



The RM Series Card Readers are designed and constructed to provide a wide variety of configuration options.

Choose from 3 different RM Series Card Reader technologies: proximity, Wiegand, and magnetic stripe. The attractive polycarbonate, all-weather housing can accommodate any of the three technologies. The universal design lets you mix and match different technologies on the same system, while simultaneously maintaining a consistent appearance.

The three LED colors, red, amber, and green, indicate a range of conditions: valid or invalid card reads, door forced or held open, and system or configuration errors. An audible alert can also be set through the system host to signal these conditions. Regardless of the technologies used, a keypad for entering Personal Identification Numbers (PINs) can be added to any RM Series Card Reader.

An optional backlit LCD display is also available for any RM Series Card Reader that has a keypad. The display shows the date, time, system conditions and user prompts.

All RM Series Card Readers use the same cable and connectors simplifying installation and service. The RM Series Card Readers provide two supervised inputs for door monitoring. The RM Series Card Readers also support two ARM-1 modules for local door lock control.

FEATURES & BENEFITS

- Universal packaging accommodates magnetic stripe, Wiegand, or proximity technologies
- Keypad and backlit LCD display can be combined with all reader technologies
- Magstripe and Wiegand non-keypad readers support reader duress capabilities
- Each RM Series reader provides 2 supervised inputs and 2 control point outputs
- Three high-intensity LEDs, (red, amber and green) indicate system conditions
- Operates in Star or Multidrop configuration
- Retrofits with existing apC panels and iSTAR controllers
- Keypad features audio feedback
- Reads all three ISO standard tracks 75/210/75 bpi
- Built-in tamper switch and security screws protect reader electronics
- Rugged design suitable for interior or exterior environment
- Readers electronics are coated against dust and moisture
- UL 294/1076, FCC, CE, C-Tick compliant

SPECIFICATIONS

Magnetic Stripe

The RM Magnetic Stripe reader is a flexible and versatile card reader technology. The readers read high and low coercivity cards encoded on track 2. The RM Magnetic Stripe Reader gives you the option of using cards that have been magnetically encoded for other applications. (Consult factory for track 1 and 3 applications.) The RM Magnetic Stripe Reader is available in standard and mullion styles, and is conformally coated for weather resistance.

Embedded RM Indala Proximity

The RM Indala Proximity Reader combines the convenience and high reliability of Indala ASP® proximity technology with the advanced electronics and stylish packaging of the RM Series Card Reader.

A variety of access credentials are supported depending on your needs, including support for photo identification badges and combination technology.

Read range:

up to 5 in.*
(up to 12.7 cm)

Embedded RM HID Proximity

The RM HID Proximity Reader combines the convenience and high reliability of HID ProxPro® proximity technology with the advanced electronics and stylish packaging of the RM Series Card Reader. A variety of access credentials are supported depending on your needs, including support for photo identification badges and combination technology. The RM HID Proximity Reader is available in standard and mullion styles.

Read range:

up to 4.5 in.*
(up to 11.4 cm)

Wiegand

RM Wiegand Card Readers are known for their ruggedness and reliability. Their fully potted electronics allow them to be used in any operating environment including snow, rain, and extreme temperatures. Based on a unique technology, Wiegand cards are virtually impossible to counterfeit. The Wiegand RM reader is available in standard (RM1-W) styles.

Reader Module (RM4)

The RM Reader Module (RM4) creates the connectivity between the reader and the apC®, when third-party card readers are used on a C•CURE® System. In addition, the RM Module provides 2 supervised inputs and 2 outputs. The RM4 Reader module is a circuit board that can be mounted in any suitable enclosure.

Keypad

The optional 12-button keypad can be combined with any card reader technology for entering Personal Identification Numbers (PIN). The keypad is made of weather resistant material and responds to key depression with an audible signal when programmed through the host. The keypad option can also be retrofitted in the field.

LCD Display

The LCD display is an optional backlit text display which is available to the RM Series Card Readers. It provides card holders with visual feedback and prompts, such as Access Granted or Enter PIN. It can also display custom messages from the host. The display consists of 2 lines of 16 characters. The LCD Display is designed for use with readers that have a keypad and is not recommended for use in harsh temperatures.

Heater Kit

For some outdoor installations, a thermostatically controlled heater may be necessary. The heater switches on at 40°F (4°C). The heater adheres directly to the reader mounting plate.

ARM-1 Auxiliary Relay Module

The ARM-1 provides outputs for door strikes or other equipment located near the RM Card Reader. Installation of the ARM reduces wire runs back to the apC.

Conformal Coating

Conformal coating is applied to the internal electronics of the RM Series Card Readers to protect them from extreme weather conditions.

* Note: Actual read range may vary depending on environmental conditions, installation surfaces, and type of card presented.

CONFIGURATIONS

The Charts below list the RM Series Card Reader configurations by model numbers. A diamond (u) in a square indicates the presence of a feature.

Magnetic Stripe

	Standard	Keypad	LCD	Conformal Coating	Mullion
RM1-MP*	◆			◆	
RM2-MP*	◆	◆		◆	
RM2L-MP*	◆	◆	◆	◆	
RM3-MP*	◆			◆	◆

* Maximum Card thickness is .033 inches.

Proximity

	Motorola Indala	HID	Keypad	LCD	Conformal Coating	Mullion
RM1-PI	◆				◆	
RM2-PI	◆		◆		◆	
RM2L-PI	◆		◆	◆	◆	
RM1-PH		◆			◆	
RM2-PH		◆	◆		◆	
RM2L-PH		◆	◆	◆	◆	
RM3-PH		◆			◆	◆

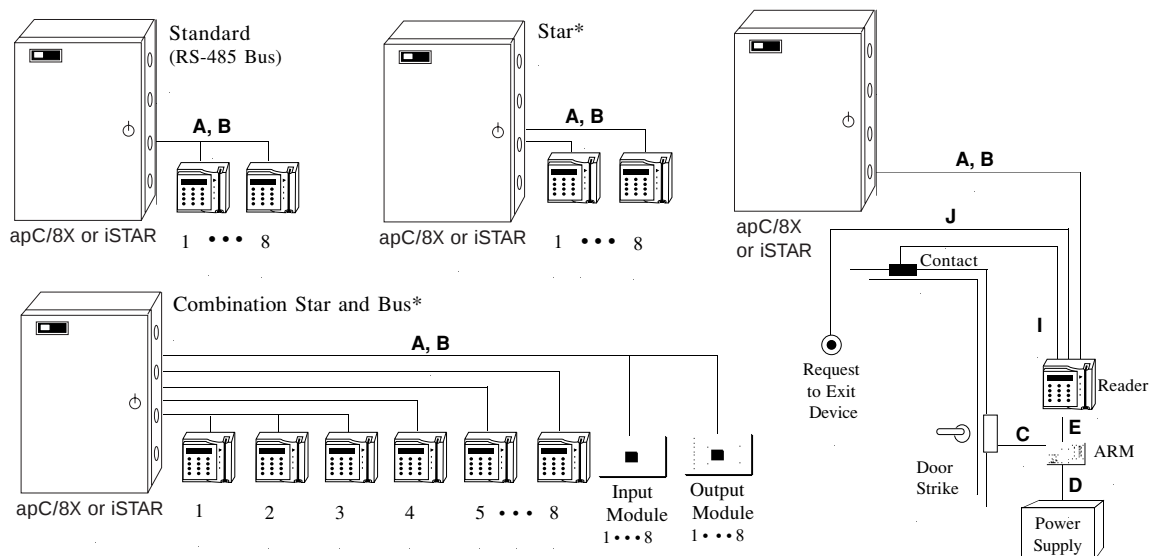
Wiegand

	Keypad	LCD	Conformal Coating	Mullion
RM1-W			◆	

ENVIRONMENTAL SPECIFICATIONS

	Operating Temperature (Environment)	Operating Temperature with Heater Kit	Power Requirements	Dimensions (H x W x D) Weight
Magnetic Stripe: RM1-MP, RM2-MP	32°F to 140°F (0°C to 60°C)	-22°F to 140°F (-30°C to 60°C)	+12VDC 80 mA	5.10 x 5.60 x 1.95 in. (12.95 x 14.22 x 4.95cm) 21 oz. (588 g)
Magnetic Stripe with LCD Display: RM2L-MP	32°F to 122°F (0°C to 50°C) 95% Humidity Non-condensing	NA	+12VDC 180 mA	5.10 x 5.60 x 1.95 in. (12.95 x 14.22 x 4.95cm) 23 oz. (644 g)
Magnetic Stripe Mullion: RM3-MP	32°F to 140°F (0°C to 60°C)	-22°F to 140°F (-30°C to 60°C)	+12VDC 80 mA	5.10 x 1.91 x 1.81 in. (12.95 x 4.85 x 4.60cm) 10 oz. (280 g)
Indala Proximity: RM1-PI, RM1-PI/C, RM2-P1, RM2-PI/C	32°F to 140°F (0°C to 60°C)	-22°F to 140°F (-30°C to 60°C)	+12VDC 80 mA	5.10 x 5.60 x 1.95 in. (12.95 x 14.22 x 4.95cm) 25 oz. (700 g)
Indala Proximity: with LCD Display: RM2L-PI	32°F to 122°F (0°C to 50°C) 95% Humidity Non-condensing	NA	+12VDC 180 mA	5.10 x 5.60 x 1.95 in. (12.95 x 14.22 x 4.95cm) 27 oz. (756 g)
HID Proximity: RM1-PH, RM2-PH	32°F to 140°F (0°C to 60°C)	-22°F to 140°F (-30°C to 65°C)	+12VDC 135 mA ave. 250 mA peak	5.10 x 5.60 x 1.95 in. (12.95 x 14.22 x 4.95cm) 21 oz. (588 g)
HID Proximity: with LCD Display: RM2L-PH	32°F to 122°F (0°C to 50°C) 95% Humidity Non-condensing	NA	+12VDC 235 mA ave. 350 mA peak	5.10 x 5.60 x 1.95 in. (12.95 x 14.22 x 4.95cm) 23 oz. (644 g)
HID Proximity: Mullion: RM3-PH	-22°F to 149°F (-30°C to 65°C)	NA	+12VDC 135 mA ave. 250 mA peak	5.10 x 1.91 x 1.81 in. (12.95 x 4.85 x 4.60cm) 10 oz. (280 g)
Wiegand: RM1-W	32°F to 140°F (0°C to 60°C)	-22°F to 140°F (-30°C to 60°C)	+12VDC 80 mA	5.10 x 5.60 x 1.95 in. (12.95 x 14.22 x 4.95cm) 23 oz. (644 g)
Reader Module: RM-4	32°F to 140°F (0°C to 60°C)	-22°F to 140°F (-30°C to 60°C)	+12VDC 75 mA	4.65 x 3.55 x .60 in. (11.81 x 9.02 x 1.52 cm) 9 oz. (252 g)

WIRING CONFIGURATIONS

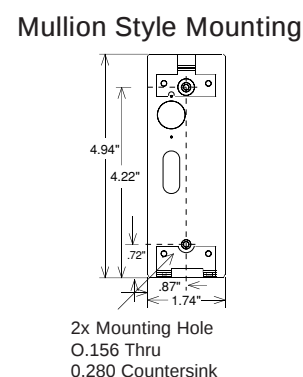
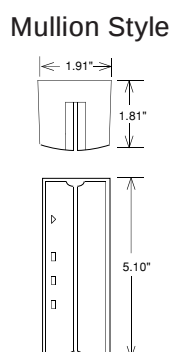
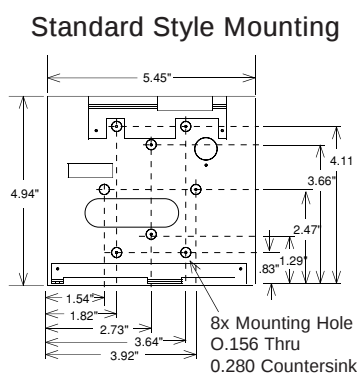
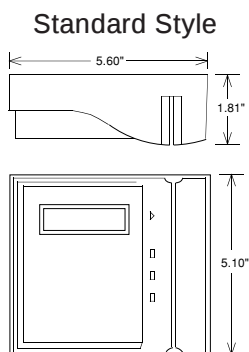


WIRING CONFIGURATIONS

Wire Label	From	To	Function	Belden Part No. ¹	Gauge (AWG)	No. of Pairs	Shielded	Max. Length (ft.)
A	apC/8X	RM, RM4, I/O Modules	Communication	9841	24	1	Yes	4000
B	apC/8X	RM, RM4, I/O Modules	Power ²	8442/8461	22/18 ³	1	No	varies ⁴
C	ARM	Locking Device	Control	8442/8461	22/18 ³	1	No	25
D	ARM	Power Supply	Power	8442/8461	22/18 ³	1	No	25
E	RM, RM4	ARM	Relay Switching	9462	22	1	Yes	25
F	RM, RM4	Proximity/Wiegand	Reader Comm.	9536	24	3	Yes	500
G	Terminal	Modem	(RS-232) Comm.	9855	22	2	Yes	50
H	Terminal	apC	(RS-232) Comm.	9855	22	2	Yes	50
I	RM, RM4	Door Contract	Door Position	8442/8461	22/18	1	No	25
J	RM, RM4	Request to Exit Device	Egress Control	8442/8461	22/18	1	No	25

¹Use Belden Part Number specified or equivalent product. ²Not required if powered locally. ³Gauge varies according to length of wire. Consult apC manual for details. ⁴Length varies according to application.

RM Series Mounting Specifications



For Product Information
Software House
1-800-550-6660
www.swhouse.com

1-800-862-7515
www.swhouse.com

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