



## Multi-Technology Readers

Single Reader Solution for Multiple Technologies including ioProx

### Features That Make a Difference:

- Reads more than 12 different types of proximity cards and contactless smart cards including ioProx with Kantech XSF format<sup>1</sup>
- Uses encryption and custom keys for secure transmission of card data
- Download new functionality or enhancements for a future-proof solution
- Optional keypad for two-factor verification
- Mount on metal with isolation spacer
- Indoor/outdoor use
- Built-in tamper switch provides secure installation
- Plug-in screw terminals reduce installation time
- Configurable Wiegand output
- ISO compliant
- Lifetime warranty

Kantech™ Multi-Technology Readers are one of the industry's most versatile card readers with their ability to read serial numbers from multiple 13.56 MHz smart card technologies, MIFARE® encrypted sectors, and most of the common 125 KHz proximity cards including ioProx with Kantech XSF format – all with one reader. This cost-effective solution enables you to transition from proximity to smart cards over time or to utilize both smart cards and proximity cards concurrently in your facility.

Kantech Multi-Technology Readers are configurable to read encrypted MIFARE® sectors using standard or custom MIFARE read keys. These readers also feature a keypad model which outputs keypad commands and a PIN in 8-bit burst Wiegand data.

Important features such as a built-in tamper switch, two-piece connectors, and isolation spacers help reduce installation time. Coupled with robust environmental ratings and a lifetime warranty, Kantech Multi-Technology Readers are the clear choice for companies looking for a powerful, cost-effective way to use various card technologies.

(1) Reader continuously cycles between 125 KHz and 13.56 MHz and, depending on the frequency cycle when card is presented, the reader will either output the proximity card number or the unencrypted smart card serial number.

### Physical

Dimensions	
Model P345MTR	111 x 84 x 28 mm (4.37 x 3.31 x 1.10 in), single-gang
Model P345KPMTR	111 x 84 x 28 mm (4.37 x 3.31 x 1.10 in), single-gang with keypad
Minimum Wiring	Five conductors including one LED control line
Cable Recommendations	22 AWG [60 m (200 ft) max] or 18 AWG [150 m (500 ft) max], stranded
Wiring Terminations	Plug-in screw terminals
Color	Black
Accessories	European surface mount kit Isolation spacer

### Environmental

Environment	UL listed for interior or exterior
Operating Temperature	-35° to 67°C (-31° to 151°F)
Humidity Range	0 to 100%
Index of Protection	IP65

### Electrical

Power Supply	9.4 to 16 VDC 125 mA max @ 12 VDC
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### Regulatory

Agency Certifications	FCC Part 15, CE, UL 294 full outdoor
Compliance	ISO 14443A ISO 14443B ISO 15693

### Operational

Read Range	Up to 102 mm (4 in) depending on technology of card
Read Time	Technology dependent (typically < 300 msec)

### Wiring Connector Pinouts

Pin	Description
1	Beeper
2	Ground
3	Power (9.4 to 16 VDC)
4	D1 Wiegand
5	D0 Wiegand
6	Reserved for future use
7	External green LED control
8	External red LED control
9	A – RS485 – used for flash upgrade
10	B – RS485 – used for flash upgrade
11	Tamper (normally closed)
12	Tamper (normally closed)

### Programming and Format Information

#### Card Technologies Supported

ioProx Kantech XSF  
HID with Kantech Secured Format (KSF)  
HID proximity  
CASi® ProxLite®  
Deister proximity  
ISO 14443A serial number  
MIFARE® serial number  
DESFire serial number  
ISO 14443B serial number  
ISO 15693 serial number  
iCLASS® serial number  
MIFARE sectors

#### Controller Communications

Wiegand

#### Configurable Using Program Card

Pass-through<sup>2</sup>  
Fixed length<sup>3</sup> (26-bit, 32-bit, 35-bit, 37-bit, 64-bit)  
CASi ProxLite 44-bit pass-through  
MIFARE sectors  
Select a sector (0-15)  
Customize encryption keys  
Specify data format (number of bits output)  
Enable PIN-on-smart-card functionality

### Ordering Information

P345MTR	Multi-Technology reader with ioProx support, smart card & proximity, up to 10.2 cm (4 in) read range depending on technology of card, single-gang, black
P345KPMTR	Multi-Technology reader with ioProx support, integrated keypad, smart card & proximity, up to 10.2 cm (4 in) read range depending on technology of card, single-gang, black

(2) Pass-through – the default setting for Kantech Multi-Technology Readers that allows the reader to send all the data on the card.  
(3) Fixed length – the reader can be configured to output a fixed length by padding or truncating data on the card.