

WALL-MOUNT CONTACTLESS READER (RS-232/USB)



IWM-K531-SU is a wall-mount proximity reader. It reads serial numbers from any standard ISO/IEC 14443 contactless card, including NXP popular MIFARE and DESFire families.

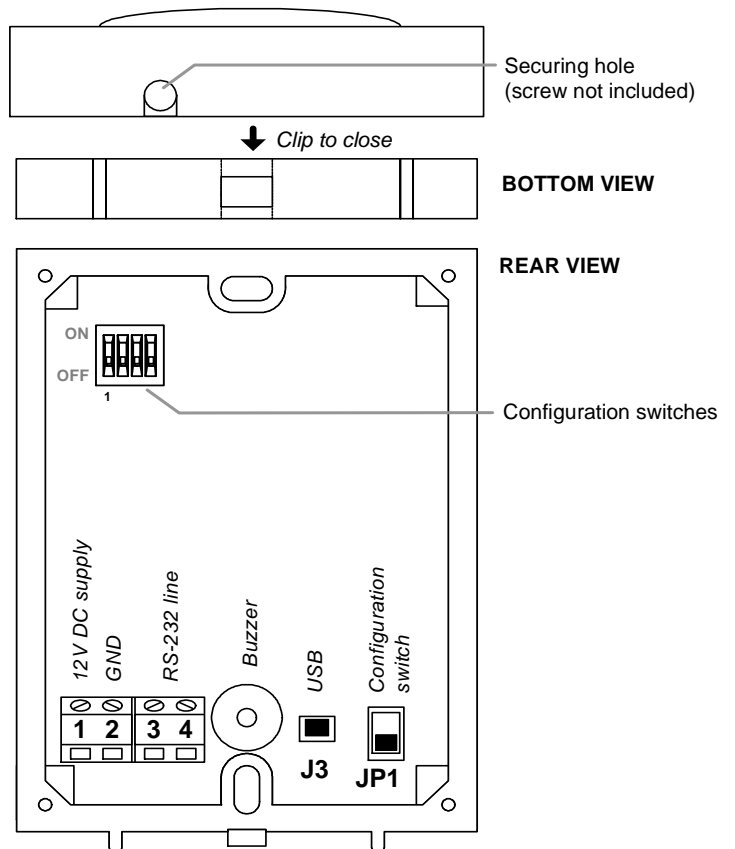
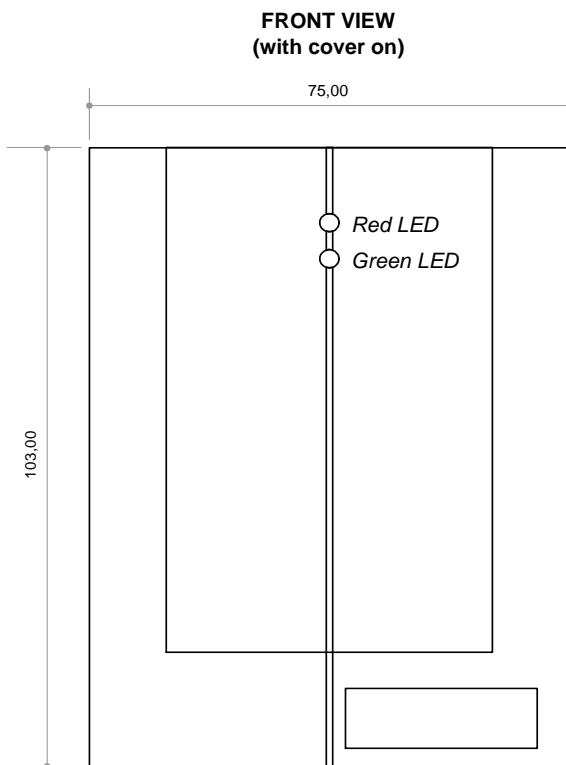
IWM-K632-SU adds the ability to read data from virtually any ISO/IEC 14443 proximity smart cards, including T=CL file-systems, and from ISO/IEC 15693 vicinity tags or transponders.

For both products, 2 output modes are available :

- RS-232,
- USB (virtual serial device, using FTDI USB to RS-232 bridge).

Reader operation as well as frame length and output format for each mode are configured on-the-field using master cards.

DETAILED VIEWS



ORDER CODES

Part #	Product name
IWM-K531-SU2	IWM-K531 Mk2 RS-232 / USB output
IWM-K632-SU2	IWM-K632 Mk2 RS-232 / USB output

Readers ship un-configured. Appropriate configuration must be applied (configuration jumpers and software settings through master card) before installing the reader.

PIN ASSIGNMENT

	RS-232	USB
1	12V power supply	Unconnected
2	GND	Unconnected
3	TX (reader to host)	Unconnected
4	RX (host to reader)	Unconnected
J3	Unconnected	USB (to host)



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TECHNICAL DATASHEET

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WALL-MOUNT CONTACTLESS READER (RS-232/USB)**COMMON SPECIFICATIONS****RS-232 interface**

3-wire RS-232 line (RX, TX, GND) + 12V power
Distance to controller 3m max

USB interface

USB 1.1 standard device, type B connector
Powered by the bus (300mA max)
Driver & compliance Seen as a virtual serial port
Driver for Windows, Linux, and others¹
Distance to controller 3m max

Communication protocol

Frame format Fully configurable
Baudrate 9600 to 115200bps
LED & buzzer control Commands in the serial stream

¹ See www.ftdichip.com for a complete list² Note that the reader may be sold without housing, for OEM integration

This reader may also run the K531 OEM or CSB4 firmware.

Hardware specifications

User interface 2 LEDs (red, green), single tone beeper
Color Black
Dimensions (LxWxH) 103 x 75 x 23 mm
Housing material² ABS-94HB (self extinguishing UL94)
Weight ≈ 180 g

Power requirements using RS-232 interface

Power supply 12V DC (linear supply recommended)
Consumption @ 12V DC average : 80 mA
peak : 250mA

Environment and safety

Operating temperature -20 → +80°C
Storage temperature -25 → +85°C
MTBF 500 000 hours
CE mark EN50082 / EN55022 class B
Other standards RoHS
FCC : pending

IWM-K531^{Mk2} SPECIFICATIONS**Contactless smartcard interface**

Standards ISO/IEC 14443 A and B
RFID carrier 13.56 MHz
Operating distance 1 to 8 cm
depending on card and environment

Mode of operation :

- Serial number reader

Please refer to

IWM-K531 reference manual (doc. PMAA060)
for detailed information regarding the operating modes

Supported cards :

- NXP (Philips) Mifare Classic & UltraLight
- NXP (Philips) Desfire, SmartMX, ProX
- ST MicroElectronics SR, SRI, SRIX families
- ASK CTS256/CTS512

And virtually any ISO 14443 A or B compliant card

Security features :

- Configuration by master cards (Mifare)
- 32 Mifare keys in secure EEPROM
- 4B for parameters

IWM-K632^{Mk2} SPECIFICATIONS**Contactless smartcard interface**

Standards ISO/IEC 14443 A and B, ISO/IEC 15693
RFID carrier 13.56 MHz
Operating distance 1 to 8 cm
depending on card and environment

Modes of operation :

- Serial number reader
 - Memory card reader (Mifare and others)
 - T=CL card reader (Desfire and others)
- Up to 4 kind of cards can be operated simultaneously

Please refer to

IWM-K632 reference manual (doc. PMAA061)
for detailed information regarding the operating modes

Supported cards :

- NXP (Philips) Mifare Classic & UltraLight
- NXP (Philips) Desfire, SmartMX, ProX
- ST MicroElectronics SR, SRI, SRIX families
- ASK CTS256/CTS512
- NXP ICode1 & ICode SLI
- Texas Instrument TagIT
- Calypso (CD97, CD21, GTML...)³

And virtually any ISO 14443 and 15693 compliant card

Security features :

- Configuration by secure master cards (Desfire)
- MD5, DES & 3-DES on board
- Mifare and Desfire key diversification
- 32 Mifare keys in secure EEPROM
- 1kB for parameters and other keys

³ Working with Calypso cards is subject to an extra license fee**PRECAUTIONS FOR INSTALLATION**

This device is a contactless reader ; it uses inductive coupling (magnetic field) to power the cards and communicate with them. Precaution must be taken to keep the reader far from any source of perturbation (e.g. other readers, computers...). Installing the reader near a metal surface (aluminium or steel plate...) may dramatically shorten operating distance and increase power consumption.

The reader must be protected from rain and excessive humidity.

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