Annex acc. to FCC Title 47 CFR Part 15
relating to
FEIG ELECTRONIC GmbH
cVEND PIN

Annex no. 5
User Manual
Functional Description

Title 47 - Telecommunication
Part 15 - Radio Frequency Devices
Subpart C – Intentional Radiators
ANSI C63.4-2014
ANSI C63.10-2013

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User Manual / Functional Description of the test equipment (EUT)

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PAYMENT

INSTALLATION

cVEND PIN

Unattended PIN Entry Terminal with On-Board Contactless Reader

M90113-10e-PY-B

Note

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1 Warnings – Read Before Start-Up!

1.1 Safety Instructions

- ► The device may only be used for the intended purpose designed by 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 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 or the antenna and your cardiac pacemaker.

1.2 Security Instructions

- ► The information given in the separate document cVEND PIN Security Policy must be observed!
- ► DO NOT DISASSEMBLE ANY PART!
  The device contains a battery-powered security circuit. The security circuit will be triggered if security relevant parts are disassembled. In this case, the device stops regular operation and can be reactivated only by the manufacturer in a certified secure environment.

2 Characterization

The cVEND PIN terminal from FEIG ELECTRONIC combines contactless payment and PIN entry functionality in one compact and robust unit for unattended payment.

The rugged stainless steel PIN PAD in combination with the integrated contactless reader simplifies the integration into various unattended applications and increases the user experience. It makes tap & go and chip & pin transactions easy and fast.

The bright color display covered by a robust and durable glass and stainless steel keys with embossed symbols in combination with illuminated keys makes cVEND PIN suitable for indoor and outdoor applications in public areas, offers optimal user guidance and ensures barrier free usage.

For acceptance of traditional smart cards with contacts cVEND PIN can be combined with the secure and robust hybrid smart card reader cVEND SHRC which is designed for ID1 size cards with magnetic stripe and smarts cards with contacts.

Fig. 1: cVEND PIN with cVEND SHRC

3 Functional Elements

3.1 Front Side

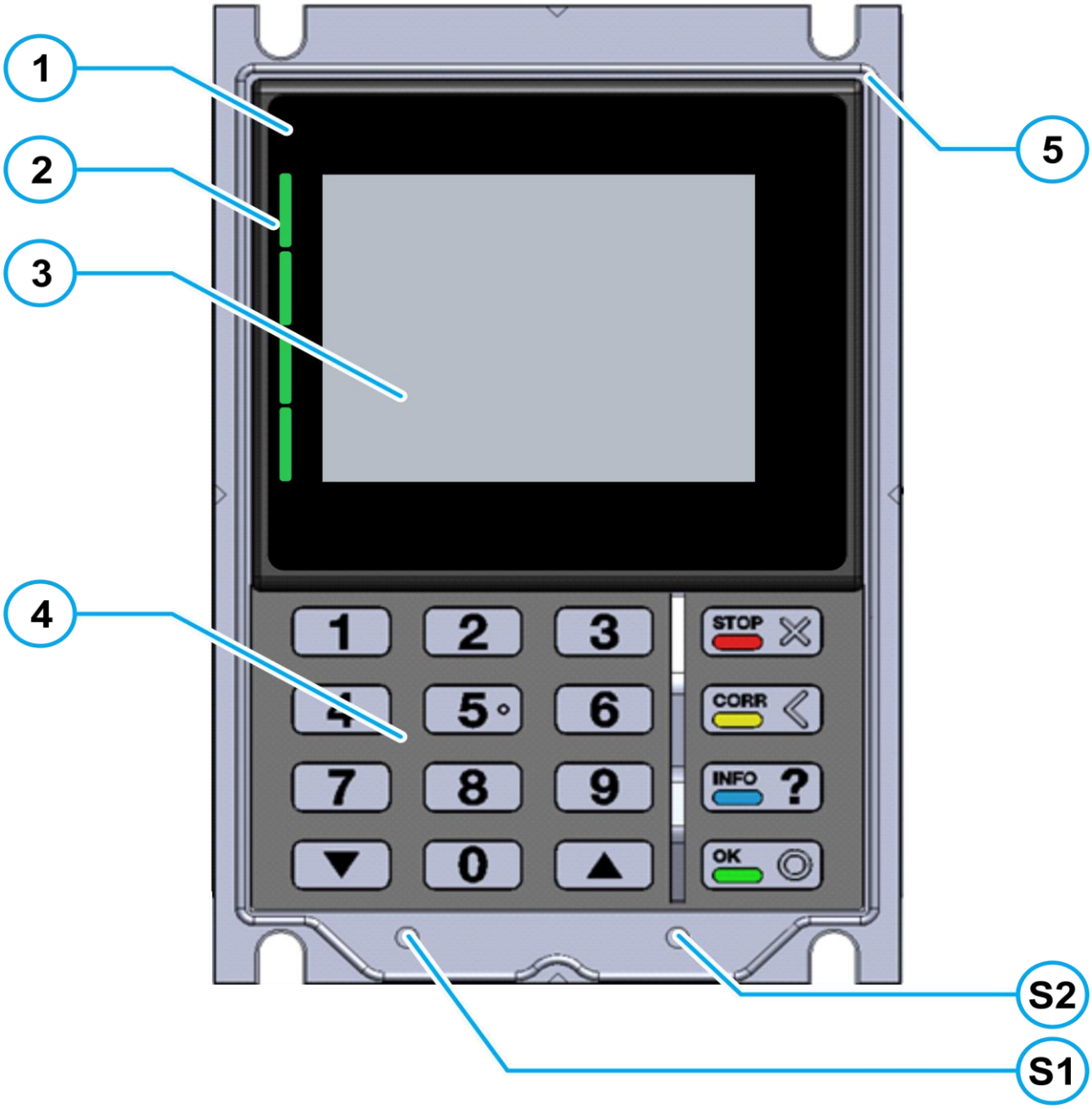


Fig. 2: cVEND PIN front view – not installed

Label	Description	Intended Use
1	Contactless Reader Antenna	Area for data exchange between cVEND PIN and a contactless payment card
2	4x green LED	Indicators to show the transaction progress
3	Display	Graphical display to guide the user during operations
4	PIN Pad	Keys to control the operation and to enter a PIN
5	Sealing Lip – all around	Sealing lip that prevents entering of water and dust in the machine
S1, S2	Removal Protection Switches	Switches which must be activated by the installation of cVEND PIN in order to enable the PIN entry function

Table 1: Front side elements

3.2 Key Pad

The stainless steel cVEND PIN key pad with clear tactile feedback and embossed symbols is designed for indoor and outdoor applications and provides barrier-free operation.

The key pad function is under software control. The functionality of the function keys (2) and the navigation keys (4, 5) may vary depending on the installed application.

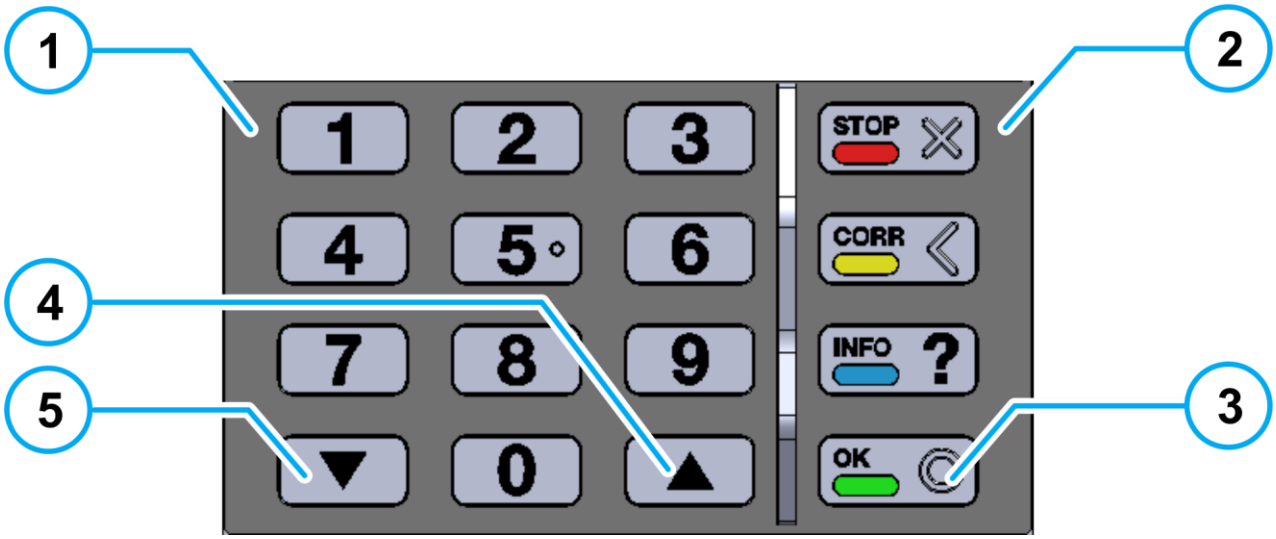


Fig. 3: cVEND PIN Key Pad

Label	Description	Indicated Use
1	Numeric Keys 0–9	To enter a PIN or other numeric data
2	Function Keys (STOP, CORR, INFO)	To control and modify the entered data
3	OK	OK key with wake-up function (see 5.2)
4, 5	Navigation Keys	Navigation keys

Table 2: Key Pad Elements

3.3 Back Side

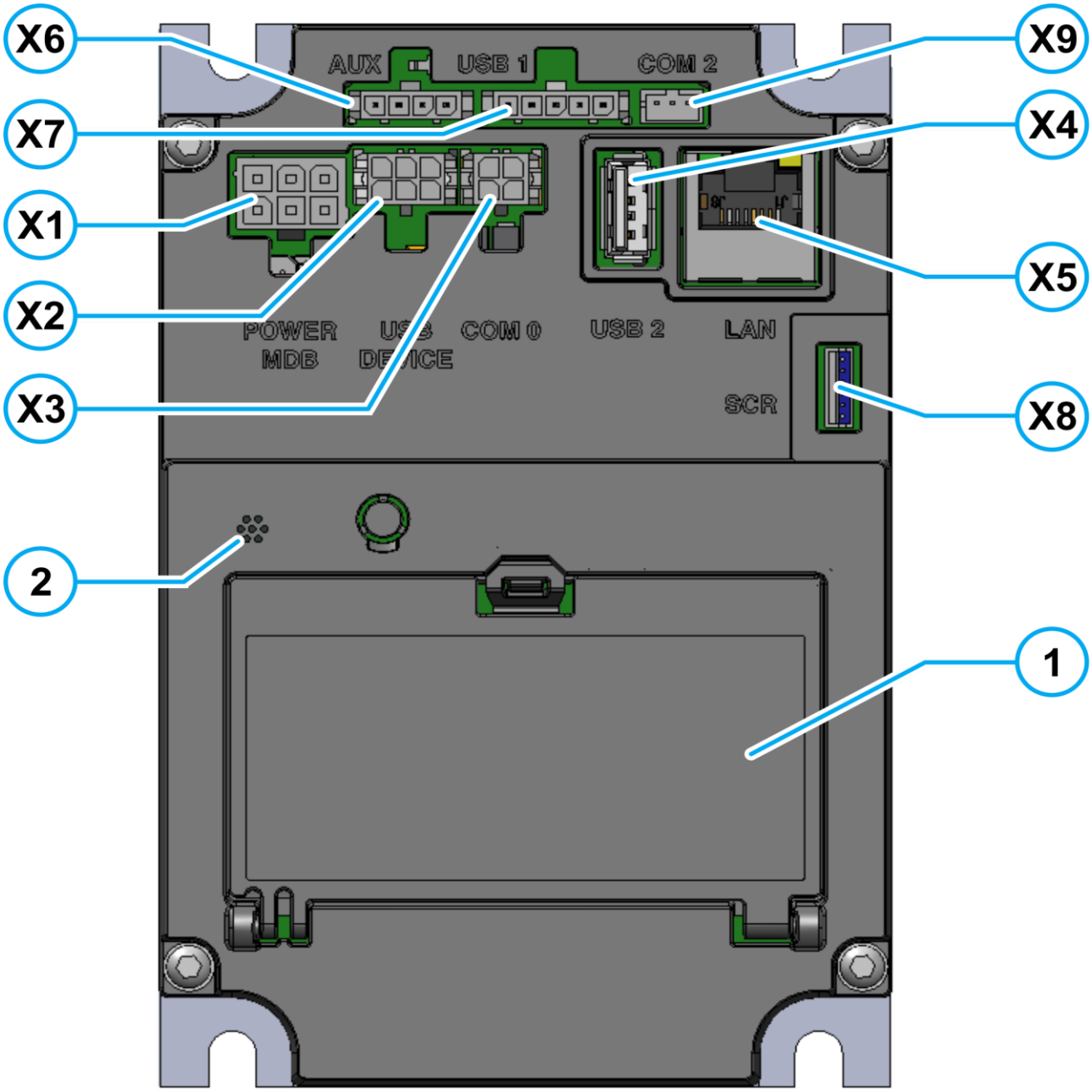


Fig. 4: cVEND PIN rear view – not installed

Label	Description	Intended Use
X1	Power Supply and MDB Interface	MDB interface: ECR interface for vending machines
X2	USB Device	ECR interface
X3	COM Port 0 (RS232)	ECR interface
X4	USB Host 2	Service interface for mass storage devices
X5	Ethernet	Host- and ECR interface
X6	Auxiliary Connector	Digital output and audio out
X7	USB Host 1	Optional fix connected GSM/GPRS modem
X8	cVEND SHCR	Power supply and communication interface for cVEND SHCR
X9	COM Port 2 (RS232)	Service interface

Label	Description	Intended Use
1	Hinged Cover	See *Table 4*
2	Buzzer	The buzzer is used to signal events to the user

Table 3: Back side elements

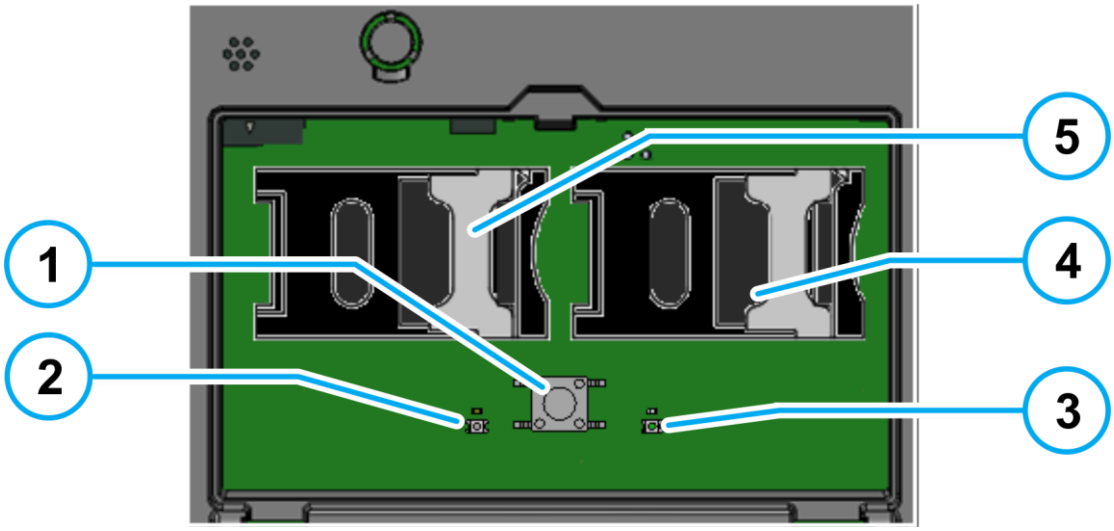


Fig. 5: cVEND PIN elements under the hinged cover

Label	Description	Inteded Use
1	Service Mode Switch T1	Activation of service and setup menu by service technician
2	LED1 – Operation Indicator	Service indicator shows different operation states of cVEND PIN controlled by the application
3	LED2 – MDB Indicator	Indicates if the MDB controller is running
4 5	SAM Socket 1 (S1) SAM Socket 2 (S2)	SAMs under application control e.g. public transport or other use cases

Table 4: Elements under the hinged cover

4 Mechanical Integration

For flush integration into a front panel the cVEND PIN has to be placed in a corresponding cutout and has to be pressed against the front plate by screwing on the four screwing points provided for this purpose. For fastening threaded bolts M4 x 12 mm are recommended. The maximum tightening torque is approx. 2,5 Nm.

ⓘ ***NOTE:***

The PIN Entry function is available after terminal set up (see Removal Protection Activation) only if both removal protection switches (S1, S2) are activated during installation.

Fehler! Verweisquelle konnte nicht gefunden werden. shows the recommended front panel cut-out.

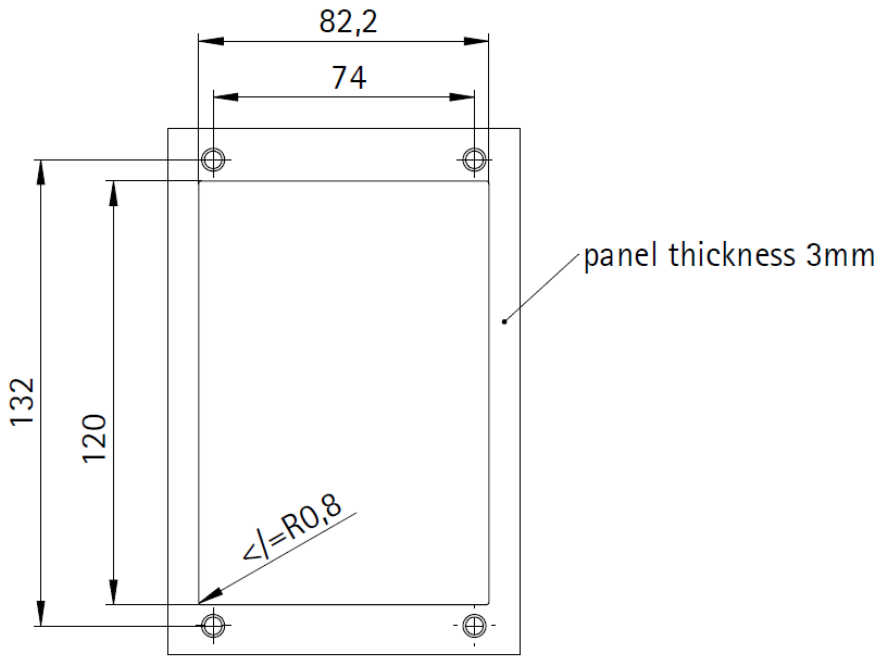


Fig. 6: cVEND PIN recommended front panel cut-out

4.1 Dimensions

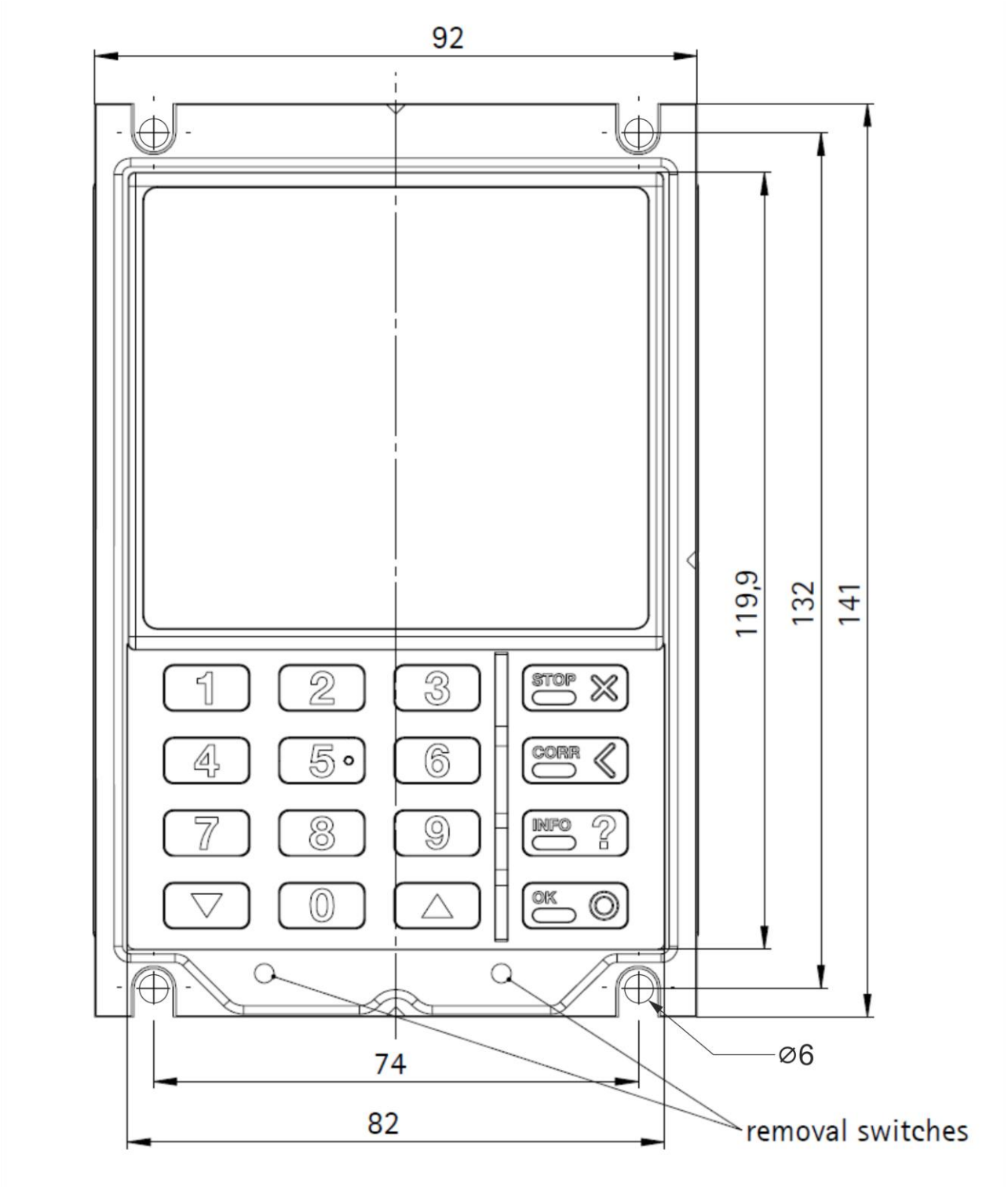


Fig. 7: cVEND PIN dimensions – front view

Manufacturing tolerance of cVEND PIN: 82 mm x 119,9 mm (+/- 0,30)

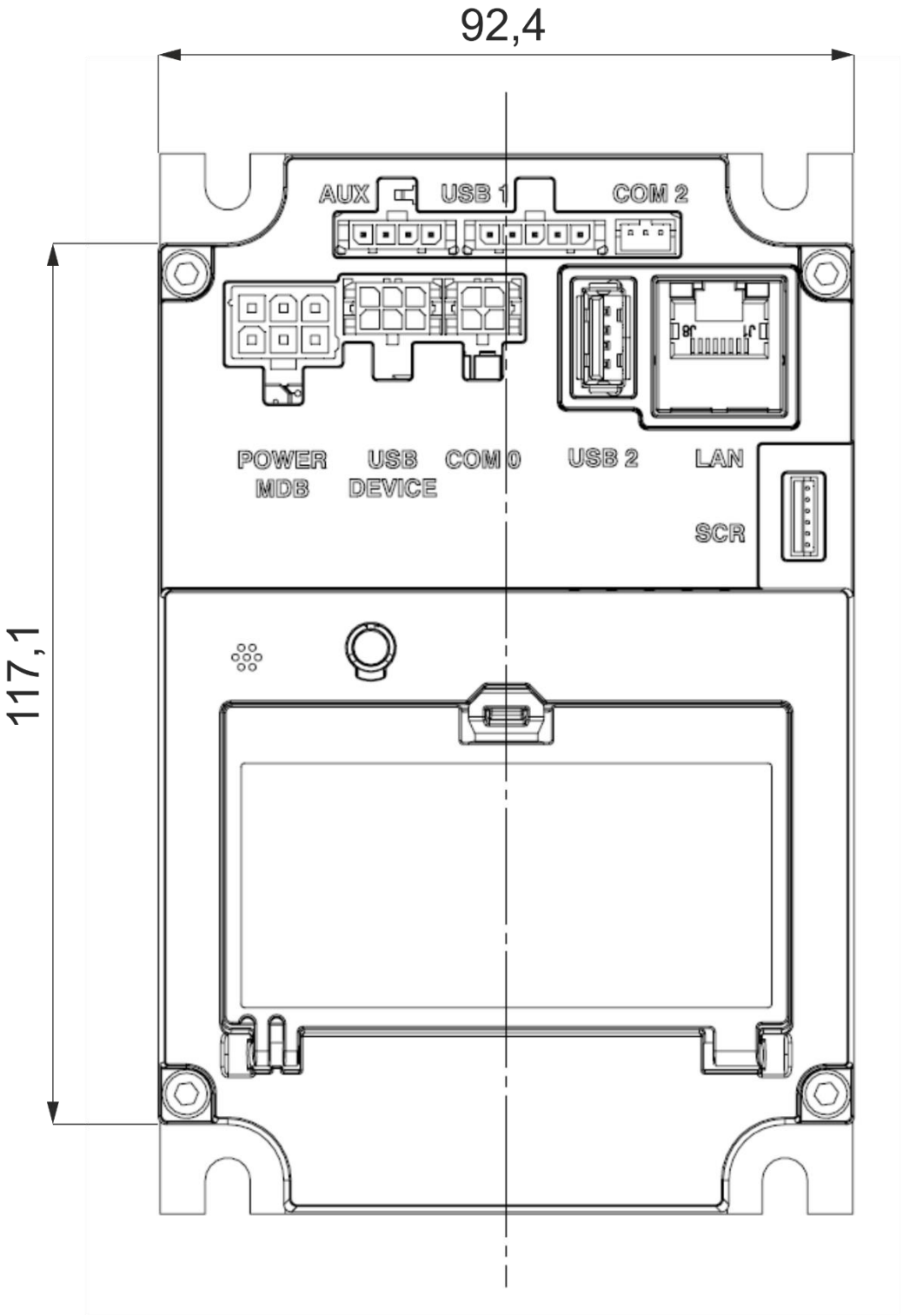


Fig. 8: cVEND PIN dimensions – rear view

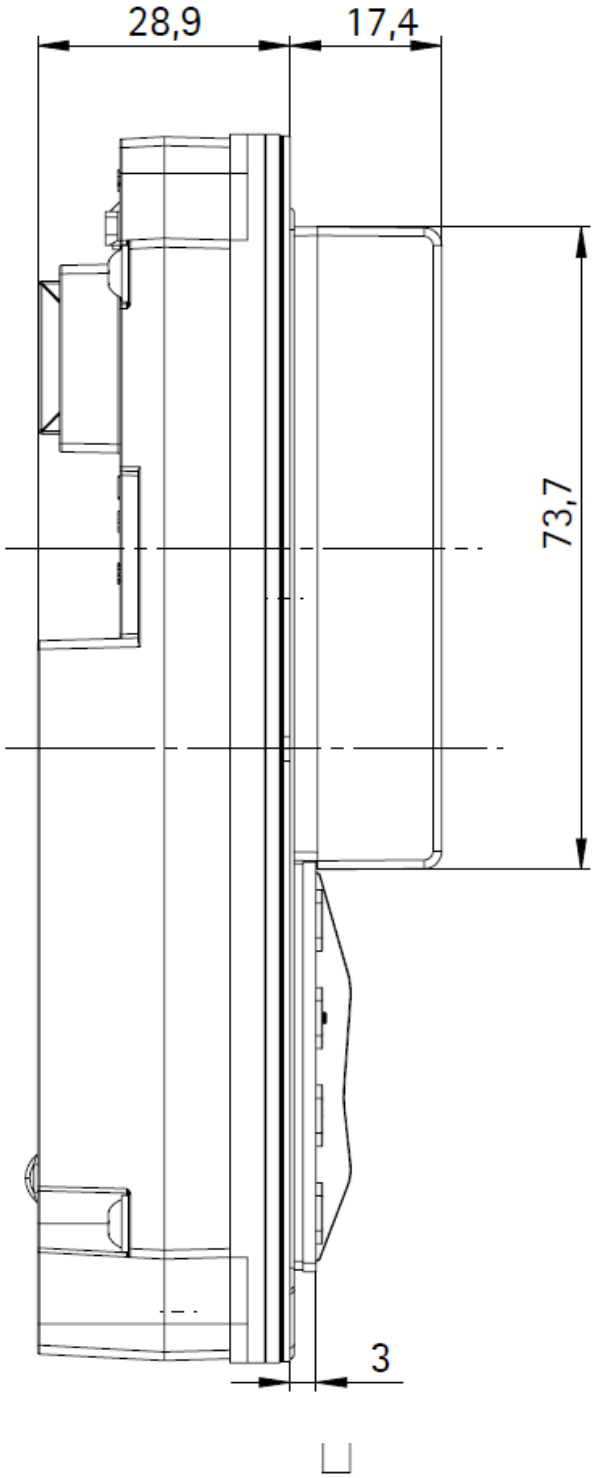


Fig. 9: cVEND PIN dimensions – side view

4.2 Privacy Shield

The integrator ensures that the installation situation meets the requirements for the privacy shield for the PIN pad. Essential requirements for the installation situation are illustrated below.

To prevent spying out the PIN entry and adequate privacy protection has to be provided by the vending machine. The horizontal observation range which has to be covered by the privacy shield is 270°. At any horizontal angle between 315° and 45°, the card holder obscures an observer's view of the PIN pad with his body (a symmetrical design must meet the minimum requirements at each point).

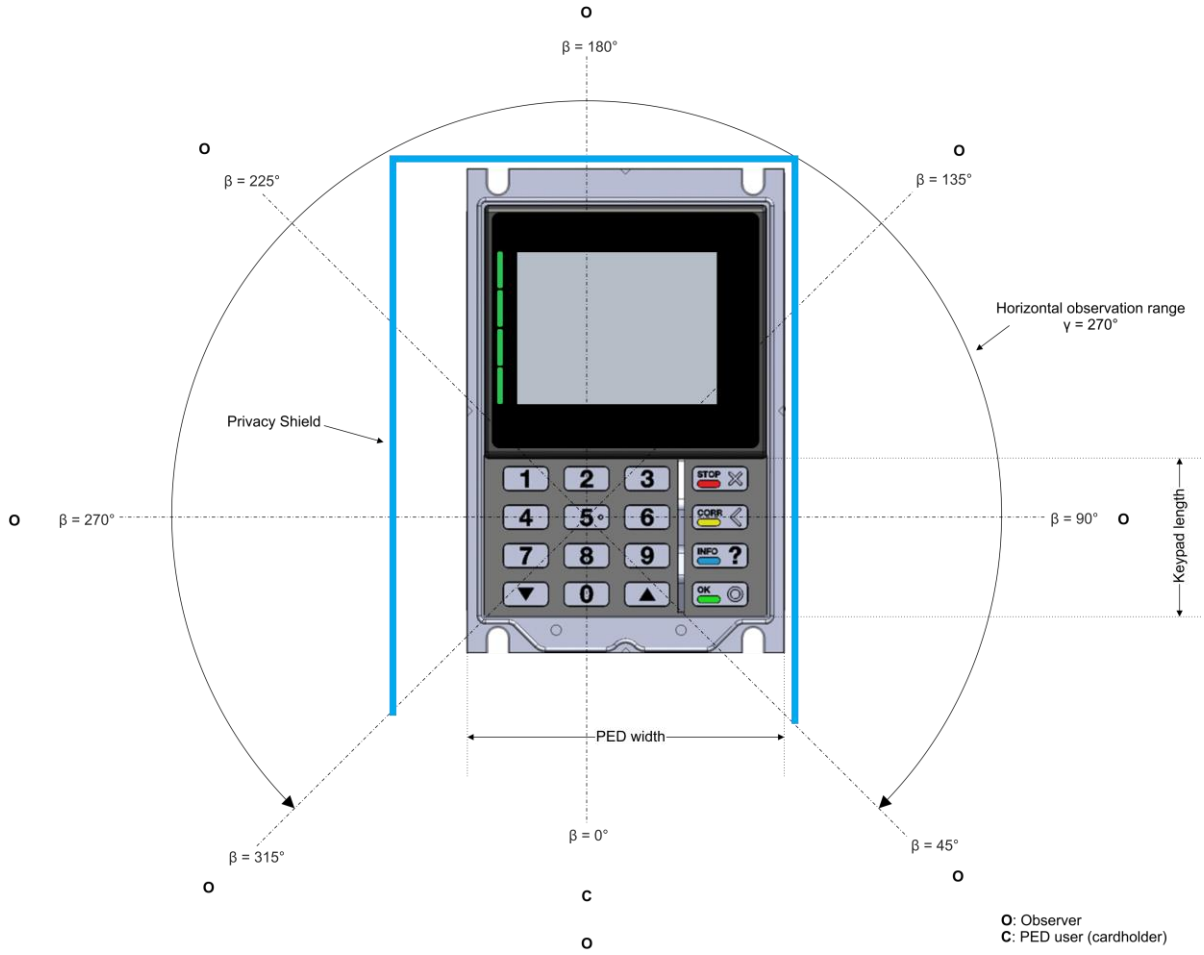
The cVEND PIN Security Guidance includes more details on how the privacy shield has to be designed.

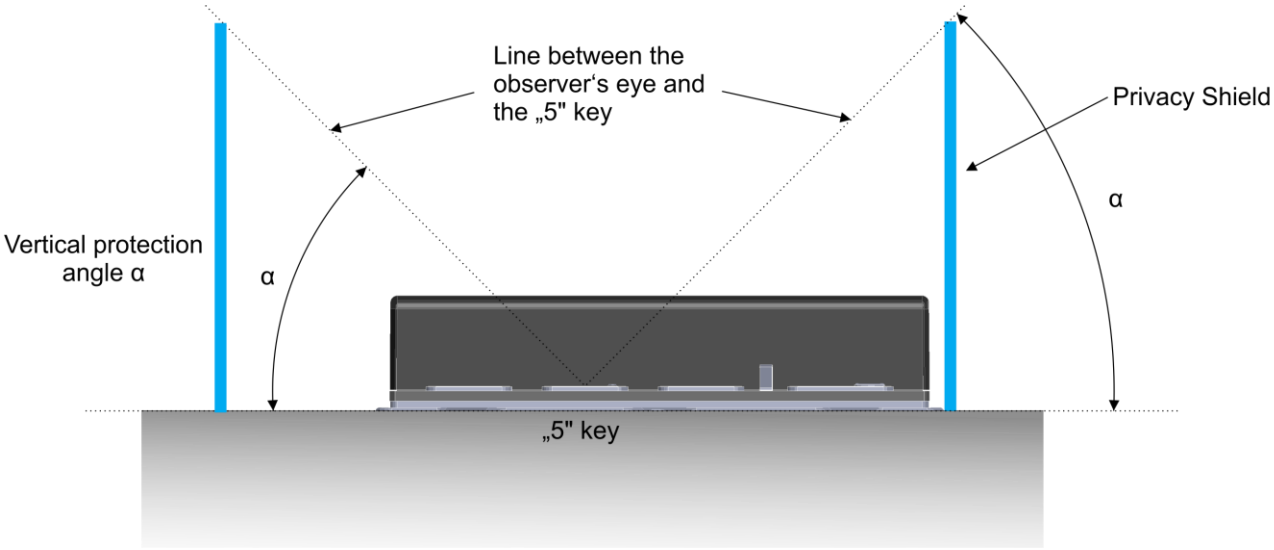
The angles in the figures below are defined as follows:

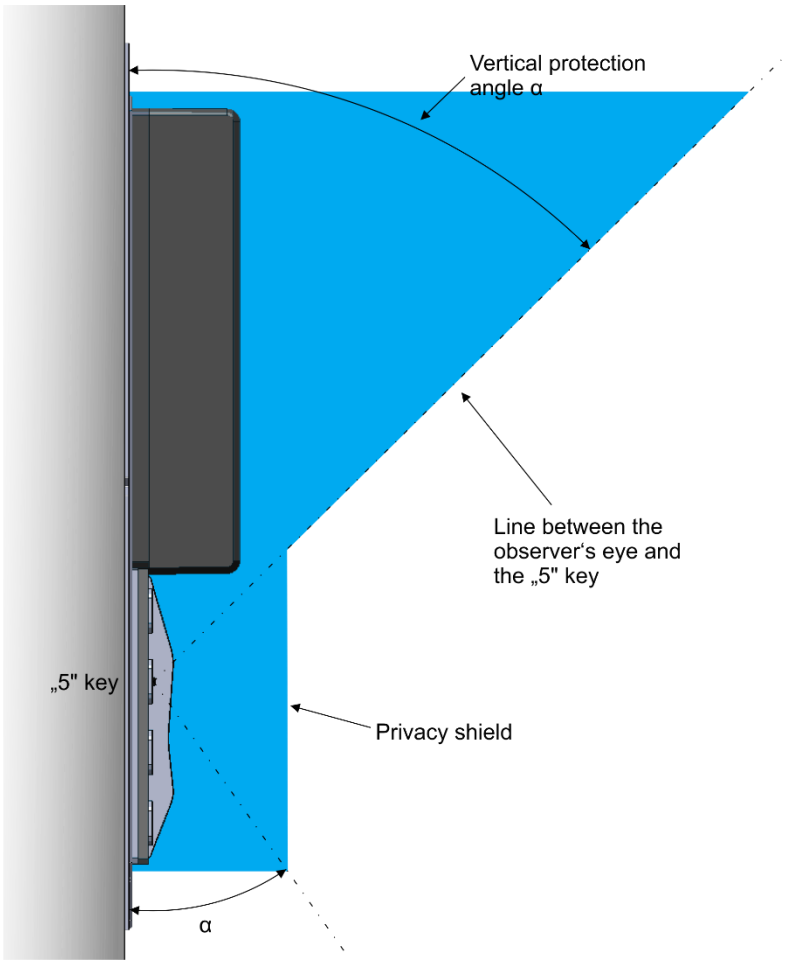
α = Angle between the vertical plane through the “5” key and a virtual line which connects the “5” key and an observer’s eye.

β = Horizontal position of an observer relative to the pin pad’s position.

γ = Horizontal range which has to be covered by the privacy shield.




Line between the observer‘s eye and the „5" key
Privacy Shield
Vertical protection angle α
α
α
„5" key


Vertical protection angle α
Line between the observer‘s eye and the „5" key
„5" key
Privacy shield
α

5 Connectors

The connector I/O PINs are described from the cVEND PIN view. A cVEND PIN input must be connected to one output or vice versa.

5.1 Connector X1 – Power Supply and MDB Interface

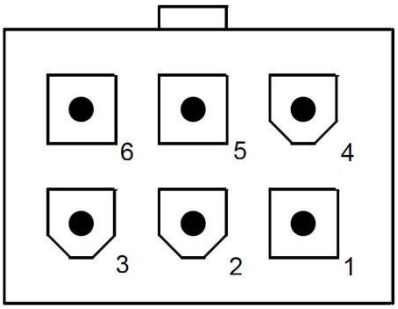


Fig. 10: Connector X1 – Power/MDB

Pin	Label	Direction
1	Power Supply – V_{CC} (12 to 42 V DC)	-
2	Power Supply – GND	-
3	Wake-Up (see X.X Standby Mode / Wake-Up)	I/O
4	MDB Master Receive	O
5	MDB Master Transmit	I
6	MDB Communication Common	-

Table 5: Pin Assignment MDB Connector (X1)

Required Connector:

The fitting complement for this connector consists of a 6-pole plug type Molex Mini Fit and the appending crimp contact.

Manufacturer Ordering Code:

- Molex 39-01-2060
  Plug 6-pole, grid dimension 4.2 mm, 2-rowed, Molex Mini Fit housing
- Molex 39-00-0065
  Crimp contact, female, grid dimension 4.2 mm, AWG#22-28, Molex Mini Fit

ⓘ ***NOTE:***

- ***The Device has to be supplied by a limited power supply according EN 62368-1 Chapter Q.1 or with a NEC Class 2/LPS certified power supply.***
- ***Supply voltages outside the specifications may destroy the device.***
- ***Each Device has to be supplied by a separate external power supply.***
- ***External wiring for the power supply must be compliant with***
  - IEC 60332-2-1 and IEC 60332-2-2 for Wire Cross Section < 0,5 mm²
  - IEC 60332-1-2 and IEC 60332-1-3 for Wire Cross Section > 0,5 mm²
- ***All cables must be fed through a ferrite as close as possible to the device (impedance greater than 700 ohms @ 800 MHz, e.g. Würth Elektronik 7427154). Cables can be bundled for feedthrough.***

5.2 Standby Mode / Wake-Up

cVEND offers a software programmable standby mode. To activate the normal operation mode the following wake-up sources are provided.

MDB wake-up by host:

If standby is activated the bi-directional wake-up I/O is used for signaling a wake-up event by the cVEND and can be used by the host to activate the cVEND. The host controller can awake the cVEND by pulling down the wake-up line.

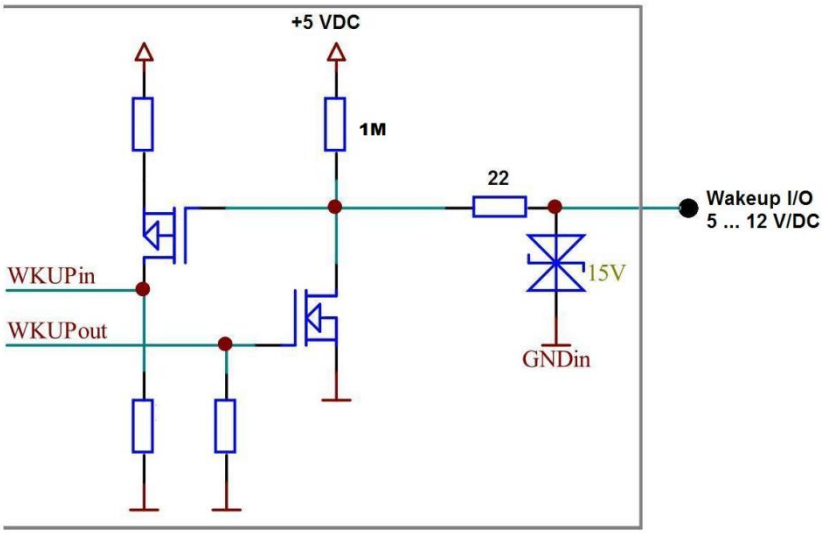


Fig. 11: cVEND PIN Internal Wake-Up Circuit

Wake-up “OK” Key:

Pressing the “OK” key on the key pad will awake the cVEND.

Time controlled wake-up:

The firmware provides functions for software programmable wake-up. This functionality depends on the installed application.

ⓘ ***NOTE:***

The USB connection will be interrupted during standby mode.

5.3 Connector X2 – USB Device Interface

At connector X2 a USB device interface is provided where a USB host can be connected. The cVEND PIN is designed as a self-powered device. Power supply via USB interface is not possible.

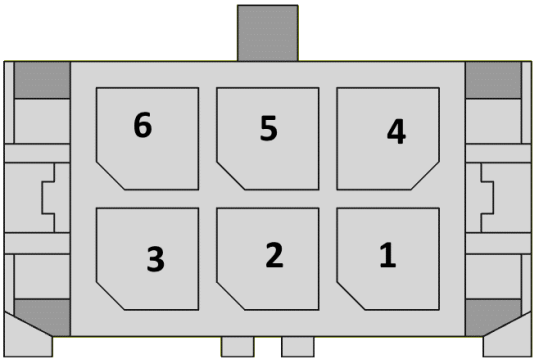


Fig. 12: Connector X2 – USB Device

Pin	Label	Direction
1	DEV-V_{CC}	I
2	DEV-D–	I/O
3	DEV-D+	I/O
4	N.C.	-
5	GND	-
6	Shield	-

Table 6: Pin Assignment USB Connector (X2)

Required Connector:

The fitting complement for this connector consists of a 6-pole plug type Molex Micro Fit and the appending crimp contact.

Manufacturer Ordering Code:

- Molex 43025-0600
  Plug, 6-pole, grid dimension 3.0 mm, dual row, Molex Micro Fit housing
- Molex 43030-0001
  Crimp contact, female, grid dimension 3.0 mm, AWG#20-24, Molex Micro Fit

ⓘ ***NOTE:***

The USB interface is designed for max. 3 m (9.8 ft) cable length.

5.4 Connector X3 – COM 0 (RS232 V.24 Interface)

X3 is the connector for an RS232 interface on V.24 level and is primarily intended as a cash register interface.

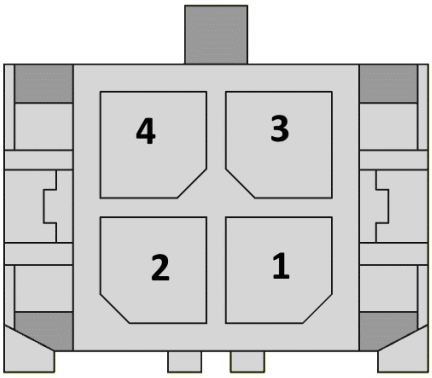


Fig. 13: Connector X3 – COM 0

Pin	Label	Direction	Remarks
1	Device RXD	I	
2	Device TXD	O	
3	Wake-Up	I/O	see 5.2
4	GND	-	

Table 7: Pin Assignment RS232 V.24 Interface (X3)

Required Connector:

The fitting complement for this connector consists of a 4-pole plug type Molex Micro Fit and the appending crimp contact.

Manufacturer Ordering Code:

- Molex 43025-0400
  Plug, 4-pole, grid dimension 3.0 mm, dual row, Molex Micro Fit housing
- Molex 43030-0001
  Crimp contact, female, grid dimension 3.0 mm, AWG#20-24, Molex Micro Fit

ⓘ ***NOTE:***

The RS232 interface is designed for max. 3 m (9.8 ft) cable length.

5.5 Connector X4 – USB Host 2 Interface

At connector X4 a USB host interface is provided where a USB device can be connected. The USB host function depends on the firmware / software version.

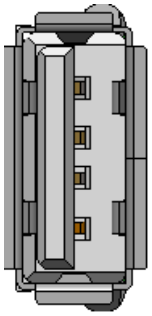


Fig. 14 Connector X4 – USB 2 Host

Required Connector:

USB 2.0 type A: max. 500 mA

ⓘ ***NOTE:***

The USB interface is designed for max. 3 m (9.8 ft) cable length.

5.6 Connector X5 – Ethernet Interface

Ethernet is provided on the RJ45 connector as 10/100 Base-T network with automatic polarity correction during auto-negotiation and 10 Base-T signal reception.

CAT5 cables are recommended to ensure a reliable operation at 10 Mbps or 100 Mbps.

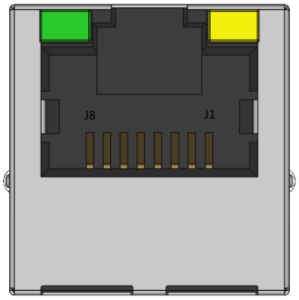


Fig. 15: Connector X5 – Ethernet Interface

Pin	Label
1	TX+
2	TX–
3	RX+
4	VETH+
5	VETH+
6	RX–
7	VETH–
8	VETH–

Table 8: Pin Assignment Ethernet Connector (X5)

Required Connector:

RJ45

5.7 Connector X6 - Auxiliary

On connector X6 an electrically isolated opto-coupler digital output and a connector for an external buzzer are provided. The opto-coupler digital output is controlled by software and can be used to control a parking barrier for example. The external buzzer output provides an PWM signal in parallel to the internal buzzer and can be used to connect a piezo speaker.

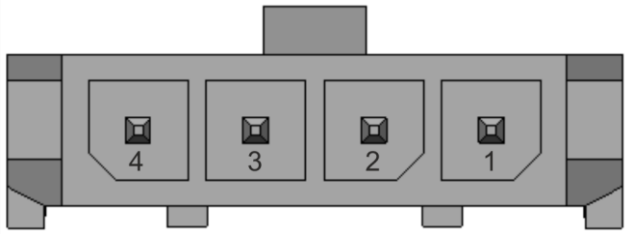


Fig. 16: Connector X6 – AUX

Pin	Label	Direction	Remark
1	5 V DC	O	
2	External Buzzer	O	PWM Output / max. 24 V DC / 100 mA
3	Opto-Out-C	I	max. 24 V DC / 20 mA / Resistive Load
4	Opto-Out-E	O	

Table 9: Pin Assignment Auxiliary Connector (X6)

Required Connector:

The fitting complement for this connector consists of a 4-pole plug type Molex Micro Fit and the appending crimp contact.

Manufacturer Ordering Code:

- Molex 43645-0400
  Plug, 4-pole, grid dimension 3.0 mm, single row, Molex Micro Fit receptacle housing
- Molex 43030-0001
  Crimp contact, female, grid dimension 3.00 mm, AWG#20-24, Molex Micro Fit

ⓘ ***NOTE:***

The interface is designed for max. 3 m (9.8 ft) cable length.

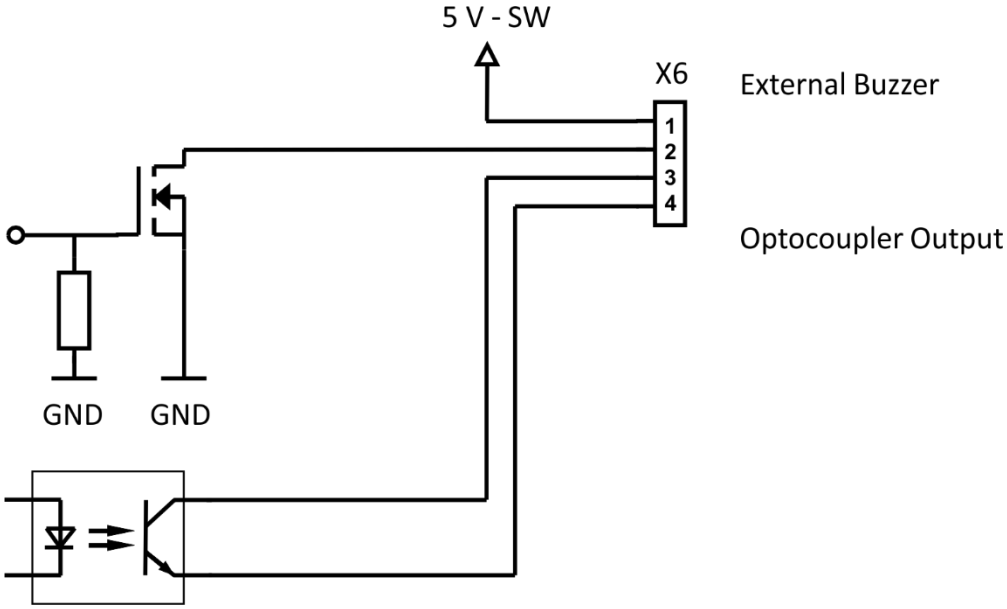


Fig. 17: X6 – AUX Schematic

External Buzzer:

The external buzzer can be powered by the 5 V DC voltage provided on X6.1. To increase the sound level and depending on the external buzzer it can also be powered by an external power supply. Observe the electrical parameters in *Table 9: Pin Assignment Auxiliary Connector (X6)*.

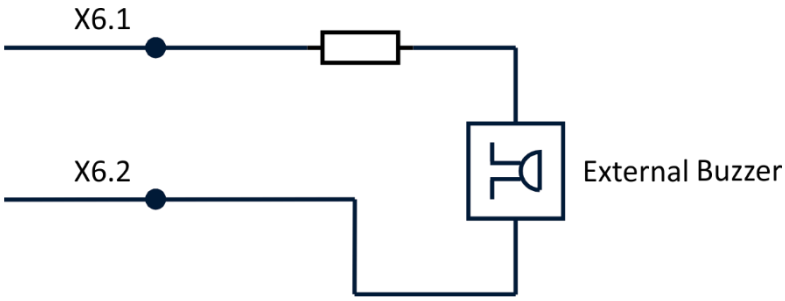


Fig. 18: X6 – Wiring External Buzzer Example

Digital Output:

The digital output is intended to trigger external electronic inputs (e.g. barrier control unit).

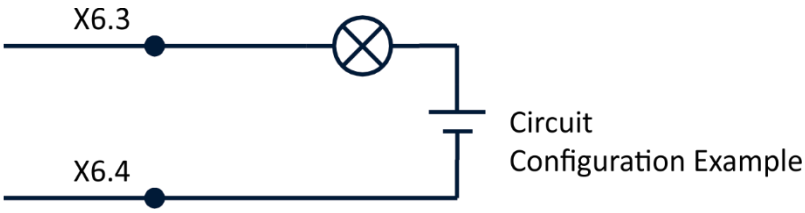


Fig. 19: Circuit Configuration Example

5.8 Connector X7 – USB Host 1

On connector X7 a USB host interface is provided, intended to be used for static connected interface devices. USB host function depends on firmware/software version.

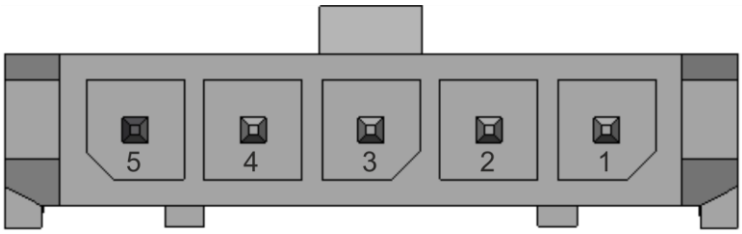


Fig. 20: Pin Assignment USB Host 1 on Connector X7

Pin	Label	Direction
1	5 V DC (max. 500 mA)	O
2	USB H–	I/O
3	USB H+	I/O
4	GND	-
5	Shield	-

Table 10: Pin Assignment USB Host 1 Connector (X7)

Required Connector:

The fitting complement for this connector consists of a 5-pole plug type Molex Micro Fit and the appending crimp contact.

Manufacturer Ordering Code:

- Molex 43645-0500
  Plug, 5-pole, grid dimension 3.0 mmm single row, Molex Micro Fit receptacle housing
- Molex 43030-0001
  Crimp contact, female, grid dimension 3.0 mm, AWG#20-24, Molex Micro Fit

ⓘ ***NOTE:***

The USB interface is designed for max. 3 m (9.8 ft) cable length.

5.9 Connector X8 – cVEND SHCR

Connector X8 is a COM port which is the connector for Secure Hybrid Card Reader cVEND SHCR. The related connection cable is included in the scope of delivery of cVEND SHCR.

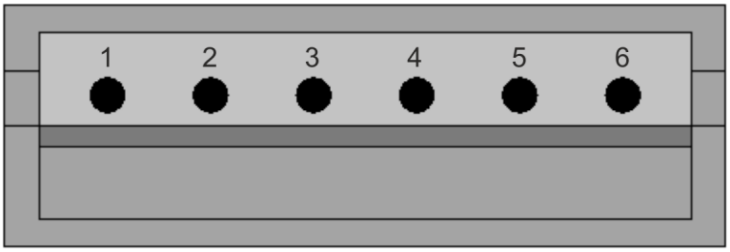


Fig. 21: Connector X8 – SHCR Connector

Pin	Label	Direction
1	CTS	-
2	RxD	I
3	RTS	I
4	TxD	O
5	GND	-
6	V_{CC} SHCR	O

Table 11: Pin Assignment SHCR Connector (X8)

5.10 Connector X9 – COM 2 (RS232 V.24)

At connector X9 a serial interface (UART#2) on RS232 V.24 level is provided which is used on development devices to access the Linux console.

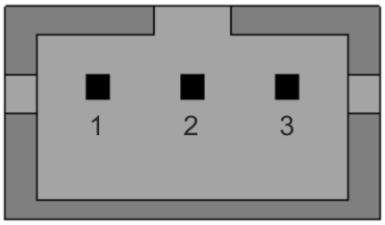


Fig. 22: Connector X9 – COM 2

Pin	Label	Direction
1	GND	-
2	Device RxD	I
3	Device TxD	O

Table 12: Pin Assignment Serial Debug Port Connector (X14)

Required Connector:

The fitting complement for this connector consists of a 3-pole plug type JST PH and the appending crimp contact.

Manufacturer Ordering Code:

- JST PHR-3 – housing, 3-pole, grid dimension 2.0 mm, single row
- JST SPH-002T-P0.5 or SPH-004T-P0.5 crimp contact

ⓘ ***NOTE:***

The RS232 interface is designed for max. 3 m (9.8 ft) cable length.

5.11 SAM Sockets (S1, S2)

The cVEND PIN is equipped with 2 SAM sockets which are located behind the hinged cover on the back side of the device.

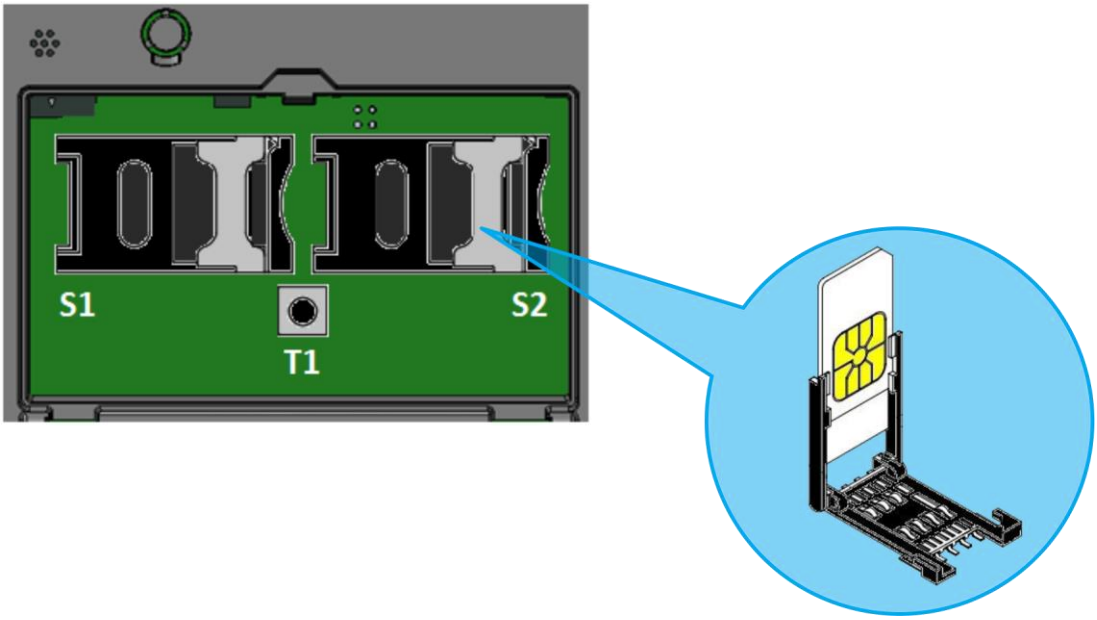


Fig. 23: SAM Socket Location and Handling

6 Installation and Setup

6.1 Installation

Before installing, visually inspect the device for any discrepancies to the official product data or unauthorized modifications. More details can be found in the cVEND PIN Security Policy.

For installation follow these steps:

1. Make sure that the intended installation are is clean and even.
2. Place the cVEND PIN in the cut-out.
3. Screw the device tight at the four screw-on points. Nuts with washer are recommended.
4. Check that all protection foils are removed from the key pad and the display.
5. Check that the power supply complies with the specification.
6. Check that all needed cables are plugged in correctly.
7. Switch on the power supply and start the setup process.

ⓘ ***NOTE:***

The PIN Entry function is available after terminal setup (see 6.4) only if both removal protection switches (S1, S2) are activated during installation.

6.2 Setup Activation

To activate the cVEND PIN setup menu the Service Mode Switch S3 (under the hinged cover) must be pressed. After activation please follow the display instructions.

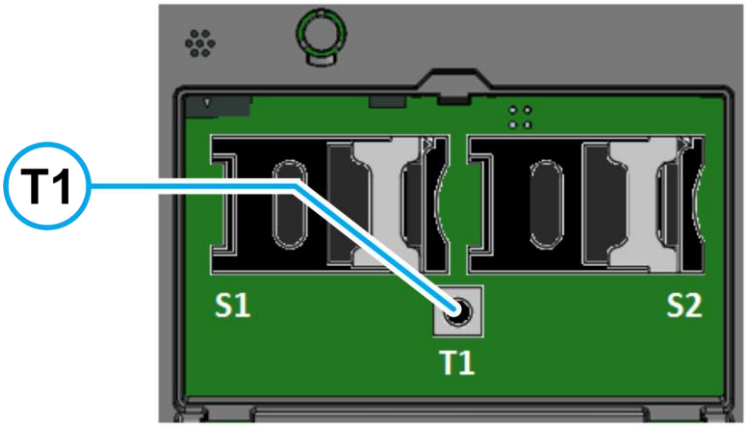


Fig. 24: Position of Service Mode Switch T1

6.3 User ID Setup

Factory new devices do not have any User ID stored except if User IDs are preconfigured on optional request. The cVEND PIN has an easy to use User ID administration function. Adding and removing of a User ID can be carried out either via secure host process or manually on the terminal. This chapter only describes the manual User ID setup process.

Before the removal protection can be enabled (and thus before PIN entry as cardholder verification method is possible), two four-digit User IDs (0000 – 9999) and corresponding seven-digit PINs must be configured.

Adding the first User ID does not require authorization, if no User ID has yet been added (i.e. for factory new devices). Adding the second User ID requires the first user to authenticate via User ID and PIN. As soon as two User IDs have been added, the cVEND PIN will always require dual authentication for all sensitive functions. It is not possible to delete a User ID, if not at least two User IDs remain configured.

Please follow the display instructions in the User ID setup menu to add and/or delete a User ID.

It is not under the control of FEIG ELECTRONIC GmbH whether or how many devices share the same authentication data. It is also not under the control of FEIG ELECTRONIC GmbH how authentication data is distributed to legitimate users.

6.4 Removal Protection Activation

Removal protection activation is necessary to activate the PIN entry capability of the cVEND PIN each time after the removal protection switches were deactivated (after initial installation or reinstallation).

This process can be carried out only if the cVEND PIN device is mounted into the enclosing housing and it is ensured the removal protection switches (S1, S2) are pressed. The same applies to the Secure Hybrid Card Reader cVEND SHCR.

Removal protection activation has to be carried out under dual control by two authorized users (see 6.3).

The activation of removal protection requires the following steps:

1. Activate the cVEND PIN setup menu by pressing Service Mode switch T1.
2. Enter into the removal protection activation menu by using the key pad.
3. User A enters the first 4 digit user ID and related 7 digit PIN.
4. User B enters the second 4 digit user ID and related 7 digit PIN.
5. Follow the instructions provided by the removal protection activation setup menu.

7 Maintenance and Cleaning

Under usual conditions the cVEND PIN doesn't need specific maintenance but should be visually inspected periodically. If the hybrid card reader cVEND SHCR is used in conjunction with cVEND PIN please follow the instructions in the cVEND SHCR manual.

7.1 Cleaning

Use only a damp or soft cloth for housing cleaning and prevent the usage of chemical cleaning agents. Do not use chemical solvents, petrol, paint thinners or corrosive or abrasive substances for cleaning. These can damage the surfaces and destroy the device.

7.2 Battery

The cVEND PIN contains a lithium battery to supply the real time clock and security circuit. If the battery is discharged, removed or short-circuited, the terminal can no longer be operated and will change into tamper detected state (see 8.3).

This battery can only be replaced by FEIG ELECTRONIC GmbH.

8 User Interface

This chapter describes the signals generated by the cVEND operating system. In normal operation mode the cVEND user interface is controlled by the respective application.

8.1 Boot Process

After power-on a short beep indicates that the cVEND PIN is powered and has started the boot process. After a short time the “FEIG ELECTRONIC” logo and firmware as well as hardware version numbers are shown on the display. A second beep and flashing of all 4 green LEDs indicates that the boot process is finished.

Subsequent to the boot process the application will start and will show their individual messages.

8.2 Update Installation Indicators

The update installation indicators show the progress of the current update to be installed.

8.3 Security Tamper

The device contains tamper mechanisms that will trigger when a physical penetration attempt of the device is detected. A tamper event is signalized by the cVEND PIN after power-on. Such a device has to be replaced. Repair is only possible in the secure manufacturer environment at FEIG ELECTRONIC GmbH.

In case of a tamper event the buzzer periodically beeps with a frequency of 4 kHz for half a second every second. On the display the message “DEVICE OUT OF SERVICE” and some additional information are shown on a red background. The additional information that is actually issued is meant to be interpreted by FEIG ELECTRONIC last level support only and might change with cVEND firmware releases. On both serial ports the cVEND PIN issues periodic messages identical to the display message. Serial communication settings are: 57.600 baud, 8 data bits, 1 stop bit, no parity bit, no flow control.

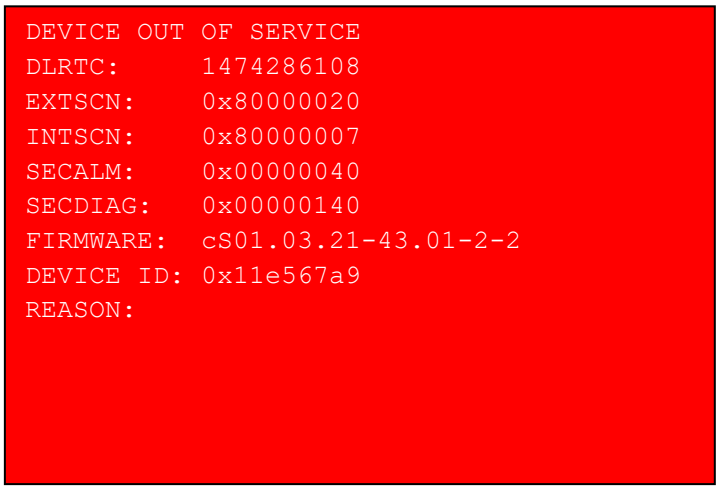


Fig. 25: Example of Tamper Detected Message

9 Technical Data

Housing	• Stainless steel with glass and polycarbonate
Dimension (W x H x D)	• Total: 92,5 x 141 x 47 mm • Visible: 82 x 120 x 14 mm
Weight	• 450 g
Protection Class	• Outside: IP 65 (if accurately installed) • Inside: IP20
Protection Class	• DIN EN 61140: Class III
Pollution Degree	• DIN EN IEC 62368-1: Grade 2
Impact Protection Class	• IEC 62262: IK10 (installed in equivalent robust housing)
Shock and Vibration	• EN 50155
Temperature Range (ambient temperature)	• Operating: –25 °C to +70 °C • Storage: –30 °C to +80 °C
Humidity	• 5% to 95% (humidity protected electronic)
Power Supply	• 12–42 V DC via MDB connector
Current Consumption	• < 15 VA
Low Power Standby Mode	• Power consumption < 10 mW • Wake-up by digital input, OK key and time controlled
Battery[1]	• 3 V Lithium, 1000 mAh; lifetime 15 years at 25 °C and 50% duty cycle
CPU and Security	• ARM 9 CPU (384 MHz) – tamper protected and side channel attack resistant with real time memory encryption • Cryptographic hardware acceleration supports SHA, DES and AES • True random number generator • RAM MByte 128 / FLASH MByte 256 • Real time clock – battery-backed
Contactless Interface	• ISO/IEC 14443-A/-B (NFC reader/writer mode) EMV Level 1 compliant • Support of: ISO/IEC 14443-4 compliant smart cards, NFC Type 1, 2 and 4 in card emulation mode, MIFARE Classic, MIFARE Ultralight, MIFARE DESFire, MIFARE Plus, Calypso and others
Peripheral Interfaces	• 1 x Ethernet – IEEE 802.3/Ethernet, 10/100 Mbps • 2 x RS232 (V.24) • 2 x USB 2.0 Host • 1 x USB 2.0 Device • 1 x MDB Slave • 1 x electrically isolated digital output • 1 x Buzzer Signal Output

[1] *The battery is used for the safety function and RTC. A higher ambient temperature will shorten the lifetime!*

User Interface	• 2,8” high-brilliance color display 320 x 240 pixel (500 cd/m²); impact, scratch and fire resistant front glass • 4 high brightness green LEDs for contactless transactions • internal multi-frequency buzzer and audio output
Key Pad	• Stainless steel key pad; 16 keys with from top illumination • Function keys and 5 with embossments for easier operation by visually impaired persons
Electrical Approvals	• RED 2014/53/EU • BIS IS 13252(PART 1):2010/ IEC 60950-1 : 2005

9.1 Payment Standard Compliance

Payment	• EMV 2.6 Contactless Level 1 • PCI PTS 5.x • Common.SECC / DK
Payment Kernel – Level 2 Contactless	• MasterCard contactless • VISA Paywave • American Express Expresspay • Discover D-PAS • Union Pay • Girocard contactless • RuPay qSPARC
Payment Kernel – Contact	• EMV Level 2 contact

9.2 Radio Approvals

9.2.1 Declaration of Conformity (CE)

CE	Hereby FEIG ELECTRONIC GmbH declares that the radio equipment type cVEND PIN 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/eu-declarations-of-conformity/

9.2.2 Declaration of Conformity (UKCA)

UK CA	Hereby FEIG ELECTRONIC GmbH declares that the radio equipment type cVEND PIN is in compliance with Directive No. 1206 Radio Equipment Regulations 2017. The full text of the UKCA declaration of conformity is available at the following internet address: https://www.feig.de/en/service/ukca-declarations-of-conformity/

9.2.3 Radio Approval - USA (FCC) and Canada (IC)

Products with corresponding marking on their labels have USA and Canada approval.

Product name:	**cVEND PIN**
FCC ID: **IC:**	**PJMCVPIN** **6633A-CVPIN**
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.

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

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.