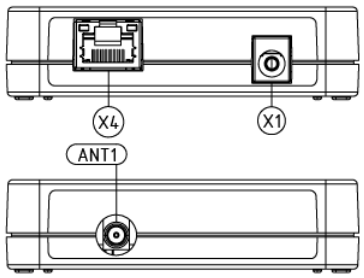
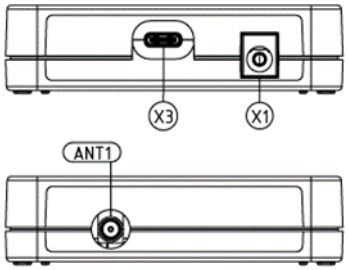
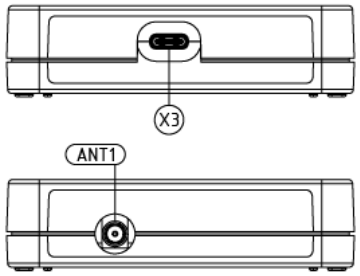
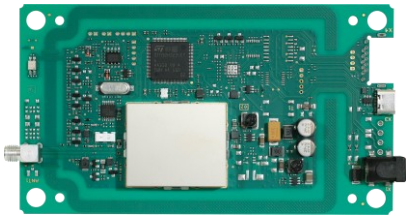
ID PR103-USB	ID MR103-A	ID MR103-E
		
ID MR103-USB	**ID MR103-USBC**	**ID PRM103-USB**
		

Fig. 4: Overview interfaces

Interface designation

Connector	Description
X1	Power supply 12 - 24V DC/ ⎓ ± 10%
X2	RS232 & Power supply 12 – 24V DC/ ⎓ ± 10%
X3	USB / USBC
X4	10/100Tbase Network interface (RJ45) LAN
ANT 1	Connector ext. antenna (Impedance 50 Ω)

Tab 4: Connector description

4.1 Antenna connection ANT1

There is an SMA socket on the circuit board or on the housing for connecting the external antenna.

NOTE:

- The antenna must be adjusted to the value 50 Ω (50 Ω ∠ 15°).
- The optimum operating quality of the antenna should be in the range QB = 10...20. To determine the operating quality, the antenna must be supplied with a 50 Ω source, e.g. a network analyzer or a frequency generator.
- When connecting an antenna, make sure that it does not exceed the permissible limit values of the national regulations regarding radio equipment.
- The maximum tightening torque of the SMA sockets is 0.45 Nm.

4.1.1 DC Voltage on antenna connector ANT1

A DC voltage can be applied from the reader to the ANT1 antenna connection. This DC voltage can be used to supply an LED, for example.

NOTE:

- The DC voltage is only designed for low currents. The DC voltage (6,9 V± 1 V) can be loaded up to a maximum of 5mA.
- Only antennas that are suitable for DC voltage and do not short-circuit the DC voltage may be connected.
- When connecting other devices (e.g. VSWR meters), make sure that they are also suitable for DC voltage.
- This DC voltage is not suitable for supplying the automatic antenna tuner ID ISC.DAT.

4.2 Overview Power supply

ID PR(M)103-USB	X3	5 VDC / 500 mA (via USB)
ID MR(M)103-A	X2	Pin 1 = GND Pin 2 = RxD Pin 3 = TxD Pin 4 = GND Pin 5 = 12 bis 24V DC/ ⎓
ID MR103-E	X1	External Power Supply Unit (12 bis 24V DC/ ⎓)*
ID MR(M)103-USB	X1	External Power Supply Unit (12 bis 24V DC/ ⎓)*
ID MR103-USBC	X3	5V DC/ ⎓ / 1,5A (via USBC)

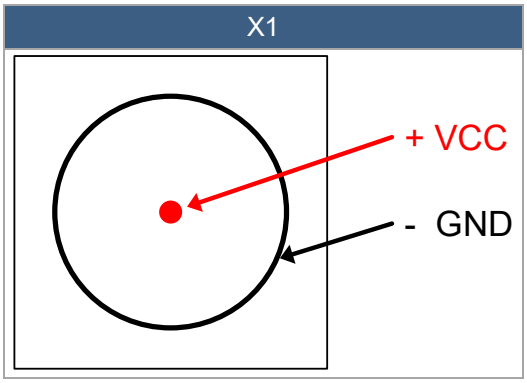
Tab 5: Power Supply

4.3 X1: External Power Supply*

The device may only be supplied by a power source in accordance with EN 62368-1 Chapter Q.1 Power sources of limited power or with a power supply unit certified in accordance with NEC Class 2/LPS.

For more information on available power supply units, see chapter 8 Accessories.

Connector for external Power Supply Unit

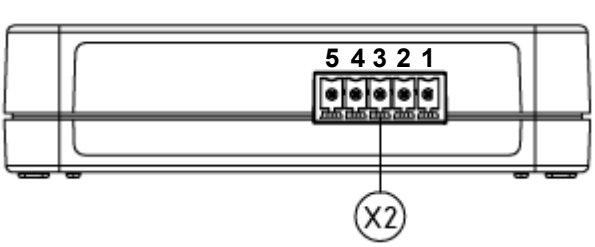


Tab 6: External Power Supply Unit

4.4 X2: RS232 Interface (ID MR103-A)

The transmission parameters can be configured via software protocol.

Connector X2 / Pin Assignment

PIN	Signal	
1	GND	
2	RxD	
3	TxD	
4	GND	
5	12 bis 24V DC/ ⎓	

Tab 7: Connector X2 / Pin Assignment

4.5 X3: USB-Interface (ID PR103-USB / ID MR103-USB, USBC)

The USB interface is connected via socket X3 (ID PR103-USB / ID MR103-USB / -USBC).
The assignment is standardized. The data rate of the reader is limited to 12 Mbit (USB Full Speed).
A standard USBC cable can be used.

Fig. 5: USBC Interface for Host-Communication

NOTE:

Maximum length of the USB cable: ≤ 3 m

4.6 X4: Ethernet-Interface (ID MR103-E)

The reader has an integrated 10/100 base-T network interface with standard RJ-45 connection. The connection is made via X4 and has automatic crossover detection in accordance with the 1000BASE-T standard.
For structured cabling, at least CAT5 category cables should be used. This guarantees problem-free operation at 10 Mbps or 100 Mbps.

A prerequisite for using the TCP/IP protocol is that each device on the network has its own IP address. All readers have a factory-set IP address.

The transmission parameters can be configured via software protocol.

Network	Address
IP-Address	192.168.10.10
Subnet-Mask	255.255.255.0
Port	10001
DHCP	ON

Tab 8: Default setting Ethernet Interface

NOTE:

- The reader has a DHCP-capable TCP/IP interface.
- A shielded STP (shielded and twisted pair) CAT5 cable must be used.

4.6.1 Reset Button T1: Factory Reset

A factory reset will reset all parameters (including Ethernet Interface) and the HID table to their default settings. The user “Admin” and “User” will be deleted.

NOTE:

The T1 "Factory Reset" button is located under the sticker!
To activate it, the sticker must be pierced.

Set	Function	LED
Press and hold the factory reset button for 3 seconds.	Factory reset is being performed	LED off
	Factory Reset ok	LED lights up green
	Factory Reset not ok	LED lights up red
Deactivate button	Reader will be rebooted	Green LED flashes for 2 seconds at 8 Hz

5 Operating and Display Elements

Default settings for LED indication

LED		Beschreibung
	„RUN “	• Lights up continuously when the reader is ready for operation.
	„TRANSPONDER “	• Lights up briefly as soon as a transponder is detected. If several transponders are detected, the LED lights up blue continuously. Lights up when a transponder is detected.
	„Warning/Alarm “	• Lights up continuously with RF warning or alarm: Temperature alarm, open or short circuit at the antenna output
NOTE: The behaivor of the red and green LED can be configured via software.		

Tab 9: LED settings

6 Radio Approvals

6.1 Declaration of conformity (CE)

CE	**CE Declaration of Conformity** Hereby, FEIG ELECTRONIC GmbH declares that the radio equipment type ID PRM103 / ID MRM103 is in compliance with Directive 2014/53/EU. The full text of the EU Declaration of Conformity is available at the following internet address https://www.feig.de/en/service/

6.2 USA (FCC) and Canada (IC)

NOTE:

The RFID reader ID PR103 / MR103 contains the RFID module ID PRM103 / MRM103.

Product name:	ID PR103 / MR103
FCC ID: **IC:**	PJMPRM103 PJMMRM103 6633A-PRM103 6633A-MRM103
Notice for USA and Canada	This device complies with Part 15 of the FCC Rules and with RSS-210 of Industry Canada. Operation is subject to the following two conditions. (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Unauthorized modifications may void the authority granted under Federal communications Commission Rules permitting the operation of this device. This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense. Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Radiofrequency radiation exposure Information:	This equipment complies with FCC and IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance of 20 cm between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20 cm de distance entre la source de rayonnement et votre corps. Ce transmetteur ne doit pas être place au même endroit ou utilise simultanément avec un autre transmetteur ou antenne.

NOTE:

Changes or modification made to this equipment not expressly approved by FEIG ELECTRONIC GmbH may void the FCC authorization to operate this equipment.

6.2.1 Installation with FCC / IC Approval

FCC-/IC-NOTICE: To comply with FCC-Part 15 Rules in the United States / with IC Radio Standards in Canada, the system must be professionally installed to ensure compliance with the Part 15 certification / IC certification. It is the responsibility of the operator and professional installer to ensure that only certified systems are deployed in the United States / Canada.

6.2.2 Label Information

The following information must be placed at the outer side of the housing in which the reader is mounted.

Contains FCC ID PJMPRM103 Contains FCC ID PJMMRM103 Contains IC: 6633A-PRM103 Contains IC: 6633A-MRM103

7 Technical Data

Mechanical Data	
Housing PR103 / MR103	Plastic ABS
Weight PR103 MR103	 150 g 150 g
Dimension PR103 / MR103 (w x h x d)	(145 x 85 x 22) mm
Dimension PR103 / MR103 Module (w x h x d)	(145 x 77 x 17) mm
Weight Modul	56 g
Protection class PR103 / MR103	IP 30
Color housing	RAL 9018 (white)
Electrical Data	
Power Supply • ID PR103-USB • ID MR103-A/-USB • ID MRM103-A/-USB • ID MR103-E • ID MR103-USBC	 • 5V DC • 12V DC up to 24V DC • 12V DC up to 24V DC • 12V DC up to 24V DC • Via USB-Type-C (Current at 1.5A)
Power consumption ID PR103-USB ID MR103-A, USB, USBC, E	 max. 2.5W max. 6W
Antenna PR(M)103-USB	integrated
Antenna connector MR(M)103	1x SMA-socket (50 Ω)
Supply voltage on antenna output MR103	6,9V DC ± 1V (5 mA) Antenna output
Operating frequency PR103-USB ID MR103-A, USB, USBC, E	 13,56 MHz
Transmitting power ID PR103-USB ID MR103-A, USB, USBC, E	 0.6W ± 2dB 1,2W ± 1dB 1,5W ± 1dB
Supported transponder	ISO15693, (ISO 18000-3 MODE 1), I-CODE1
Reader modes ID PR(M)103-USB ID MR(M)103-A, USB, USBC, ID MR(M)103-E	 ISO Host Mode, Scan Mode ISO Host Mode, Scan Mode ISO Host Mode, Notification Mode
1 x LED	1 x multicolor LED; (green, blue, red)
Interfaces • ID PR(M)103-USB • ID MR(M)103-A	 • USB • RS232

• ID MR(M)103-USB • IS MR(M)103-USBC • ID MR(M)103-E	• USB • USB • Ethernet (TCP/IP)
Feature	Short-circuit detection (antenna) Temperature monitoring
Environmental conditions	
Temperature range	
Operation Storage	-25°C to +55°C -40°C to +85°C
Relative air humidity	5% - 95% (noncondensing)
Vibration	EN60068-2-6 10 Hz bis 150 Hz: 0,075 mm / 1 g
Shock	EN60068-2-27 Acceleration: 30 g
Approvals	
Radio approval	
• Europa / UK • USA • Canada	• EN 300 330 • FCC 47 CFR-Part 15 • RSS-Gen Issue 1, RSS-210
EMV	EN 301 489
Safety and Health	
Low voltage Human Exposure Cyber Security (MR103-E)	EN 62368-1 EN 50364 EN 18031

8 Accessories

Order No.	Type	Description
1688.002.00	ID NET.12V-B-EU Power Supply Unit 12V	Supply unit 100 - 240V AC, (Angled plug, **EU**), Output: 12V DC/⎓; 50Hz / 60Hz, 700mA
3886.000.00	ID NET.12V-B-GB Power Supply Unit 12V	Supply unit 100 - 240V AC, (Angled plug, **GB**)
3887.000.00	ID NET.12V-B-US Power Supply Unit 12V	Supply unit 100 - 240V AC, (Angled plug, **US**)
7224.000.00	ID MS.MR103/PR103-A	Wall mounting or under-counter mounting
7102.000.00	ID CAB.RS-T	Cable for RS232 and Power Supply (ID MR103-A)
7103.000.00	ID CAB.USB-AC	USB Interface cable, USB-A auf USBC
7104.000.00	ID CAB.USB-CC	USB Interface cable, USBC auf USBC
External Antennas		
1663.000.00	ID ISC.ANT340/240-A	Dim.: 340mm x 240mm x 9mm Protection.: IP20
2396.000.00	ID ISC.ANT340/240-B	External antenna without housing
3249.000.00	ID ISC.ANT310/310-A	Dim.: 318mm x 338mm x 30mm Protection.: IP65
3512.000.00	ID ISC.ANTS370/270	Dim.: 370mm x 270mm x 27mm Protection.: IP20
6612.000.00	ID ANT240/180-A	Dim.: 40mm x 180mm x 13mm Protection: IP30
6616.000.00	ID ANTS240/180-A	Dim.: 240mm x 180mm x 15mm Protection: IP30
1968.000.00	ID ISC.ANT100/100-A	External antenna without housing Dim.: 40mm x 30mm x 6mm
1967.000.00	ID ISC.ANT40/30-A	External antenna without housing Dim.: 100mm x 100mm x 6mm

Tab 10: Accessories

8.1 Wall mounting or under counter mounting

- Remove the screws on the back of the reader.
- The mounting brackets are fastened with the previously removed screws.

  They can also be mounted rotated by 90° as an option.

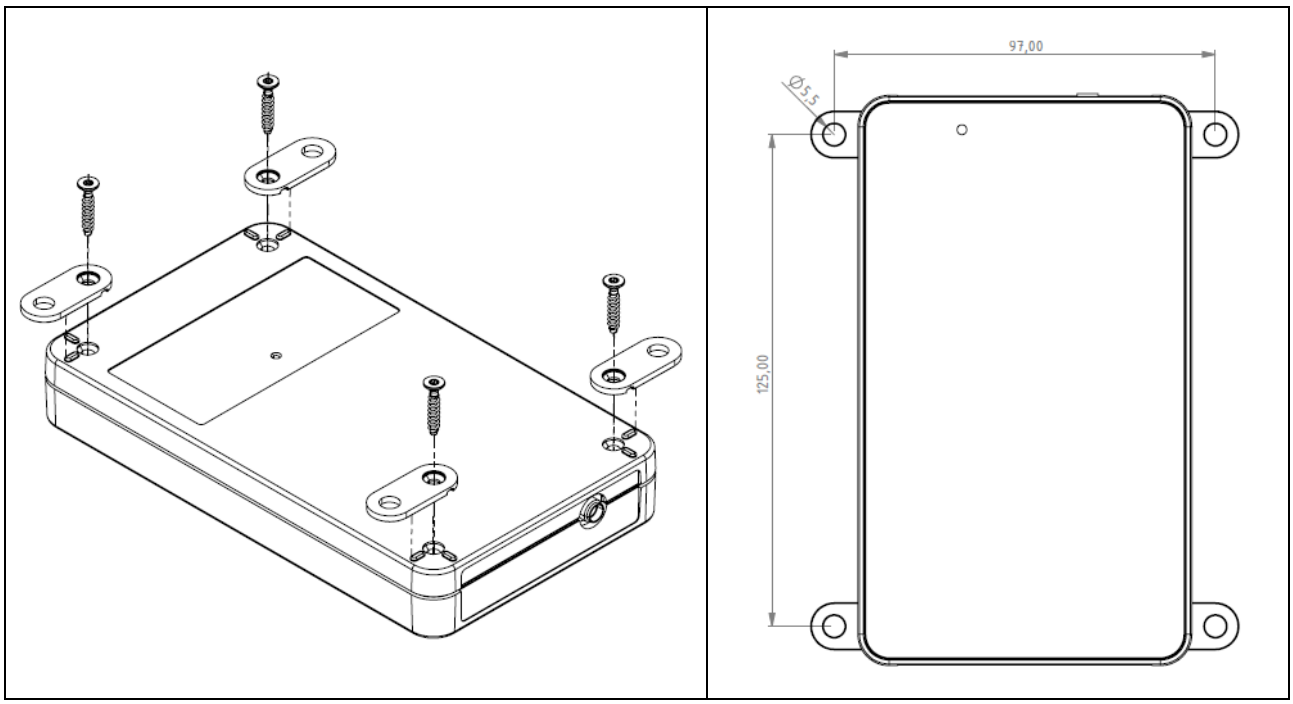
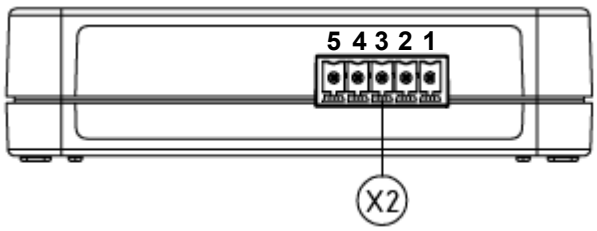


Fig. 6: Wall mounting or under-counter mounting

Note:

The mounting kit “ID MS.MR103/PR103-A” includes the four mounting brackets (See 8 Accessories).

8.2 Serial Data Cable ID CAB.RS-T

PIN	Signal	Farbe / Color	X2
1	GND	Yellow	
2	RxD	Orange	
3	TxD	Brown	
4	GND	Black	
5	12 bis 24V DC/ ⎓	Red	

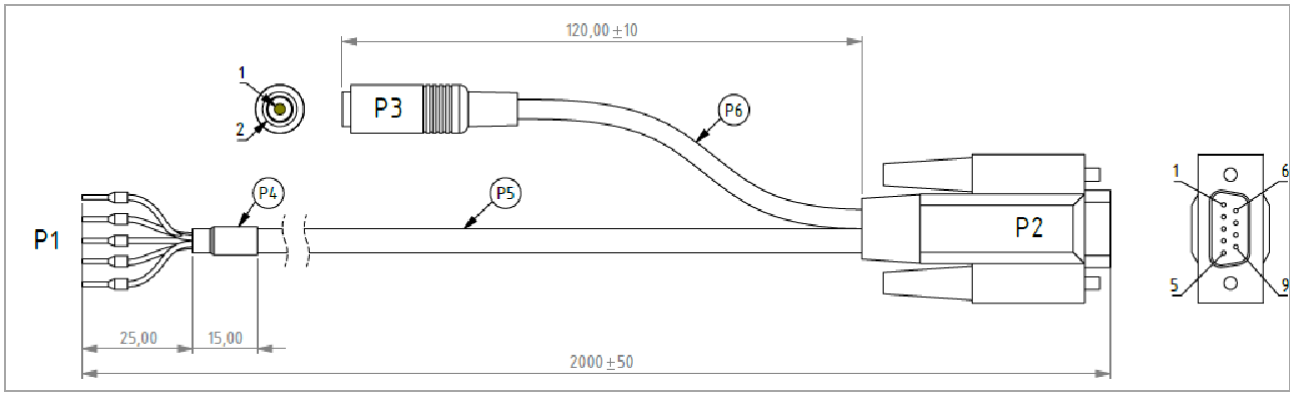


Fig. 7: Serial data cable with voltage connection

Document: Installation
Id-Nr. Document Version: M50720-1e-ID-B
Date: 07.11.25

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