

# AY-R6255



## Illuminated CSN SELECT™ Smart Card Reader (Rev. B)

### Installation and User Manual

## 1. Introduction

The CSN SELECT™ AY-R6255 is a multi-credential technology contactless smart card reader for use in access control system solutions and has a unique illumination system. The reader features two multi-spectral high-intensity light bars that provide reader status indications with 180-degree horizontal visibility. CSN SELECT readers have the capability to read the Card Serial Number (CSN) from many smart card RFID Standards implementations. The following list shows the credential technologies for which we have confirmed compatibility:

- ISO14443A – MIFARE® Ultralight® Nano / EV1/ C, MIFARE Classic® / Classic EV1, MIFARE Plus® S / SE / X / EV1, MIFARE DESFire® EV1 / EV2, N-TAG NFC / Card Emulation
- ISO14443B – China National ID
- ISO15693 – HID® iClass®, PicoPass, iCode, LEGIC
- ISO18092 – SONY® FeliCa® (Hong Kong Octopus)
- Rosslare's CS-ECA NFC app (HCE) for Android smartphones



**Note** This list is continuously updated. For the latest compatibility list, contact your sales representative.

The standard reader outputs the Wiegand CSN data in Wiegand 26-Bit format. Other Wiegand formats are selectable using the *CS-CCT Configuration Card Tool for the DR-6255* application.

### 1.1 Installation Kit

The installation kit consists of the following items to be used during the installation procedure:

- 1 self-adhesive mounting label template
- 2 mounting screws and 2 screw anchors
- 1 Torx key tool
- 1 Torx security screw

Figure 1: AY-R6255



## 2. Technical Specifications

### 2.1 Electrical Characteristics

<b>Power Supply Type</b>	Regulated
<b>Operating Voltage Range</b>	8 to 16 VDC
<b>Current @ 12 V</b>	Standby: 160 mA Max: 180 mA
<b>Read Range*</b>	5 cm (2 in.)
<b>LED/Buzzer Controls</b>	Dry Contact, N.O.
<b>Tamper Output</b>	Open collector, active low, max. sink current 16 mA
<b>Maximum Cable Distance to Controller</b>	Wiegand: 150 m (500 ft) with 18-AWG cable OSDP (RS-485): 1,200 m (4,000 ft) with 2x2 18-AWG twisted shielded cable

\* 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.

### 2.2 Environmental Characteristics

<b>Operating Temp. Range</b>	-35°C to 66°C (-31°F to 150°F)
<b>Operating Humidity Range</b>	0 to 95% (non-condensing)
<b>Outdoor Usage</b>	Weather-resistant, UV-resistant, meets IP65, epoxy-potted, suitable for indoor and outdoor use

### 2.3 Physical Characteristics

<b>Dimensions (H x W x D)</b>	120.0 x 89.0 x 20 mm ( 4.7 x 3.5 x 0.8 in.)
<b>Weight</b>	208 g (7.3 oz)

## 3. Wiring Instructions

The unit is supplied with a 10-conductor 57-cm (22-in.) pigtail with exposed wires coated with solder.

**To connect the reader to the controller:**

- Select the appropriate connections according to Table 1.
- Prepare the controller cable by cutting its jacket back about 3 cm (1¼") and strip the insulation from the wires about 1.3 cm (½").
- Splice the reader's pigtail wires to the corresponding controller wires and cover each joint with insulating tape.
- If the tamper output is being utilized, connect the purple wire to the correct input on the controller.
- Trim and cover all unused conductors.

- Note**
- The individual wires from the reader are color coded according the Wiegand standard.
  - When using a separate power supply for the reader, this supply and that of the controller must have a common ground.
  - The reader's cable shield wire should be preferably attached to an earth ground, or a signal ground connection at the panel, or power supply end of the cable.

Table 1: Wiring

Wire Color	Function
Red	Power
Black	Ground
Green	Data 0 / Data
White	Data 1 / Clock
Orange	Green LED Control*
Brown	Red LED Control*
Purple	Tamper Output
Yellow	Buzzer Control*
Blue	RS-485 – A / OSDP**
Gray	RS-485 – B / OSDP**

\* These wires have programmable functions that may be adjusted by presenting a configuration card within 10 seconds upon powering on the unit. See the *CS-CCT Configuration Card Tool for the DR-6255 Software Manual* for how you can create a configuration card.

\*\* RS-485 is used for firmware update.

## 4. OSDP Operation

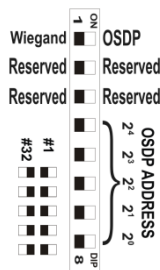
**Note**

- In OSDP mode, all control lines (Inputs/Outputs) are disabled.
- In OSDP mode, if a connection is not established or lost with the controller, the LED flashes orange continuously.

The AY-R6255 reader is compatible with all reader-related OSDP commands. The reader address is set using DIP switches located inside the reader. Release the screw on the bottom of the reader to remove the front bezel to access the DIP switches inside the reader.

Figure 2 shows the DIP switch settings, which are described below.

**Figure 2: DIP Switch Settings**



- **DIP Switch 1**  
This switch is used to select the reader output (Wiegand or OSDP):
  - Off = Wiegand
  - On = OSDP
- **DIP Switch 2**  
This switch is reserved for future use.
- **DIP Switch 3**  
This switch is reserved for future use.
- **DIP Switches 4 to 8**  
These switches set the address of the reader for OSDP protocol. DIP Switch 4 is MSB and DIP Switch 8 is LSB. The address is the DIP switch state +1.  
Examples:
  - All the DIP switches in Off position, address = 1
  - All the DIP switches in On position, address = 32

## Declaration of Conformity

FCC ID = GCD-AYR6255

- 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.
  - This device must accept any interference received, including interference that may cause undesired operation.
- Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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.

## Limited Warranty

The full ROSSLARE Limited Warranty Statement is available in the Quick Links section on the ROSSLARE website at [www.rosslaresecurity.com](http://www.rosslaresecurity.com). Rosslare considers any use of this product as agreement to the Warranty Terms even if you do not review them.

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