



Matrix Card Readers: MX iCLASS, MX2, MXProx2

Overview

Since 1979, Matrix Systems has produced the most reliable, versatile card readers in the access control industry. Matrix card readers have everything needed to handle your most demanding access control application: Built-in security features. Application flexibility. Compact, rugged construction. With Matrix card readers, your organization's doors, gates, turnstiles, and elevators can all be easily controlled and monitored. Plus the microprocessor-based, CMOS-programmable microcontroller in each reader provides reliable power and intelligence, all in one small package.

Select the Matrix card reader that best suits your particular needs: Choose the MX iCLASS card reader when it's important to hold, carry and provide faster transmission of information. Used with an iCLASS antenna, the MX iCLASS adds increased security with contactless smart card technology, read/write capability, and encryption. Choose the MXProx2 proximity card reader for environments where physical contact with the reader is problematical, such as when a user may not have a free hand to make contact between the card and the reader, where it is difficult for a driver in a vehicle to reach the reader, or where the card needs to be read through common building materials. Choose the MX2 magnetic stripe card reader for the most economical solution. The MX2 supports high-coercivity badge encoding at 75 or 210 BPI and meets all ANSI-ISO standards for tracks I, II, and III, providing compatibility with other card systems using different tracks.

Support for multiple formats

The MXProx2 and MX iCLASS card readers read all HID card formats, including 26-bit and 37-bit proximity cards, dual-technology cards, and key fobs. The readers display the prompt, PRESENT CARD, to indicate proximity operation. Access control can be enhanced with the use of personal identification numbers (PINs), "two badge" rules, anti-passback, and other special controls.



Highlights

- **Convenient telephone-style layout supports all key security functions needed**
- **Close-in reading range and high-speed communications system allow authorized personnel to pass quickly through secure areas**
- **Support for industry access control standards provides critical security assurance**
- **Clear audible and visual feedback plus compatibility with many card formats make Matrix card readers a snap to use**
- **Adjustable-contrast display adapts to any lighting condition, including bright office areas**
- **Durable construction allows for easy use in both indoor and outdoor environments**

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Flexible keypad and display

Every Matrix card reader features an easy-to-use, 16-position keypad plus a 32-character, LED-backlit liquid crystal display that can be adjusted to suit any lighting condition. The handy telephone-style layout of each card reader supports silent duress alarm, permits arm/disarm of security zones, and allows for PIN and keypad entry. Other standard features include:

- PIN entry to provide an additional line of security Operation prompts (PRESENT CARD) to allow easy unassisted operation
- Door status indicators (LOCKED or UNLOCKED) to minimize errors and protect occupants
- Modification and display of zone status (ARMED or DISARMED) to simplify operation
- Display of custom messages and prompts, which contribute to improved communications

Easy to install and use

Designed for a five-conductor plug and cable, the Matrix card readers connect easily to the Matrix Reader Control Module (RCM) as part of a total access control system. The keypad and display are used during installation to set the reader address and define which door and which side of the door is being controlled. The RCM can control up to two doors, with one or two readers per door (IN and OUT). With Matrix high-speed communications, plus a nominal card reading range of up to 4 inches (with the MXProx2 and MX iCLASS) or high-coercivity badge encoding (MX2), these card readers get authorized personnel in and out of secure areas quickly and easily.

Adaptable to any environment

The rugged, tamper-resistant construction and weather-resistant finish of each Matrix card reader makes it an ideal choice for the harshest outdoor environment, while still being equally suitable for indoor mounting. Each card reader has high-impact, ABS plastic construction, a sealed membrane keypad, a built-in tamper switch, and high-security mounting screws with a 2-gang switchbox mounting.



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Specifications

MX iCLASS – MX2 – MXProx2

Physical	Dimensions: 4.6" (116.8 mm) width x 4.6" (116.8 mm) height x 1.5" (38.1 mm) depth		
Keypad	Weight: 15 oz (425.25 g) ABS plastic construction; steel backplate 16-position alphanumeric telephone-style keypad		
Display	Silver/mylar membrane switch Back-lit 32-character display		
Environmental	Character size: 2.95 mm width x 3.80 mm height (5 x 7 dots) LCD contrast adjustable through keypad Temperature: -31° F (-35° C) to +150.8° F (66° C); UL 294 Humidity: 0% to 100%		
Input voltage	12 VDC nominal		
Communications	9600 baud RS-485 communications to RCM		
Electronics	Main electronic circuit board contains a single CMOS programmable microcontroller		
Installation and mounting	Connects to reader through a five-position pluggable connector for the following: +data, - data, power ground, +12VDC, earth ground Mounts on 2-gang switchbox surface mounting box		
Warranty	Weather hood and turnstile or parking pedestal options available where required One year from date of installation		
	Return-to-factory standard Other levels of warranty available as options		
	MX iCLASS	MXProx2	MX2
Transmit frequency	13.56 MHz	125 kHz	N/A
Read time	140 mS	140 mS	N/A
Card reading speed	N/A	N/A	55 inches per second
Read range	2" to 4"	3" to 4"	N/A
Encoding	Standard including 26-bit, 37-bit and HID Corporate 1000; custom	Standard including 26-bit, 37-bit and HID Corporate 1000; custom	High coercivity Tracks I, II, III
Recording density	N/A	N/A	75 or 210 BPI
Error checking	Parity and longitudinal redundancy check (LRC)	Checked per card format	Parity and longitudinal redundancy check (LRC)
Assurance	UL 294 Access Control UL 1076 Proprietary Burglar Alarm	European Compliance (CE) UL 294 Access Control UL 1076 Proprietary Burglar Alarm	ISO 7811 CE (European Compliance) UL 294 Access Control UL 1076 Proprietary Burglar Alarm



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