

AY-x6x70 Series Open to Secure (O2S) Readers

Datasheet



Introduction

Rosslare's Open to Secure (O2S) family of readers are highly flexible smart card readers that redefine ease of use and high security for RFID access control solutions. The readers support reading from and writing to the secure memory of the world's most accepted RFID technologies – MIFARE Plus and MIFARE Classic EV1.

With MIFARE Plus credentials, you have access to the highest levels of cryptographic security with support for 128-bit AES encrypted communications between reader and credential. With O2S preprogrammed readers and credentials, you can have the highest level of secure access control solutions right out of the box.

The AY-x6x70 and credentials can also come with distinct custom keys and security configuration from the factory.

Choose from a variety of standard configurations to get the functionality that you need – US/UK/Asia or mullion mount, proximity only or proximity & keypad authentication, pigtail or terminal block termination, and multi-format Wiegand or OSDP outputs. You can customize the reader to meet your requirements for maximum configuration flexibility.

General Description

The AY-x6x70 readers read secure O2S ID data and the CSN from MIFARE Classic EV1 credentials.

Main Features

- Contactless smart card reader (13.56 MHz)
- Meets ISO14443 Type A Standard
- AES 128-bit encryption during transmission
- Reads O2S ID data from O2S credentials
- Reads CSN of non-O2S credentials
- Output formats:
 - Wiegand (per format on O2S credential)
 - OSDP via RS-485 (selected models)
- RGB multicolor light indicator
- Blue backlit tact switch keypad
- IP68 water and dust resistant, IK08 vandal resistant
- Optical back tamper sensor
- Two LED control and buzzer control inputs
- Pigtail or terminal block connectivity
- Antimicrobial technology reduces level of microbes on reader by up to 99.99%.

Specifications

| ELECTRICAL SPECIFICATIONS | | |
|---------------------------------------|---|------------------------------|
| Operating Voltage Range | 6 to 16 VDC | |
| Input Current at 12V | Standby: 85 mA, Maximum: 110 mA | |
| OPERATIONAL SPECIFICATIONS | | |
| Read Range (secure credential memory) | AY-H6xx0 | AY-G6xx0 |
| MIFARE Classic EV1 | 40 to 45 mm (1.5 to 1.8 in.) | 40 to 45 mm (1.5 to 1.8 in.) |
| MIFARE Plus | 25 mm (1 in.) | 30 mm (1.2 in.) |
| LED Control | Two Inputs: Green LED CTL and RED LED CTL – TTL | |
| Auxiliary Input | Buzzer CTL or Hold CTL – TTL | |
| Auxiliary Output | Tamper Output (OC, active low, max. sink current 30 mA) | |
| Supported Protocol | Wiegand OSDP Secure Channel V2 | |
| Output Format | O2S - Preprogrammed key (per format on O2S credential) Custom - Wiegand 26, 32, 34, 40, 56, 64, 128-bit and customized ¹ Keypad: Four user-selectable standard formats available | |
| Maximum Cable Distance to Controller | Wiegand: 150 m (500 ft) with 18-AWG cable OSDP (RS-485): 1200 m (4,000 ft) with 2x2 18-AWG twisted shielded cable | |
| Compatible Cards | MIFARE Plus X/S (2K, 4K) and MIFARE EV1 Classic (1K, 4K) | |
| ENVIRONMENTAL SPECIFICATIONS | | |
| Operating Temperature | -31°C to 63°C (-24°F to 145°F) | |
| Operating Humidity Range | 0% to 95% (non-condensing) | |
| Outdoor Usage | Weather-resistant, epoxy potted, suitable for outdoor use | |
| Operating Environment | UV-resistant, epoxy-potted, suitable for indoor and outdoor use <ul style="list-style-type: none"> • IP68 for pigtail models • IP65 for terminal block models | |
| Vandal Resistance | IK08 | |
| Antimicrobial efficacy | Inhibits bacteria proliferation by up to 99.9% | |

¹For custom key operation the AY-x6x70 Series needs to be program using a configuration card.

MECHANICAL SPECIFICATIONS

| | |
|---|--|
| Dimensions of Pigtail Models (H x W x D) | AY-G6x70: 145.3 x 42.0 x 23.0 mm (5.7 x 1.7 x 0.9 in.) AY-H6x70: 120.0 x 80.0 x 23.0 mm (4.7 x 3.2 x 0.9 in.) |
| Dimensions of Terminal Block and OSDP Models (H x W x D) | AY-G6x70: 145.3 x 42.0 x 31.0 mm (5.7 x 1.7 x 1.2 in.) AY-H6x70: 120.0 x 80.0 x 31.0 mm (4.7 x 3.2 x 1.2 in.) |
| Weight | AY-G6x70: 155 g (5.5 oz) AY-H6x70: 217 g (7.7 oz) |

Interoperability: The AY-G/H6x70 readers are compatible with Rosslare's controllers and many other third-party Wiegand controllers

Product Warranty: 5-year limited product warranty



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