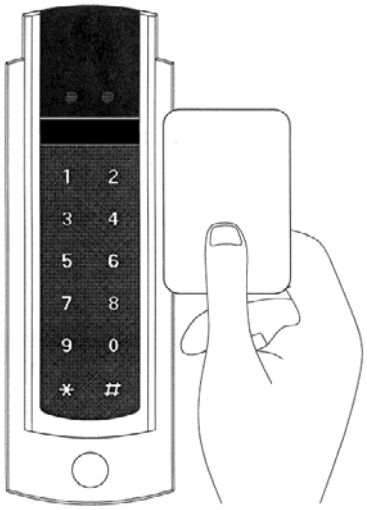
Integrated Engineering Smart ID Reader Family

Model Desfire
FCC ID P4E-SMARTPROX11



Specifications

Typical read range with an ISO Card
SmartID/EM4102 5 - 10 cm
SmartID/ Hitag1&2 5 - 10 cm
SmartID/ISO14443 2 - 5 cm
SmartID/ISO15693 5 - 15 cm

Power Supply
4.75 – 12.25 Volt DC

Current requirements

Average	50 mA
Peak	160 mA

Interface

Inputs	EMC Prot. 10Kohm pull-ups
Outputs	EMC Prot. open drain 0.5 A/max

Dimensions
142 x 46 x 25 mm

Material
SB housing with polyurethan potting

Operating temperature
-20° to 60° C

Certifications
EN50022, CE, FCC

Cable Distance
25 meter. Recommended cable 8 x 0.35 conductor stranded overall shield or equivalent.
The Smart ID Reader has a slim door style mountable design to match any decor. The buried LED's and buzzer allow the Smart ID Readers to be mounted indoors and out. The Smart ID Reader accepts 4.75 to 12.25 Volts DC. The output formats like clock-and-data magstripe (ABA / ISO7811), Wiegand and a number of other formats are determined by the personalization of the card and are emitted without customizing the Reader. The 5 Volt DC capability allows the replacement of older reader systems without rewiring or pulling new cables. The Smart ID Reader offers high reliability, consistent read characteristics and low power consumption.
Within the Smart ID Proximity Reader Family also models with a RS232/RS422/RS485 interface are available for read and write operations.
The Smart ID Reader Family supports both the 125KHz and 13.56MHz technologies. Different models are available for EM4002, EM4050, HiTAG1 and 2, Mifare and I•Code silicon. Standard capabilities include Host system controlled red and green LED's and a buzzer. The Smart ID Reader can be mounted on any surface without relevant performance degradation. For mounting to a metal wall a spacer is advised.
Our commitment is to bring *non-propriety*, *open* Radio Frequent Identification (RFID) systems to the market demonstrated with the Smart ID Reader Family.

Features

Mullion mounting
The Smart ID Readers can be mounted on a door mullion.
Optional there is a mounting kit available in case the small Smart ID reader will be mounted over a wall box (mounting US back box, vertical 84 milimeter, mounting European back box, horizontal 60 millimeter).

Indications
When a proximity card is decoded successfully the with the card associated code is send to the Host system and the buzzer sounds a short 3KHz beep. Both LED's and the buzzer are also controllable by the Host system.

Connections
The Smart ID Reader Family has a flexible and reliable connector interface. The space for the cable and the connector within the Smart ID housing can be poured with silicone to withstand harsh environmental conditions.

Interface Coding
The Smart ID Reader Family can operate with any facility, system or card coding scheme. The output format, contents and length are determined by the personalization of the card. Output formats like magstripe, Wiegand and several others are available.

Security
Depending on the model and the silicon used the Smart ID Reader Family offers high security challenge response schemes to protect the RFID air interface against simulations of cards.

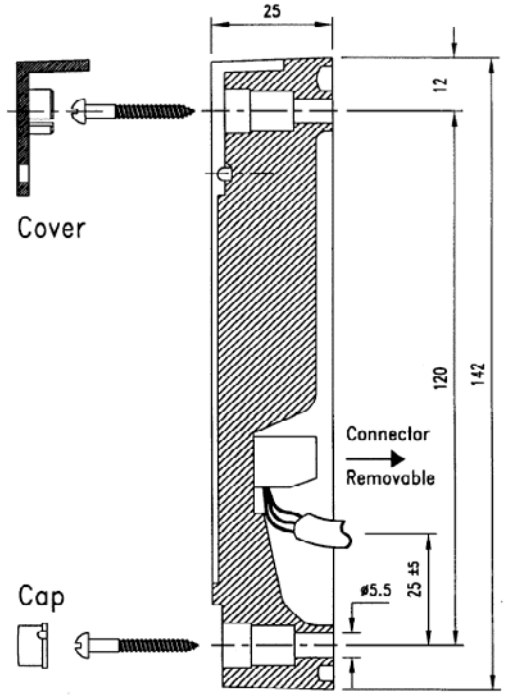
Parts List

1)	Reader 4.75-12.25 VDC	qty 1
2)	Terminal Connector 8 pins	qty 1
3)	Mounting cover	qty 1
4)	Mounting cap	qty 1
5)	Installation sheet	qty 1
6)	Mounting kit / back plate (optional)	qty 1
7)	Cable, 8 x 0.35 conductor	as required

Installation instruction

1) Determine an appropriate position for the Reader and drill two holes for mounting the reader to the surface (see diagram). Do not mount the readers less than 20 cm from each other. Make sure that enough room to connect the cable is allowed. Protect the cable against sharp edges and any damage from chaffing.
2) Remove the Terminal Connector 8 pins from the back of the Reader. Use a small flat head screwdriver to loosen off all of the terminals. The end of the cable should be prepared by cutting it back to expose the wires and each end should be twisted to eliminate any loose or frayed wires.
3) The wires should then be connected to the Reader inline with the Connector Assignments.
4) After wiring the reader and the Host system the Reader is ready to be tested. Apply power and present a Card to the Reader. The green LED should flash and the buzzer should beep indicating a read. If the Host system is connected to the red and green LED inputs these should follow the functionality of the Host system.
5) The Reader should now be secured to the surface using the appropriate screws. Mount the black cover (sticker) and mount the cap over the mounting hole.

Mullion Mounting



Connector Assignments

Wiegand / Clock and Data

SmartID/EM4102
SmartID/Hitag1&2
SmartID/DESFire
SmartID/ISO14443-3
SmartID/ISO14443-3/pin
SmartID/ISO14443/SNR
SmartID/ISO15693/SNR

1 ⇦ Green LED input	5 ⇦ Buzzer input
2 ⇦ Red LED input	6 NC
3 ⇨ Data / D1	7 ⇦ Ground
4 ⇨ Clock / D0	8 ⇦ Power

RS232

SmartID/Hitag1&2/RW
SmartID/DESFire/RO
SmartID/ISO14443-3/Sect/RS
SmartID/ISO14443/SNR/RS
SmartID/ISO15693/SNR/RS

1 ⇦ Green LED input	5 ⇦ Do not connect
2 ⇦ Red LED input	6 ⇦ RS232 RXD
3 ⇨ Do not connect	7 ⇦ Ground
4 ⇨ RS232 TXD	8 ⇦ Power

RS422

SmartID/ISO14443-3/Sect
SmartID/ISO14443/SNR/RS
SmartID/ISO15693/SNR/RS

1 ⇦ Green LED input	5 ⇦ RS422 RXA
2 ⇦ Red LED input	6 ⇦ RS422 RXB
3 ⇨ RS422 TXA	7 ⇦ Ground
4 ⇨ RS422 TXB	8 ⇦ Power

Other FCC ID's are:

- Hitag1&2: Smart ID/Hitag1&2
  PX007Z/HX ⇨ P4EHPROX-02
- ISO14443: Smart ID/ ISO14443/SNR
  PX007Z/XXSNR ⇨ P4EI-MSNRPOX-02
- ISO 14443-3: Smart ID/ISO14443-3/Sect
  PX007Z/MF ⇨ P4EMPROX-03

Consult your National Authority if any authorization is needed for this product.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
1) that this device does not cause harmful interference, and
2) that this device must accept any interference received, including interference that may cause undesired operation.

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