

# MIFARE DESFire EV1 Credentials

## Datasheet



### Introduction

Rosslare offers a large selection of high-quality, long-lasting credentials that are compatible with today's most popular devices and are recognized for their high number of possible reads. The MIFARE® DESFire® EV1 smart card credentials have the highest level of security and are ideally suited for a variety of applications and environments where security is important while keeping the solution cost-effective.

### General Description

The MIFARE DESFire EV1 smart card credentials use AES-128 (Advanced Encryption Standard) for authentication, encryption, and data integrity.

The smart card credentials are available as an ISO card or in a key FOB form factor. For the ISO card, a photo ID image can be directly printed on the card by inkjet or it can be added via thermal transfer. For a key FOB, programmable laser engraving of an ID and the facility code is available.

### Open to Secure

The Rosslare's O2S platform comprises a highly secured line of card readers compliant with existing access control systems. The platform allows a choice between open key and preconfigured readers and credentials. The open key and credential management solution for MIFARE DESFire® EV1 includes the tools to configure everything in-house in order to secure a facility and access by managing reader and credentials settings. The preconfigured readers and credentials have distinct custom keys and security configuration that are made during production. This helps to further reduce the cost of ownership. Thus, Rosslare MIFARE DESFire EV1 credentials come preformatted

and preprogrammed with Rosslare Open to Secure (O2S) technology, or the credentials can be unprogrammed.

Using the Rosslare CP-R27 desktop programmer and AS-B01 software configuration tool, customers can make configuration cards for the reader settings and quickly make MIFARE DESFire® EV1 credentials with user data.

### Main Features

- 13.56 MHz Smart card technology
- 2 kB/4 kB/8 kB memory
- Flexible memory structure
- AES-128 for authentication, encryption, and data integrity
- Fast data transfer speed up to 848 kbit/s
- ISO card form factor with optional inkjet printing
- Shark, twist, and ring key fob form factors with optional laser engraving

## Catalog List - MIFARE DESFire EV1 - Not programmed

Part Number	Type	Memory Size	Form Factor	Credential Format	ID Printing
AT-V2S-000-0000	Not Programmed	2K	ISO Card (PVC)	Not Programmed	No ID Printed
AT-V4S-000-0000		4K			
AT-V8S-000-0000		8K			
AT-V2K-000-0SB0	Not Programmed	2K	Key FOB (Shark)	Not Programmed	No ID Printed
AT-V4K-000-0SB0		4K			
AT-V8K-000-0SB0		8K			
AT-V2K-000-0RB0	Not Programmed	2K	Key FOB (Ring)	Not Programmed	No ID Printed
AT-V4K-000-0RB0		4K			
AT-V8K-000-0RB0		8K			
AT-V2K-000-0TB0	Not Programmed	2K	Key FOB (Twist)	Not Programmed	No ID Printed
AT-V4K-000-0TB0		4K			
AT-V8K-000-0TB0		8K			

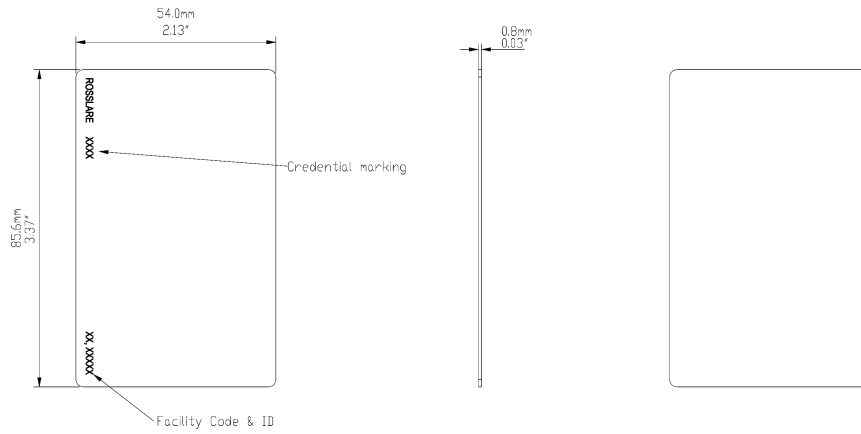
## Catalog List - MIFARE DESFire EV1 - Programmed with Rosslare O2S Keys

Part Number	Type	Memory Size	Form Factor	Credential Format	ID Printing
RT-V2S-26A-3000	O2S Rosslare Keys	2K	ISO Card (PVC)	Rosslare Wiegand 26-bit	Inkjet - FC & Card ID (decimal)
RT-V4S-26A-3000		4K			
RT-V8S-26A-3000		8K			
RT-V2S-38A-3000	O2S Rosslare Keys	2K	ISO Card (PVC)	Wiegand 38-bit (Rosslare Proprietary)	Inkjet - FC & Card ID (decimal)
RT-V4S-38A-3000		4K			
RT-V8S-38A-3000		8K			
RT-V2K-26A-7SB0	O2S Rosslare Keys	2K	Key FOB (Shark)	Rosslare Wiegand 26-bit	Laser Engraving - FC & Card ID (decimal)
RT-V4K-26A-7SB0		4K			
RT-V8K-26A-7SB0		8K			
RT-V2K-38A-7SB0	O2S Rosslare Keys	2K	Key FOB (Shark)	Wiegand 38-bit (Rosslare Proprietary)	Laser Engraving - FC & Card ID (decimal)
RT-V4K-38A-7SB0		4K			
RT-V8K-38A-7SB0		8K			
RT-V2K-26A-7RB0	O2S Rosslare Keys	2K	Key FOB (Ring)	Rosslare Wiegand 26-bit	Laser Engraving - FC & Card ID (decimal)
RT-V4K-26A-7RB0		4K			
RT-V8K-26A-7RB0		8K			
RT-V2K-38A-7RB0	O2S Rosslare Keys	2K	Key FOB (Ring)	Wiegand 38-bit (Rosslare Proprietary)	Laser Engraving - FC & Card ID (decimal)
RT-V4K-38A-7RB0		4K			
RT-V8K-38A-7RB0		8K			
RT-V2K-26A-7TB0	O2S Rosslare Keys	2K	Key FOB (Twist)	Rosslare Wiegand 26-bit	Laser Engraving - FC & Card ID (decimal)
RT-V4K-26A-7TB0		4K			
RT-V8K-26A-7TB0		8K			
RT-V2K-38A-7TB0	O2S Rosslare Keys	2K	Key FOB (Twist)	Wiegand 38-bit (Rosslare Proprietary)	Laser Engraving - FC & Card ID (decimal)
RT-V4K-38A-7TB0		4K			
RT-V8K-38A-7TB0		8K			

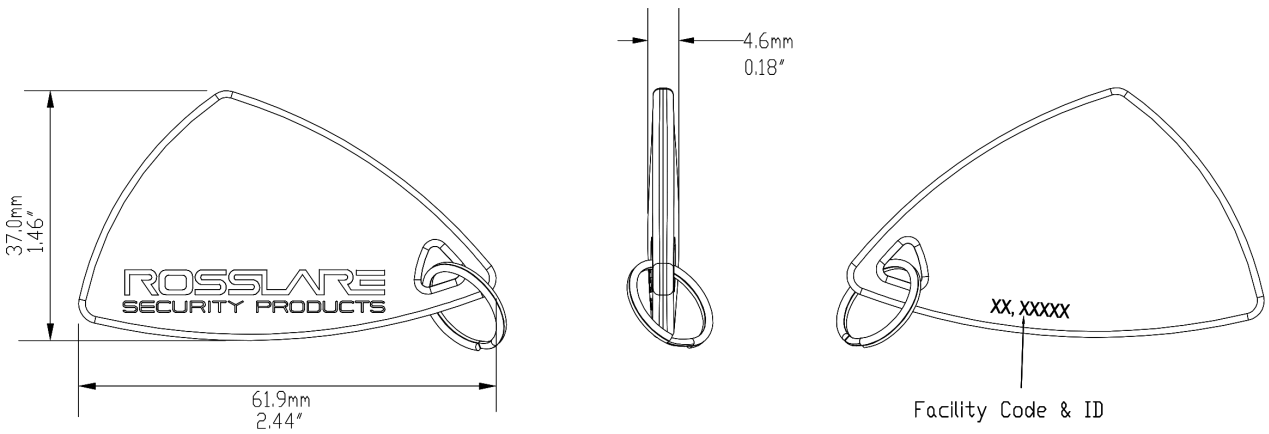
## Technical Specifications

OPERATING	ISO Card	Key FOB (Shark)	Key FOB (Ring)	Key FOB (Twist)
Frequency	13.56 MHz	13.56 MHz	13.56 MHz	13.56 MHz
Read Range	Within 30 mm (1.18 in.)	Within 20 mm (0.79 in.)	Within 20 mm (0.79 in.)	Within 20 mm (0.79 in.)
ENVIRONMENTAL	ISO Card	Key FOB (Shark)	Key FOB (Ring)	Key FOB (Twist)
Operating Temperature Range	-10°C to 50°C (14°F to 122°F)	-20°C to 50°C (-4°F to 122°F)	-20°C to 50°C (-4°F to 122°F)	-20°C to 50°C (-4°F to 122°F)
Operating Humidity Range	0% to 90% (non-condensing)	0% to 90% (non-condensing)	0% to 90% (non-condensing)	0% to 90% (non-condensing)
Operating Storage Range	-20°C to 50°C (-4°F to 122°F)	-20°C to 50°C (-4°F to 122°F)	-20°C to 50°C (-4°F to 122°F)	-20°C to 50°C (-4°F to 122°F)
PHYSICAL	ISO Card	Key FOB (Shark)	Key FOB (Ring)	Key FOB (Twist)
Material Type	PVC	PC	PC	PC
Color	White	Black	Black	Black
Surface Finish	Glossy	EDM Texture	EDM Texture	EDM Texture
Dimensions (H x W x D)	85.6 × 54.0 × 0.8 mm (3.37 x 2.13 x 0.03 in.)	37.0 × 61.9 × 4.6 mm (1.46 x 2.44 x 0.18 in.)	50.1 × 41.0 × 6 mm (1.97 x 1.61 x 0.24 in.)	44.0 × 35.0 × 8.1 mm (1.73 x 1.38 x 0.32 in.)
Weight	5.7 g (0.2 oz)	4.7 g (0.2 oz)	3.8 g (0.1 oz)	5.9 g (0.2 oz)

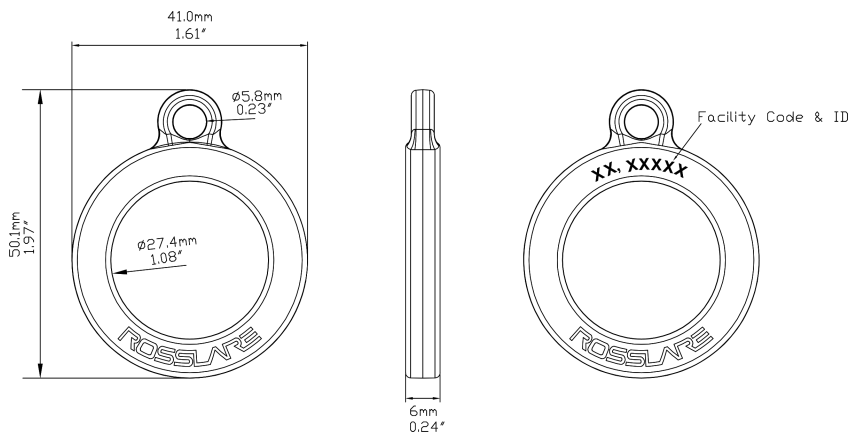
**ISO Card**



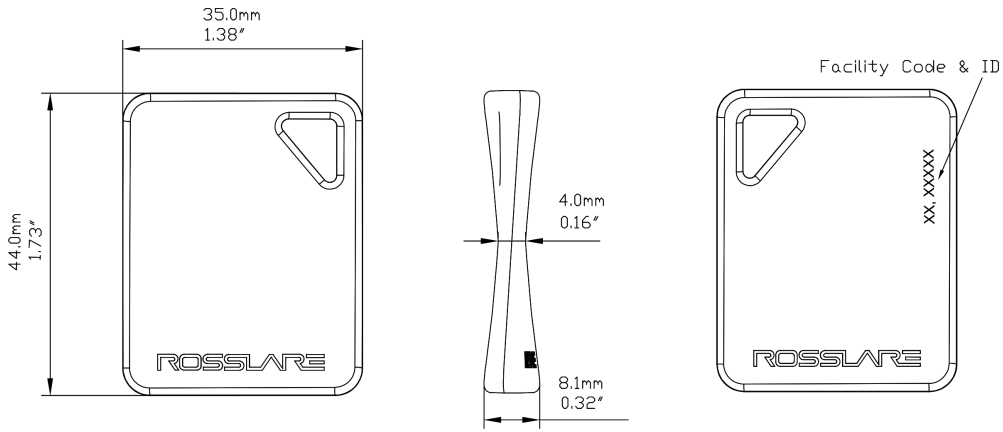
**Key FOB (Shark)**



**Key FOB (Ring)**



Key FOB (Twist)



• EN ISO 13485



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