

Contactless Smart Card Reader

Installation Instructions

Model: JT-MCR45(55)-32C

Rev 1.3, Apr.18th, 2014

WHAT IS THE Contactless Smart Card Reader?

The Reader is an RFID Contactless Smart Card reader for use with access control systems.

These installation instructions contain the following information:

- Mounting Instructions
- Connecting the reader to a host using the wiegand interface
- Testing and operation of the reader

How to install the PSAM card?

If the card reader is configured as software encrypted, it is no need the PSAM card. But if it is hardware encrypted, the PASM card is necessary. The steps to install the PSAM card are as follow:

1. Open the back cover of the reader first and then you could find the socket of PSAM card.
2. Push the deck lid on the socket in the direction of sign "OPEN", and then open it.
3. Insert the flat side of PASM card (NOT THE SIDE WHICH HAS MISSING CORNER) alone the guide groove on the upper lid. Let the face which has contacts up (THIS SIDE WILL FACE DOWN AFTER CLOSE THE LID). After that, close the upper lid and push it in the opposite direction when open it, make sure the lid be locked and fastened reliably.
4. Close the back cover of the card reader.

HOW TO MOUNT THE READER

To surface mount the reader, perform the following:

1. Determine an appropriate mounting position for the reader.
Ideally, for the maximum operating distance, avoid mounting the reader directly on metal surfaces.
2. Peel off the back of the self-stick mounting label template included with the unit and position it at the desired mounting position.
3. Using the template as a guide, drill two holes (hole size is indicated on mounting template) for mounting the reader to the surface.
4. Drill a 1/2" (13 mm) hole for the cable. If mounting on metal,

place a grommet or electrical tape around the edge of the hole to protect the wire from chaffing.

5. Attach the reader to the mounting surface using the appropriate screws (not supplied). The mounting template may be left in place if desired since the reader will cover it completely.

HOW TO CONNECT THE READER TO THE HOST

The Reader is supplied with an 18-inch pigtail, having a 7-conductor cable. To connect the reader to the host, perform the following steps:

1. Prepare both the reader cable and host cables by cutting the cable jacket back 1 1/4 inches and strip the wires 1/2 inch.
2. Splice the reader pigtail wires to the corresponding host wires and cover each connection (see Figure 1).
3. Trim and cover all conductors that are not used.

Figure 1 below shows how you should wire the reader to the host.

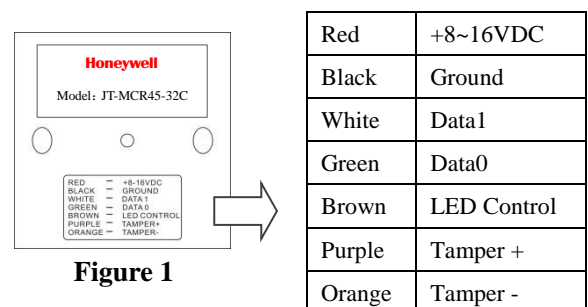


Figure 1

Wiring Notes:

1. The individual wires coming out of the reader are color coded according to the recommended wiegand standard.
2. When using a separate power supply for the reader, the reader power supply and host must have a common ground.
3. The recommended cable depends on the distance from the reader to the host. See Table 1 below for the correct wire gage based upon distance. Larger wire gauges (smaller numbers) are desirable. The wire must be stranded with an overall

shield, either foil or braided.

- The cable shield wire on the reader should be attached to an Earth ground (best) or signal ground connection at the panel or power supply end of the cable. This configuration is best for shielding the reader cable from external interference.

TABLE 1: WIRE GAGE SPECIFICATIONS



Distance	Gage	5 Conductor	6 Conductor
= 200 ft. (61m)	22	Alpha 1295C	Alpha 1296C
=300 ft. (91m)	20	Alpha 58126	Alpha 58126
= 500 ft. (153 m)	18	Alpha 58136	Alpha 58136

Recommended cable is only a guideline, use any manufacturer that meets the gage and shield specifications.

HOW TO TEST AND OPERATE THE READER

The reader should be tested after wiring it to the host. Do this by performing the following steps:

- Power up the reader. The LED and beeper will activate three times. This indicates that the reader is working properly.
- Present the configuration card to the reader. Power up the reader. The LED and beeper will active two times in 1 ~ 10 seconds. This indicates that the reader is configuration successful.(Must configured in 3 seconds after power up)
- Present a Contactless Smart Card to the reader. The LED will momentarily flash green and beep will activate one time (if the reader is the factory default configuration). This indicates that the card was read properly by reader.
- After the card data is processed by the host, the host turn the LED green. Refer to the host description of the LED operation if the reader LED is controlled by the host.

SPECIFICATIONS

Electrical Characteristics:

Frequency: 13.56 MHz

Power Supply Type: Linear or switching; ripple < 50 mVpp

Operating Voltage Range: 8.0 – 16 VDC

Maximum input current: 120 mA

Maximum Cable Distance to Host: 500 ft. (150 meters)

Output Interface: Wiegand 32 (User-defined Support)

Tamper Output: NC

Card Supported: ISO14443 CPU Card

Card Read Distance (Normal Use) : More than 3cm

Operating Temperature Range: -25 °F to 145 °F (-31 °C to 63 °C)

Operating Humidity: 0 to 95% (non-condensing)

Dimensions: 3.5" (89mm) L x 3.5" (89mm) W x 0.8" (20mm) D

FCC STATEMENT :

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference, and
- This device must accept any interference received, including interference that may cause undesired operation.

Warning: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient or relocate the receiving antenna.

Increase the separation between the equipment and receiver.

Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.