

IMPROX MR

ImproX Micro Remote Reader

INTRODUCTION

The ImproX Micro remote Reader (MR) is a small compact Read/write unit designed for use in conjunction with the ImproX DT Door Terminal or ImproX PT Portal Terminal within the IXP200, 300 and 400 Access Control Systems or in OEM applications.

The Remote Reader is intended for indoor or outdoor use.

APPLICATIONS

- Access control terminal.
- Vending terminal.
- OEM custom requirements.



FEATURES

- Read/write tag capability for various tag types: Slim Tags (Read Only), Omega Tags (Read Only), WriTag128 and WriTag2048.
- A single bi-coloured red/green LED, the use of which is configurable via the communications protocol.
- A buzzer.
- An external TTL terminal communications bus interface, for connection to an ImproX DT or ImproX PT unit.

SPECIFICATIONS

PHYSICAL SPECIFICATIONS	Dimensions	L = 88 mm (3.46"). W = 54 mm (2.13"). H = 25 mm (0.98").
	Mass	130g. (4.58 oz).
Material	ABS plastic.	
Colour	Dark grey.	
ENVIRONMENTAL SPECIFICATIONS	Temperature Operating	-25°C to +60°C (-13°F to +140°F).
	Temperature Storage	-40°C to +80°C (-40°F to +176°F).

Humidity Range	0 to 95% relative humidity at +40°C (+104°F) non-condensing.
EMC	EN 55024.
Electrostatic Discharge	EN 61000-4-2
Electrical Fast Transients	EN 61000-4-4.
Surge Immunity	EN 61000-4-5.
Radiated Susceptibility	EN 61000-4-3.
Conducted Susceptibility	EN 61000-4-6.
Voltage Dips and Interruptions	EN 61000-4-11.
Dust and Splash Resistance	This unit is manufactured in accordance with a dust and splash environment similar to that of IP30.
Drop Endurance	2m drop (in packaging).

NOTE :

The tests were performed with the ImproX MR Remote Reader connected to an ImproX PT Portal Terminal.

ELECTRICAL SPECIFICATIONS
Power Requirements

Voltage	3,5 V DC to 5,5 V DC, polarity sensitive.
Current	75 mA at 5 V DC, indicators all off. 100 mA at 5 V DC, indicators all on.
Power Input Protection	Reverse polarity protection is provided on the unit.
Permissible Input Supply Ripple Voltage (maximum)	1 Vpp at 50 Hz.

Nominal Reading Range	60 mm to 860 mm (tag type dependent - see Table 1).
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EEPROM	Retention of authentication keys.
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Remote Bus Port

Baud rate	9 600.
Data format	8 data bits, no parity, 1 stop bit.
Communications Data Format	TTL Full Duplex.
Communications protocol	ImproX Proprietary Protocol.

OPERATOR INTERFACES
Buzzer

Volume	Adjustable in four discrete steps (including off) via the communications protocol.
Tones	Single tone.

Status Indicators

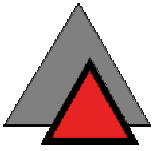
Bi-colour Red/Green LED	The functions are application specific (externally visible).
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TAG READING RANGES

The range at which the unit can read to or write from a tag is dependent on the type of tag and on the material on which a particular unit is mounted. Typical ranges are shown in Table 1 below.

TAG TYPE	TYPICAL RANGE (minimum) (Remote Reader mounted on non-metallic surface)
ISO Credit Card Tag (Slim)	80 mm (3.14")
ImproX Credit Card Tag	80 mm (3.14")
ImproX Keyring Tag	60 mm (2.36")
ISO Credit Card WriTag 128	60 mm (2.36")
ISO Credit Card WriTag 2048	60 mm (2.36")

Table 1: Typical reading ranges



NOTE : Ranges with reader mounted on non-metallic surfaces. Mounting on a metallic surface may decrease the range by up to 15%.

ACCESSORIES

The Terminal is supplied with the following accessories:

- Wall mounting plugs and screws.

INTERNATIONAL STANDARDS

The ImproX MR unit complies with requirements of the following international standards where applicable (tests applicable only when the Remote Reader is connected to an ImproX DT Door Terminal or a PT Port Terminal).

EIA RS-485	Standard for Electrical Characteristics of Generators and Receivers for use in Balanced Digital Multipoint Systems.
EN 55024	Limits and Methods of Measurement of Radio Disturbance Characteristics of Information Technology Equipment.
EN 61000-6-1	Generic Standards-Immunity.
EN 61000-6-3	Generic Standards-Emission.
EN 61000-4-1	Electromagnetic Compatibility (EMC). Part 4: Testing and Measurement Techniques. Section 1: Overview of Immunity Tests. Basic EMC Publication.
EN 61000-4-2	Electromagnetic Compatibility (EMC). Part 4: Testing and Measurement Techniques. Section 2: Electrostatic Discharge Immunity Test. Basic EMC Publication.
EN 61000-4-4	Electromagnetic Compatibility (EMC). Part 4: Testing and Measurement Techniques. Section 4: Electrical Fast Transients / Bursts. Basic EMC Publication.
EN 61000-4-3	Electromagnetic Compatibility (EMC). Part 4: Testing and Measurement Techniques. Section 3: Radiated, Radio-Frequency, Electromagnetic Field Immunity Test.
EN 61000-4-6	Conducted Susceptibility.
EN 61000-4-5	Surge Immunity.
EN 61000-4-11	Voltage Dips and Interruptions.

APPROVALS

CE approved

TAMPER PROOFING

The unit is potted, and is therefore tamper-resistant.

RELATED IMPRO PRODUCTS

The ImproX MR Remote Reader is designed to be used for example in conjunction with the ImproX DT Door Terminal or ImproX PT Portal Terminal.

NOTE: The ImproX PT Portal Terminal will be available in the 3rd quarter of 2002.

ORDERING INFORMATION

The ImproX MR Remote Reader can be ordered separately under the Impro code XMR900-1-0-GB-XX.