

# AY-x6255

## CSN SELECT™ Smart Card Readers

### Datasheet



AY-K6255 AY-M6255 AY-Q6255

#### Introduction

The CSN SELECT™ AY-x6255 is a series of multi-credential technology contactless smart card (13.56 MHz) readers. The readers have the flexibility to read the CSN from many smart card RFID standards, including MIFARE Classic Sector read, perfect for transitioning from one technology to another. They support access by an NFC compatible Android smartphone app for use in access control system solutions.<sup>1</sup>

The readers are UV, water, and dust resistant. The readers have a sleek, modern design and can be used comfortably in any indoor or outdoor installation environment.

#### General Description

The AY-x6255 reader series are built to read the CSN of the most popular smart cards in the security industry, including MIFARE sector read, as well as NFC compatible Android smartphones, and output the CSN in Wiegand or OSDP protocols.

Four individual control lines provide green LED control, red LED control, and buzzer control inputs, as well as an output for the optical wall tamper detector. AY-x6255 readers support SIA Open Supervised Device Protocol (OSDP V2) including SCP mode (Secured Channel Protocol) to let the reader connect to any controller that supports OSDP.

#### Main Features

- The reader settings can be configured with the CS-CCT Configuration Tool
- Supports OSDP V2 including secure channel using AES 128 bit encryption for improved security with an extended range, up to 32 addresses
- MIFARE Classic EV1 Sector Read - Compatible with ISO 14443A 1K and 4K credentials
- Supports NFC<sup>1</sup> technology using Rosslare BLE-ID mobile app or SDK.
- Sleek and modern design
- Tri-colored LED operation
- Optical wall tamper detection
- Multiple mounting options including micro-mullion, mullion, US gangbox and UK/Asia gangbox
- Comes with mounting template and installation kit for easy installation
- Water and dust resistant
  - IP68 for models without DIP switches
  - IP65 for models with DIP switches
- IK08 vandal resistance (without the bezel)

<sup>1</sup>NFC-ID can be generated from the Rosslare BLE-ID app or Rosslare Mobile Credentials SDK for each NFC supported Android smartphone.

## Technical Specifications

| Electrical Characteristics              |   |
|---|---|
| Operating Voltage Range                 | 8 to 16 VDC   |
| Current at 12 V                         | AY-K/L6255: Standby: 55 mA, max: 80 mA  |
|   | AY-H/M6255: Standby: 75 mA, max: 110 mA   |
|   | AY-Q6255: Standby: 100 mA, max: 150 mA  |
| Read Range                              | AY-K6255/AY-Q6255: 5 cm (2.0 in.) <sup>1</sup>  |
|   | AY-L6255: 7 cm (2.9 in.) <sup>1</sup>   |
|   | AY-H/M6255: 9 cm (3.5 in.) <sup>1</sup>   |
|   | NFC up to 7 cm (2.9 in.) <sup>2</sup>   |
| LED/Buzzer Controls                     | Dry Contact, N.O.   |
| Tamper Output                           | Open collector, active low, max. sink current 16 mA   |
| Credential Technology <sup>1</sup>      | 13.56MHz: ISO14443A: MIFARE Classic <sup>®</sup> EV1 / MIFRAE Classic EV1 Sector read / MIFARE Classic <sup>®</sup> , MIFARE Ultralight <sup>®</sup> Nano / MIFARE Ultralight <sup>®</sup> EV1/ MIFARE Ultralight <sup>®</sup> C,<br>MIFARE Plus <sup>®</sup> S / MIFARE Plus <sup>®</sup> SE / MIFARE Plus <sup>®</sup> X / MIFARE Plus <sup>®</sup> EV1, MIFARE DESFire <sup>®</sup> EV1/ MIFARE DESFire <sup>®</sup> EV2, MIFARE<br>NFC N-TAG / Card Emulation<br>ISO14443B - China National ID<br>ISO15693 HID <sup>®</sup> , iClass <sup>®</sup> , PicoPass, iCode, LEGIC<br>ISO18092: SONY <sup>®</sup> FeliCa <sup>®</sup> (Hong Kong Octopus) |
| Communication and Controller Connection | Wiegand: 26 (default), 32, 34, 40, 56, 64, 96, 128-bits<br>Wiegand Card + PIN<br>Clock & Data<br>OSDP Secure Channel V2   |
| Maximum Cable Distance to Controller    | Wiegand: 150 m (500 ft) with 18-AWG cable<br>OSDP (RS-485): 1,200 m (4,000 ft) with 2x2 18-AWG twisted shielded cable   |
| Environmental Characteristics           |   |
| Operating Temp. Range                   | -35°C to 66°C (-31°F to 150°F)  |
| Operating Humidity Range                | 0 to 95% (non-condensing)   |
| Operating Environment                   | UV-resistant, epoxy-potted, suitable for indoor and outdoor use <ul style="list-style-type: none"> <li>• IP68 for models without DIP switches</li> <li>• IP65 for models with DIP switches</li> </ul>   |
| Vandal Resistance                       | IK08 (without the bezel)  |

<sup>1</sup>Measured using a Rosslare MIFARE Classic EV1 (ISO card). Read range with other credential technologies may vary. Range also depends on electrical environment and proximity to metal.

<sup>2</sup>The NFC read range is different for different smartphones and also is affected by a variety of factors.

## Physical Characteristics

|                           |  |
|---------------------------|--|
| Dimensions<br>(H x W x D) | AY-K6255: 80.5 x 40.5 x 14.7 mm (3.2 x 1.6 x 0.6 in.)  |
|                           | AY-L6255: 145.0 x 43.0 x 22.3 mm (5.7 x 1.7 x 0.9 in.) |
|                           | AY-H6255: 110.7 x 75.0 x 17.0 mm (4.4 x 3.0 x 0.7 in.) |
|                           | AY-M6255: 89.5 x 88.5 x 16.9 mm (3.5 x 3.5 x 0.7 in.)  |
|                           | AY-Q6255: 120.0 x 76.0 x 21.5 mm (4.7 x 3.0 x 0.9 in.) |
| Weight                    | AY-K6255: 73 g (2.6 oz)                                |
|                           | AY-L6255: 130 g (4.6 oz)                               |
|                           | AY-H6255: 177 g (6.2 oz)                               |
|                           | AY-M6255: 167 g (5.9 oz)                               |
|                           | AY-Q6255: 410g (14.5 oz)                               |

**System Components:** AY-x6255 are compatible with a variety of Rosslare controllers, as well as with many third-party access control systems supporting Wiegand or OSDP interfaces.

**Product Warranty:** 5-year limited product warranty



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