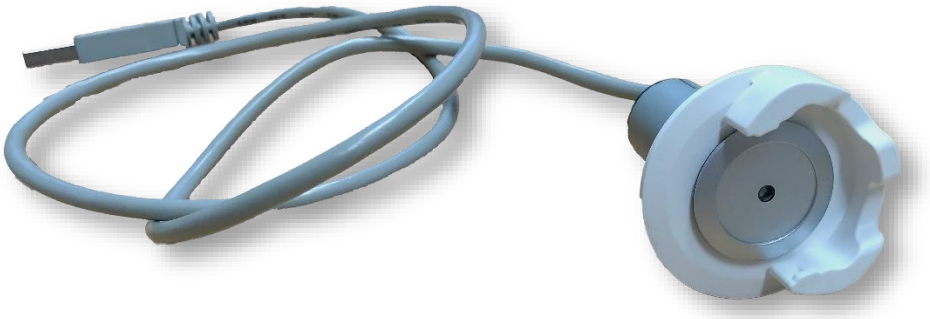
iDTRONIC
PROFESSIONAL RFID



R-PROF-DES-PAN
13.56 MHz RFID DESFire Panel Reader
Hardware Description

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1 Installation

1.1 Key Features

- RFID Panel Reader with holder for RFID keyfobs
- Adopts ARM MCU solution
- Compliant with ISO14443A/B, ISO15693, ISO18092 Standard
- 5 V power supply via USB

1.2 Versions

R-PROF-DES-PAN-USB

With fixed USB cable of 80 cm length.

R-PROF-DES-PAN-232

With fixed cable of 80 cm length.

1.3 Reference Documents

This device uses the following commands on top of the DESFire communication protocol. So, in order to gain full access to the device, please consult this communication protocol description:

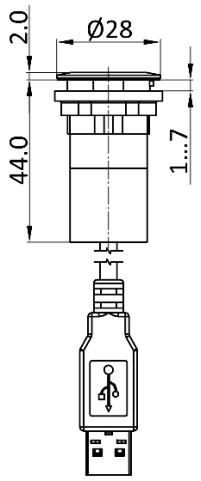
Command Protocol and API Description: OEM-DES devices Communication Protocol_x.yy_EN.pdf

For test operation:

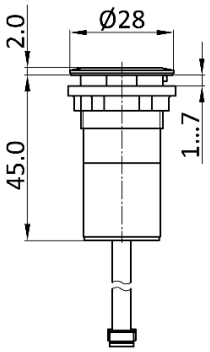
Manual of Test/Demo Software: OEM-DES devices Test Software Manual_x.y_EN.pdf

2 Mechanical Installation

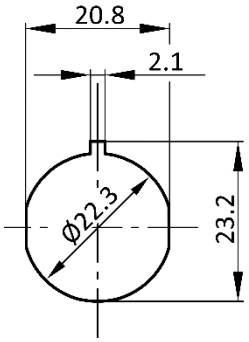
2.1 Dimensions R-PROF-DES-PAN-USB



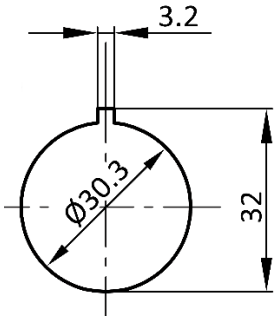
2.2 Dimensions R-PROF-DES-PAN-232



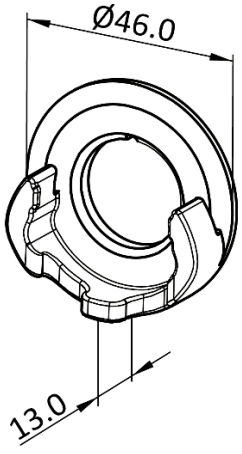
2.3 Mounting Hole for RFID Reader only



2.4 Mounting Hole RFID Reader with Tag Holder



2.5 Dimensions Tag Holder



2.6 Installation in a Front Panel



3 Electrical Connection RS232 Version

Pin	Signal	Wire Colour
1	RS232 TxD	Brown
2	RS232 RxD	Red
3	+5 Vdc	Orange
4	GND	Black

4 Technical Data

Electrical Specifications	
Power Supply	5 Vdc via USB
Power Consumption	< 150 mA, standby current < 1 mA (low power mode)
Operating Frequency	13.56 MHz
Baudrate	9600…115200 bit/s, 115.200 bits/s default
Antenna	Internal
Reader IC	CL 663
RF TX Speed	up to 848 kBd
Interfaces	USB VCP, RS232

Environmental Conditions	
Operating Temperature	-20 °C … +60 °C
Storage Temperature	-20 °C … +70 °C
Humidity	up to 95 %, non condensing
MTBF	200‘000 h

Physical Specifications	
Dimensions	Panel cut-out: ø 22.3/30.3 mm Cable Length: 80 cm (other lengths on request)
Colours	silver-coloured, stainless steel, polished, black
Weight	35 g
Material	ABS

Supported Standards / Tags	
ISO 14443 A and compatible	Read/write: MIFARE® Classic Mini / 1K /4K, MIFARE Ultralight®, MIFARE Ultralight® C, MIFARE® DESFire®EV1, MIFARE® Smart MX, MIFARE® Plus S / X, MIFARE® Pro X, NTAG 21x Read UID only: Read UID only of all other ISO14443A RFID tags
ISO 14443 B and compatible	SRI4K, SRIX4K, AT88RF020, 66CL160S, SR176
ISO 15693 and compatible	EM4135, EM4043, EM4x33, EM4x35, I-Code SLI / SLIX, M24LR16/64, TI Tag-it HF-I, SRF55Vxx (my-d vicinity)we

Applicable Standards	
EMC	EN 301489-1:2012-04 (v1.9.21) EN 301489-3:2013-12 (V1.6.1)
Radio Regulation	EN 300330-1:2015-08 (V1.8.1) EN 300330-2:2015-08 (V1.6.1)
Safety	EN 60950-1:2014-08 EN 62369-1:2010-03 EN 50364:2010-11
RoHS	EC Guideline 2011/65/EU and amendment 2015/863 EN 50581:2012 (valid till 2024-07-07) EN 63000:2018
REACH	EU Guideline 1907/2006, updated by 2018/2005/EU

SDK Information	
Supported OS by Silabs USB VCP Driver	Windows 7/8/8.1/10 (v6.7.3) Windows XP/Server 2003/Vista/7/8/8.1 (v6.7) Windows 2K (v6.3a) WinCE (5.0, 6.0) Macintosh OSX (v4) Linux (3.x.x., 2.6.x) Android 4.2
Supported OS	Windows XP, Vista, 7, 8, 8.1, 10
Supported Languages	Binary command protocol, VS2005 C++
Demo Software	Windows

Other functions and details to be continued and upgraded.