

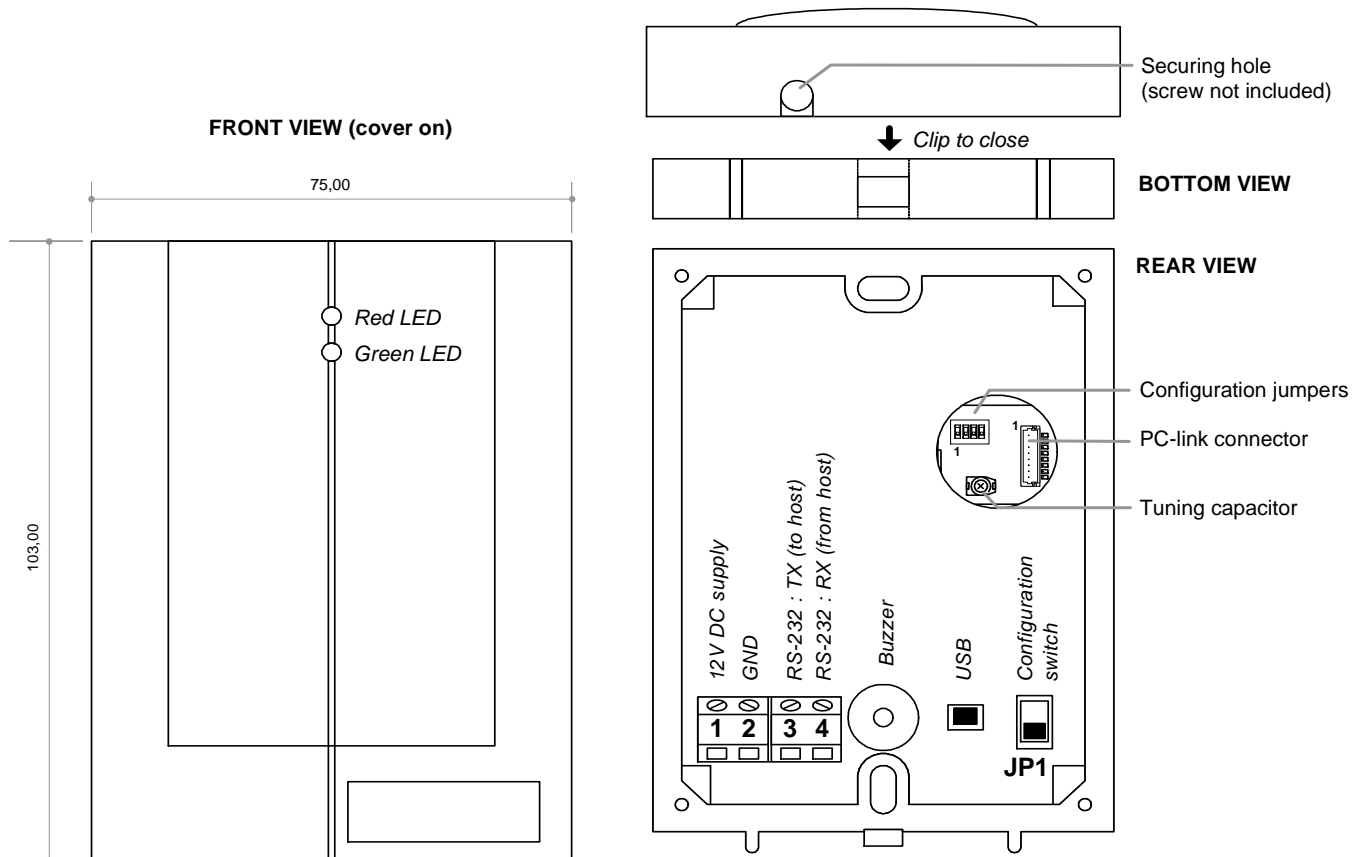
WALL-MOUNT CONTACTLESS READER (RS-232/USB)

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.

This reader is primarily dedicated to residential or corporate access control, but can also be used in cash or vending machines. 2 output modes are available :

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

Frame length and format can be configured by software.

DETAILED VIEWS**PIN ASSIGNMENT**

	RS-232	USB
1	12 V power supply	Not used
2	Ground	Not used
3	TX	Not used
4	RX	Not used
J3	Not used	USB to computer

Pins marked as "not used" must be kept unconnected

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TECHNICAL DATASHEET

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

ISO compliance	ISO/IEC 14443-A/B 1, 2 & 3	RS-232 mode	3-wire RS-232 serial communication <i>RX / TX at +12/-12 V</i>
RFID operating frequency	13.56 MHz	Distance to computer :	max 3m
Card reading distance	5cm typ., min 0cm, max 8cm <i>depending both on card characteristics and Installation particularities</i>	USB mode	Standard USB 1.1 interface, type B connector <i>Seen as a virtual serial port, with drivers available for Windows, Linux and others⁴</i>
Supported cards	NXP MIFARE Classic & UltraLight NXP DESFIRE, SmartMX, MIFARE ProX Infineon SLE66 STMicroelectronics ST19 ... Other cards (Calypso ¹ , Jewel, SR176...) : on request.	Distance to computer :	max 3m
Transmitted data	14443-A : unique card ID (4, 7 or 12 bytes) 14443-B : card PUPI (4 bytes) <i>A specific reader firmware may be developed to read other data from memory or T=CL cards</i>	Common information	Baud rate ² : 38400bps or 9600bps Output format ³ : 64 bits (8 bytes) ASCII hexadecimal strings (16 characters)
Buzzer	Single-tone beeper	Red & green LEDs :	Driven by short commands
Power supply	RS-232 mode : 12 V DC 250mA <i>linear supply recommended</i> USB mode : self-powered by USB <i>bus must be able to deliver 400mA</i>	Temperature range	Operation : 0°C → +45°C Storage : -10°C → +55°C
Consumption at 12V DC	average : 80mA peak : 250mA	Housing	ABC-94HB
CE mark	EN50082 / EN55022 class B	Color	Black
		Dimensions h x l x d	103 x 75 x 23 (mm)
		Weight	180g

¹ Calypso card support is subject to extra license fees² Software configuration to be done through PC-link connector or using master cards³ Output format is configurable through PC-link connector or using master cards⁴ See www.ftdichip.com for a complete list**HARDWARE CONFIGURATION****Jumpers**

ON



1 2 3 4

	ON	OFF
1		<i>Not used</i>
2	Flash mode	Normal mode
3	Buzzer enabled	Buzzer disabled
4		<i>Not used</i>

Use a small and sharp pin to change jumper position. Flash mode must be set only for firmware upgrade operation.

JP1 switch

RS-232



JP1

USB



JP1

SOFTWARE SETTINGS

Secured "master cards" are provided by Pro-Active for an easy configuration of the reader's software.

Alternatively, software configuration can be defined through RS-232 or USB connection.

Please refer to PMAA060 reference manual for details regarding configuration and operating instructions.

Typical configuration :

	E ² PROM settings
RS-232 & USB mode	00000203

INSTALLATION PRECAUTIONS

Reader is shipped un-configured. Appropriate configuration must be applied (configuration jumpers and software settings) before installing the reader.

This device is a contactless reader ; it uses inductive coupling (magnetic field) to power and read cards. Precaution must be taken to keep the reader free from any source of perturbation (e.g. other readers, lift machines, electrical motors...). Installing the reader on a metal surface (aluminum or steel door frame, iron-armed concrete walls...) may dramatically shorten operating distance and increase power consumption.

The reader must be protected from rain and excessive humidity.

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