ID CPR46.10

EMVCo Level 1 Certified Contactless Payment Reader

About this Document

This document gives an overview about the technical features of the OBID® *classic-pro* ID CPR46.10. Actual and detailed technical documentations are available on www.feig.de. Please ask your sales agent for an access code.

Product Specification

The OBID® *classic-pro* ID CPR46.10 is a transparent contactless EMVCo Level 1 certified RFID card reader designed for unattended electronic payment-, eTicket- or eMobility- Applications.

The ID CPR46.10 supports all common contactless credit and debit cards as well as other common ISO/IEC 14443-A and -B based smart cards.

The reader is explicitly designed to be nearly flat installed into a metallic front panel from the back side.

If mounted in nonmetallic front plates an additional 2 mm steel frame has to be used.

Rubber
Sealing Cord

The ID CPR46.10 reader family:

Model	Order No.	SAM Sockets	Host-Interface		
			USB	RS232	RS232 LVTTL
ID CPR46.10-4SUSB	3889.000.00	4	●	●	●
ID CPR46.10-USB	3889.001.00	-	●	●	●

Delivery Content

- ID CPR46.10 RFID Reader Unit

- Rubber (EPDM) Sealing Cord (D=4 mm)

## Safety Instructions / Warning - Read before start-up !

- **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.**

- **Unauthorised 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 unauthorised 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 should only be carried out by 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.**

- **Special advice for carriers of cardiac pacemakers:**
  Although this device doesn't exceed the valid limits for electromagnetic fields you should keep a minimum distance of 25 cm between the device and your cardiac pace-maker and not stay in an immediate proximity of the device respective the antenna for some time.

Connection

The ID CPR46.10 offers 2 alternative power supply options. Either "Vin" which can be between 8 V DC and 42 V DC or Vcc which can be 5 V DC only.
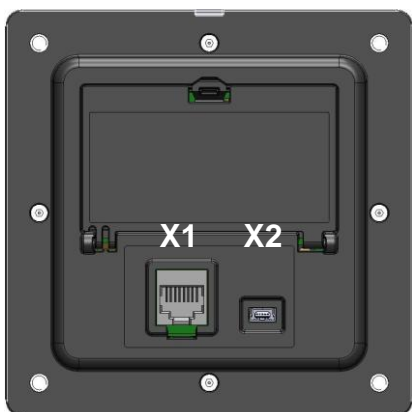
X1 RJ-45	Symbol	Function
1	TXD-LVTLL	RS232-LVTTL
2	RXD-LVTLL	RS232-LVTTL
3	I/O	Wakeup
4	Vin	8 V to 42 V DC
5	GND	
6	Vcc	+ 5 V DC $\pm$ 2 %
7	TxD	RS232
8	RxD	RS232

X2 (USB Mini B):

The USB mini connector is for connecting to an USB host. **The device is a self-powered USB device which requires a separate power supply via the RJ-45 connector X1.**

NOTICE:
- *The reader has to supplied by a limited power supply (e.g. NEC Class 2/LPS power supply) according IEC EN 60950, only!*
- *Do never supply the reader with both supply voltages Vin and Vcc at the same time!*
- *Supply voltages outside the specifications may destroy the device!*
- *Noisy power supplies can cause malfunctions.*
- *The host interfaces (RS232 or RS232-LVTTL or USB) cannot be used simultaneous.*

Technical Data

Housing		• transparent front: PC • rear part: ASA+PC
Dimensions over all (W x H x D)		• 120 x 120 x 23,8 mm (4,72 x 4,72, x 0,95 in)
Visible front section (W x H)		• 85 x 85 mm (3,35 x 3,35 in)
Recommended torque for mounting screws		max. 3,5 Nm, mounted with washer and nut
Weight		approx 255 g (9 oz)
Protection Class	**Front Side**	• IP65 (if accurate installed)
	Back Side	• IP30
Impact protection Class (Front Impact)		IK10 (installed with mounting frame)
Temperature Range	**Operating**	• -25 °C to +70 °C[1] (-13 °F to +158 °F)
	Storage	• -40 °C to +80 °C (-40 °F to +176 °F)
Humidity		95 % max, (no condensing)
Power Supply (Alternative)		• 5 V DC - reverse polarity protected • 8 to 42 V DC - reverse polarity protected
Power consumption		3 W max
Standby Current		280 µA to 500 µA
Antenna		internal
Operating Frequency		13,56 MHz
RF Interface		ISO/IEC 14443-A / -B
Supported Transponder (reading and writing)		ISO/IEC 14443-4 compliant smart cards, NFC: Type 1, Type 2 and Type 4 in NFC card emulation mode, mifare classic, mifare PLUS, mifare DESFire, mifare ultralight, my-d move, my-d proximity, Jewel, SR176, SRIx, Calypso (Innovatron radio protocol)
Terminal / Host-Interface		• USB Full Speed (12 Mbit/s) Self-Powered Device • RS232 (4.800 - 921.600 Baud) • RS232-LVTTL (4.800 - 921.600 Baud)
Connector		• RJ-45 (8P8C) Modular Jack • Mini USB - B
Operating Modes		Polling-Mode (OBID® ISO-Host)

[1] *with 50% duty cycle and max. active duration of 60 Seconds.*

User Interface	• LED: 4 x green, 1 x red, 1 x yellow • 1 x Buzzer
Contact Interface - ISO7816 *(ID CPR46.10-4SUSB only)*	4 x independent SAM Sockets for ID000 Format T=0 and T=1 Protocol support of power class A, B, C
MTBF	150.000 h
CPU / Memory	ARM Cortex-M3 / Flash Write Cycles 10.000

Radio Approval	**Europe**	EN 300 330
EMC		EN 301 489
Safety and Health		EN 60950
		EN 50364
Waste and Hazardous Substances		WEEE - 2002/96/EC
		RoHS - 2002/95/EC
EMVCo		Conform to Book D - EMV Contactless Communication Protocol Specification, Version 2.1

Notice for USA and Canada	FCC ID: PJMCPR46, IC: 6633A-CPR46

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.