

# Multi-Smart™ Readers

125 kHz, 13.56 MHz,  
Bluetooth and NFC

## Datasheet



AY-K35

### Introduction

The innovative Multi-Smart™ Readers from Rosslare support multiple technologies: BLE (Bluetooth Low Energy), NFC, 125 kHz and 13.56 MHz RFID. They are ideal for general purpose access control installations that want to take advantage of the latest convenience and flexibility of mobility.

### General Description

Multi-Smart Readers are especially suited for sites that need more than one RFID credential or use more than one CSN Select credential. The readers support ASK and FSK for 125 kHz and 13.56 MHz smartcards to read the RFID transponder UID and output the ID to the control panel. This feature supports all RFID types in one reader without updating legacy credentials in the system.

The Multi-Smart™ Readers read Rosslare BLE-ID™ and NFC-ID™ credentials generated by the BLE-ID™ mobile app or the mobile credentials SDK that run on a user's iOS or Android smartphone. NFC-ID can be generated from the Rosslare BLE-ID app or SDK for each NFC supported Android smartphone. This feature leverages the users' smartphones as credentials and gives a fast and easy way to entry-level Bluetooth access control.

The Multi-Smart Readers have a special MIFARE Classic EV1 Sector read capability that keeps the ID hidden within a secure sector, resulting in a higher level of security than CSN. Multi-Smart Readers is attractive for customers wishing to transition to MIFARE classic EV1 sector crypto technology.

The Multi-Smart 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.

Multi-Smart Readers have a capacitive touch button on the surface. The reader touch button output is in Wiegand or OSDP format and can be assigned to tasks such as Door-Bell (press for doorbell), Exit (press to exit), Help (press for assistance), and Turn on lights. This output can be connected to a controller input and can be assigned a function or linked to any required output.

With simple installation, the Multi-Smart Readers lets you easily manage add-on installations and technology migrations. They fit all architectural designs and are suitable for outdoor use.

### Main Features

- Supports 125 kHz and 13.56 MHz frequencies and contactless operation with BLE and NFC<sup>1</sup> technologies using Rosslare BLE-ID mobile app or SDK.
- Supports OSDP V2 including secure channel using AES 128 bit encryption for improved security with an extended range, up to 32 addresses
- Fully programmable using Rosslare BLE-Admin app
- Touch button for different functions
- IP68 water and dust resistant, IK09 vandal resistant
- Antimicrobial technology reduces level of microbes on reader by up to 99.8%
- Easy installation in all environments with the included mounting template and installation kit
- Sleek and modern design, superior mechanics

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

## Specifications

ELECTRICAL SPECIFICATIONS	
Operating Voltage Range	8 – 16 VDC
Current at 12 VDC	Maximum: 300 mA @ 12 VDC
BLE Read Range*	12 m (39.3 ft) (line of sight)
RFID and NFC Read Range**	Contactless: 13.56 MHz: 5 cm (1.97 in.), 125 kHz: 8 cm (20.32 in.)
LED/Buzzer Input	Tri-color LED on the lights bars, white-color LED on the touch button, Buzzer, Hold @ Active Low
Tamper / Touch Button Output	Optical tamper, open collector, active low, max. sink current 20 mA @12 VDC, 10 mA@5 VDC. Current limit: 500 Ω series resistance
RFID	125kHz ASK 125kHz FSK - supports Wiegand 26, 32, 34, 35, 37, 40, 48 bit 13.56MHz: ISO14443A (UID): MIFARE® Classic® EV1: Sector Read, MIFARE® Ultralight® Nano /Ultralight EV1/ Ultralight C, MIFARE Classic® / Classic EV1, MIFARE Plus® S / SE / X / EV1, MIFARE DESFire® EV1, LEGIC ISO14443B (UID), ISO15693 HID®, iClass®, PicoPass, iCode, LEGIC ISO18092 (UID): SONY® FeliCa®
Communication and Controller Connection	Wiegand 26-64 bit***, Clock & Data, and OSDP Secure Channel V2 via 11-wire Pigtail (58 cm / 22.8 in.)
ENVIRONMENTAL SPECIFICATIONS	
Operating Environment	IP68, UV-resistant, epoxy-potted, suitable for indoor and outdoor use
Vandal Resistance	IK09
Operating Temperature Range	-35°C to 66°C (-31°F to 150°F)
Operating Humidity Range	0% to 95% (non-condensing)
Antimicrobial efficacy	Inhibits bacteria proliferation by up to 99.8%
MECHANICAL SPECIFICATIONS	
Material Type	Tough polycarbonate plastic
Enclosure Dimensions (H x W x D)	88 × 48 × 24 mm (3.46 x 1.89 x 0.94 in.)
Weight	121 g (4.27 oz)

**System Components:** Multi-Smart™ Readers 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

\* Read range is different for different smartphones and also is affected by a variety of factors.

\*\* Read range listed is statistical mean rounded to nearest centimeter, measured in open air using Rosslare MIFARE Classic EV1 and EM (ISO card). Form factor, technology, and environmental conditions, including metallic mounting surface, can degrade read range performance; plastic spacers are recommended to improve performance on metallic mounting surfaces.

\*\*\* Standard readers output the Wiegand CSN data in 26-bit format by default. Other formats such as Clock & Data and Wiegand 32-, 32R-, 34-, 40-, 56-, and 64-bit can be selected using the CS-HCT Hardware Configuration Tool for the DR-6255 application. Custom formats are available upon request.



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