

# MIFARE Plus 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 Plus<sup>®</sup> smart card credentials are available in two versions: MIFARE Plus<sup>®</sup> S and MIFARE Plus<sup>®</sup> X for 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 Plus S and MIFARE Plus X 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 inject or it can be added via thermal transfer. For a key FOB, programmable laser engraving of an ID or the facility is available.

### Open to Secure (O2S)

The Rosslare's O2S platform comprises a highly secured line of card readers compliant with existing access control systems. The platform allows readers and credentials to be preconfigured with distinct custom keys and security configuration during production. This helps to further reduce cost of ownership. Thus, Rosslare MIFARE Plus credentials come preformatted and preprogrammed with Rosslare Open to Secure (O2S) technology, or the credentials can be unprogrammed.

### Main Features

- Open architecture
- 13.56 MHz Smart card technology
- 2 kB/4 kB memory (EEPROM)
- Programmable fixed memory structure compatible with MIFARE Classic 1K and MIFARE Classic 4K
- 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 Plus S

Part Number	Type	Memory Size	Form Factor	Credential Format	ID Printing
AT-P2S-000-0000	Not Programmed	2K	ISO Card (PVC)	Not Programmed	No ID Printed
AT-P4S-000-0000		4K			
RT-P2S-26A-3000	O2S Rosslare Keys	2K	ISO Card (PVC)	Wiegand 26-bit	Inkjet - FC & Card ID (decimal)
RT-P4S-26A-3000		4K			
RT-P2S-38A-3000	O2S Rosslare Keys	2K	ISO Card (PVC)	Rosslare Wiegand 38-bit	Inkjet - FC & Card ID (decimal)
RT-P4S-38A-3000		4K			
AT-P2K-000-0SB0	Not Programmed	2K	Key FOB (Shark)	Not Programmed	No ID Printed
AT-P4K-000-0SB0		4K			
RT-P2K-26A-7SB0	O2S Rosslare Keys	2K	Key FOB (Shark)	Wiegand 26-bit	Laser Engraving - FC & Card ID (decimal)
RT-P4K-26A-7SB0		4K			
RT-P2K-38A-7SB0	O2S Rosslare Keys	2K	Key FOB (Shark)	Rosslare Wiegand 38-bit	Laser Engraving - FC & Card ID (decimal)
RT-P4K-38A-7SB0		4K			
AT-P2K-000-0RB0	Not Programmed	2K	Key FOB (Ring)	Not Programmed	No ID Printed
AT-P4K-000-0RB0		4K			
RT-P2K-26A-7RB0	O2S Rosslare Keys	2K	Key FOB (Ring)	Wiegand 26-bit	Laser Engraving - FC & Card ID (decimal)
RT-P4K-26A-7RB0		4K			
RT-P2K-38A-7RB0	O2S Rosslare Keys	2K	Key FOB (Ring)	Rosslare Wiegand 38-bit	Laser Engraving - FC & Card ID (decimal)
RT-P4K-38A-7RB0		4K			
AT-P2K-000-0TB0	Not Programmed	2K	Key FOB (Twist)	Not Programmed	No ID Printed
AT-P4K-000-0TB0		4K			
RT-P2K-26A-7TB0	O2S Rosslare Keys	2K	Key FOB (Twist)	Wiegand 26-bit	Laser Engraving - FC & Card ID (decimal)
RT-P4K-26A-7TB0		4K			
RT-P2K-38A-7TB0	O2S Rosslare Keys	2K	Key FOB (Twist)	Rosslare Wiegand 38-bit	Laser Engraving - FC & Card ID (decimal)
RT-P4K-38A-7TB0		4K			

## Catalog List - MIFARE Plus X

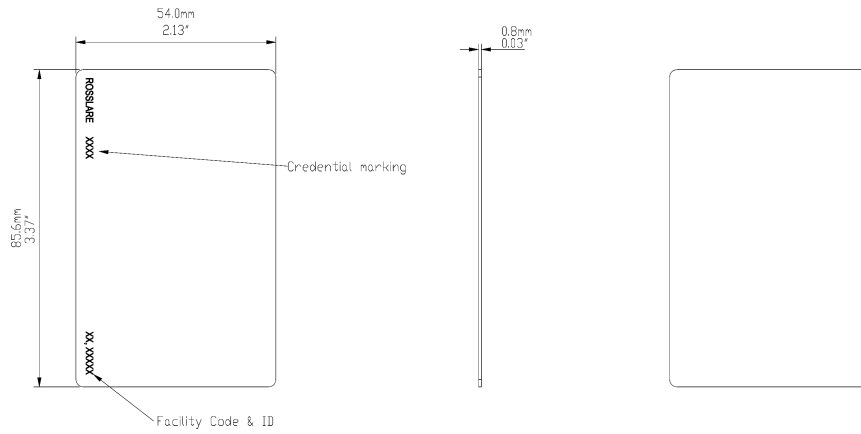
Part Number	Type	Memory Size	Form Factor	Credential Format	ID Printing
AT-X2S-000-0000	Not Programmed	2K	ISO Card (PVC)	Not Programmed	No ID Printed
AT-X4S-000-0000		4K			
RT-X2S-26A-3000	O2S Rosslare Keys	2K	ISO Card (PVC)	Wiegand 26-bit	Inkjet - FC & Card ID (decimal)
RT-X4S-26A-3000		4K			
RT-X2S-38A-3000	O2S Rosslare Keys	2K	ISO Card (PVC)	Rosslare Wiegand 38-bit	Inkjet - FC & Card ID (decimal)
RT-X4S-38A-3000		4K			
AT-X2K-000-0SB0	Not Programmed	2K	Key FOB (Shark)	Not Programmed	No ID Printed
AT-X4K-000-0SB0		4K			
RT-X2K-26A-7SB0	O2S Rosslare Keys	2K	Key FOB (Shark)	Wiegand 26-bit	Laser Engraving - FC & Card ID (decimal)
RT-X4K-26A-7SB0		4K			
RT-X2K-38A-7SB0	O2S Rosslare Keys	2K	Key FOB (Shark)	Rosslare Wiegand 38-bit	Laser Engraving - FC & Card ID (decimal)
RT-X4K-38A-7SB0		4K			
AT-X2K-000-0RB0	Not Programmed	2K	Key FOB (Ring)	Not Programmed	No ID Printed
AT-X4K-000-0RB0		4K			
RT-X2K-26A-7RB0	O2S Rosslare Keys	2K	Key FOB (Ring)	Wiegand 26-bit	Laser Engraving - FC & Card ID (decimal)
RT-X4K-26A-7RB0		4K			
RT-X2K-38A-7RB0	O2S Rosslare Keys	2K	Key FOB (Ring)	Rosslare Wiegand 38-bit	Laser Engraving - FC & Card ID (decimal)
RT-X4K-38A-7RB0		4K			
AT-X2K-000-0TB0	Not Programmed	2K	Key FOB (Twist)	Not Programmed	No ID Printed
AT-X4K-000-0TB0		4K			
RT-X2K-26A-7TB0	O2S Rosslare Keys	2K	Key FOB (Twist)	Wiegand 26-bit	Laser Engraving - FC & Card ID (decimal)
RT-X4K-26A-7TB0		4K			
RT-X2K-38A-7TB0	O2S Rosslare Keys	2K	Key FOB (Twist)	Rosslare Wiegand 38-bit	Laser Engraving - FC & Card ID (decimal)
RT-X4K-38A-7TB0		4K			

## Technical Specifications

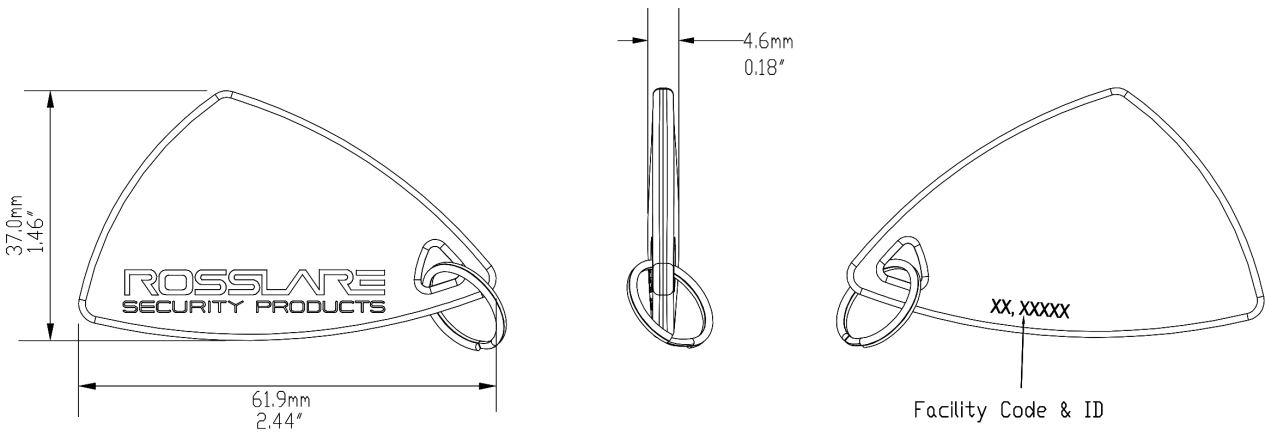
OPERATING	ISO Card	Key FOB (Shark)	Key FOB (Ring)	Key FOB (Twist)
Frequency	13.56 MHz	13.56 MHz	13.56 MHz	13.56 MHz
Read Range*	Within 30 mm (1.18 in.)	Within 20 mm (0.79 in.)	Within 20 mm (0.79 in.)	Within 20 mm (0.79 in.)
ENVIRONMENTAL	ISO Card	Key FOB (Shark)	Key FOB (Ring)	Key FOB (Twist)
Operating Temperature Range	-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)
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)

\*Measured using a Rosslare proximity card or equivalent. Range also depends on installation environment, reader voltage, and proximity to metal.

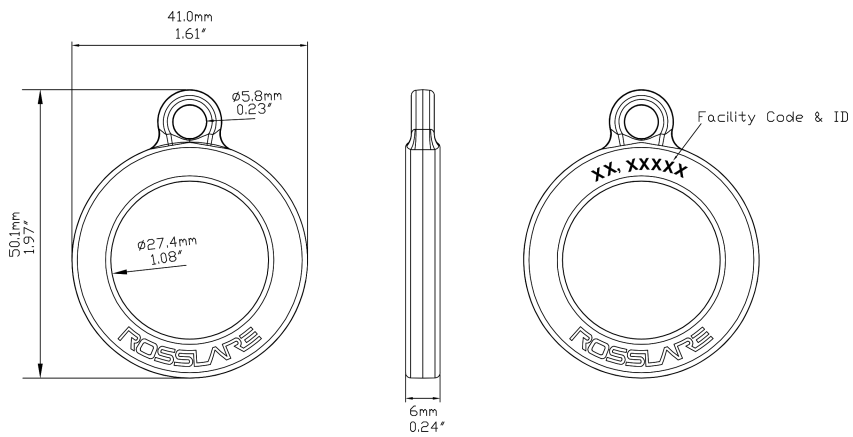
**ISO Card**



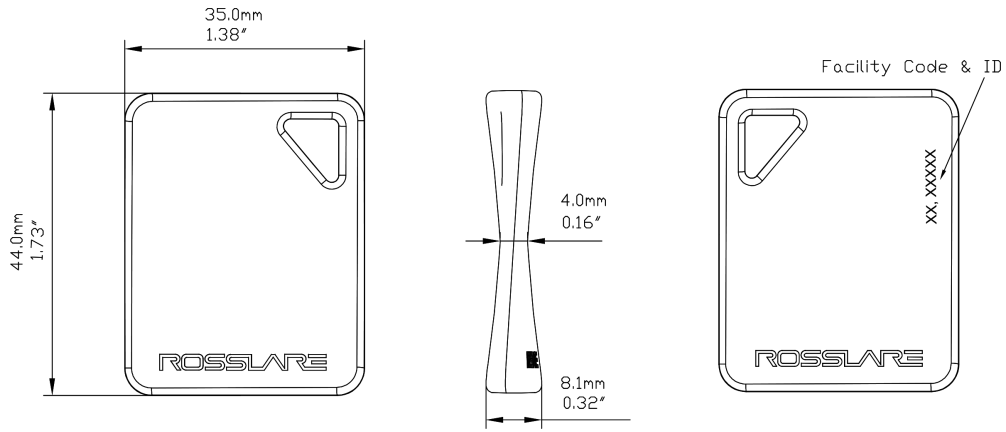
**Key FOB (Shark)**



**Key FOB (Ring)**



Key FOB (Twist)



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