

WALL-MOUNT CONTACTLESS READER (RS-485/WIEGAND/DATACLOCK)



IWM-K531-WD 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.

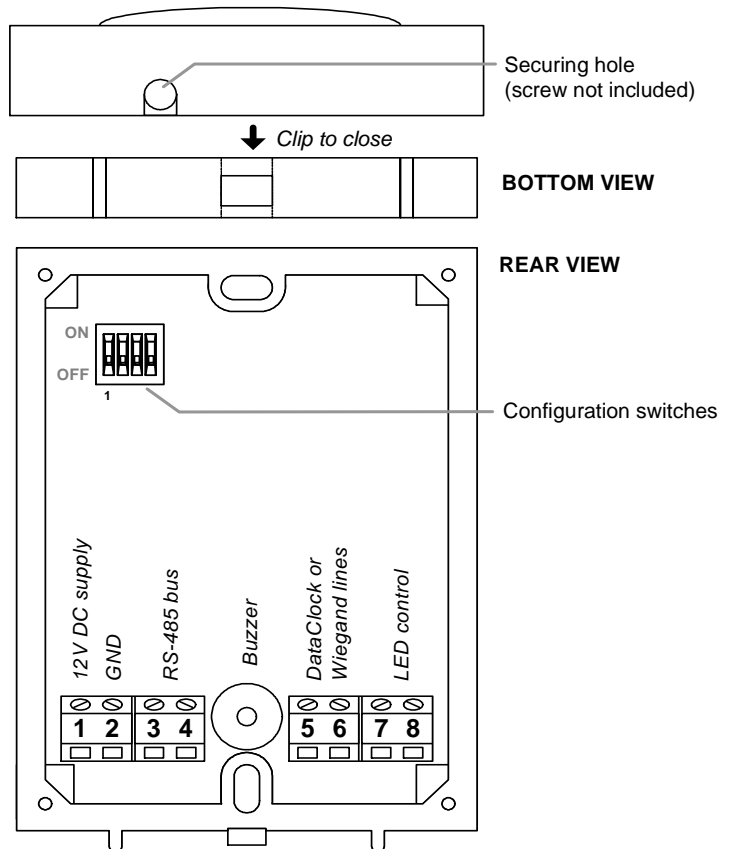
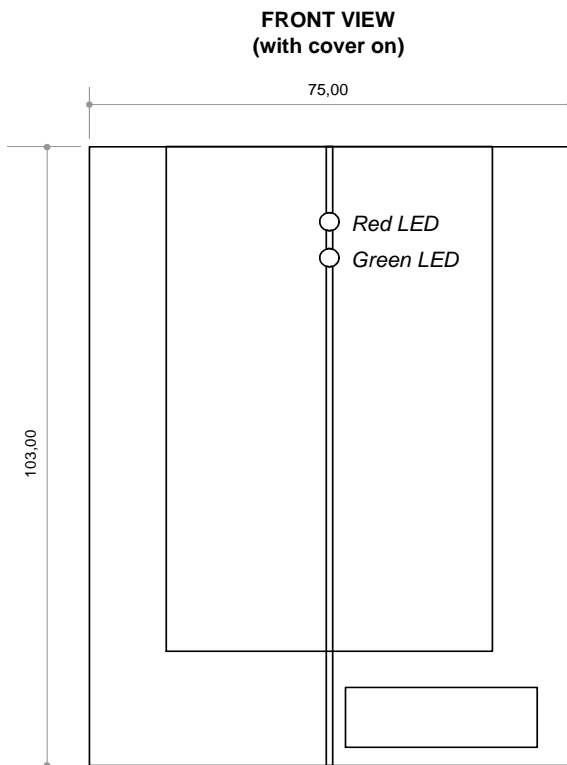
IWM-K632-WD adds the ability to read data from virtually any ISO/IEC 14443 proximity smart cards, including T=CL file-systems, and from ISO/IEC 15693 vicinity tags or transponders.

For both products, 3 output modes are available :

- Wiegand,
- Dataclock (ISO2 / Magstripe),
- RS-485.

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-DW2	IWM-K531 Mk2 RS-485 / Wiegand / Dataclock output
IWM-K632-DW2	IWM-K632 Mk2 RS-485 / Wiegand / Dataclock 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-485	Wiegand	Dataclock
1	VCC - 12 V DC power supply		
2	GND - common		
3	RS-485 bus A	Unconnected	Unconnected
4	RS-485 bus B	Unconnected	Unconnected
5	Unconnected	Data 0 output	Data output
6	Unconnected	Data 1 output	Clock output
7	Unconnected	Red LED input	
8	Unconnected	Green LED input	

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TECHNICAL DATASHEET



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WALL-MOUNT CONTACTLESS READER (RS-485/WIEGAND/DATACLOCK)**COMMON SPECIFICATIONS****RS-485 interface**

<i>2-wire RS-485 bus with optional addressing</i>	
Frame format	Fully configurable
Baudrate	9600 to 38400bps
Distance to controller	30m max
LED & buzzer control	Commands in the serial stream

Wiegand interface

<i>Open-collector¹ output lines DATA0 & DATA1, active low</i>	
Frame format	BCD or raw binary
Distance to controller	30m max
LED control	2 input lines, active low

Dataclock interface

<i>Open-collector¹ output lines DATA & CLOCK, active low</i>	
Frame	ISO2/Magstripe, BCB or raw binary
Distance to controller	30m max
LED control	2 input lines, active low

Hardware specifications

User interface	2 LEDs (red, green), single tone beeper
Color	Black
Dimensions (LxWxH)	103 x 75 x 23 mm
Housing material ²	ABS-94HB (self extinguishing UL94)
Weight	≈ 180 g
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 → +90°C
MTBF	500 000 hours
CE mark	EN50082 / EN55022 class B
Other standards	RoHS FCC : pending

¹ IWM-K531 & IWM-K632 Mk2 have open-collector output lines. Earliest release has internal pull-up resistors to a 5V level.² Note that the reader may be sold without housing, for OEM integration**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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