

IMPROX KR

ImproX Keypad Remote Reader

INTRODUCTION

The **ImproX (KR) Keypad Remote Reader** is a small compact Read/Write Remote designed for use in conjunction with an ImproX (DT) Door Terminal, ImproX (PT) Portal Terminal or ImproX (TA) Time and Attendance Terminal for use in an IXP200, 300 or 400 Access Control System or in OEM applications. It provides a 12-key alphanumeric keypad to permit the entry of PIN-Codes, Personal Access Codes (PAC) and Reason Codes.

The Remote Reader is intended for indoor or outdoor use.



APPLICATIONS

The following are possible uses of the Remote Reader:

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

FEATURES

The ImproX KR provides the following features:

- Read/Write tag capability for various tag types: Slim Tags (Read Only), Omega Tags (Read Only), WriTag 128 (Read/Write) and WriTag 2048 (Read/Write).
- A single bi-coloured red/green LED, the use of which is configurable via the communications protocol.
- A buzzer.
- A 12-button keypad.
- An external TTL Remote communications bus interface, for connection to an ImproX DT, ImproX PT or ImproX TA.

SPECIFICATIONS

PHYSICAL SPECIFICATIONS	
Dimensions	L = 113 mm (4.44 in). W = 81 mm (3.19 in). H = 32 mm (1.26 in).
Approximate Weight	250 g (8.8 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 +60°C (-40°F to +176°F).
Humidity Range	0 to 95% relative humidity at +40°C (+104°F) non-condensing.
Radiated/Conducted Emission	EN 55022.
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.
Power Frequency Magnetic Field	EN 61000-4-8.
Dust and Splash Resistance	This Reader is manufactured in accordance with a dust and splash environment similar to that of IP53.
Drop Endurance	2 m (6.56 ft) drop (in packaging).

NOTE :

These tests were performed with the ImproX KR Remote Reader connected to an ImproX PT Portal Terminal.

ELECTRICAL SPECIFICATIONS

Supply Voltage	5 V DC, polarity sensitive.	
Power Requirements (Maximum)	Current (mA)	Power (W)
	140	0.7
Permissible Input Supply Ripple Voltage (maximum)	1 Vpp at 50 Hz.	
Power Input Protection	Reverse polarity protection is provided on the Reader.	
Nominal Read/Write Range	60 mm to 100 mm (2.36 in to 3.94 in) (tag type dependent see table 1).	
EEPROM	Authentication keys.	
Terminal Bus Port		
Electrical Interface	TTL Full Duplex.	
Baud Rate	9 600.	
Data Format	8 data bits, no parity, 1 stop bit.	
Communications Protocol	ImproX Proprietary Protocol.	

OPERATOR INTERFACES

Keypad	
Keys	12 alphanumeric keys.
Backlighting	Turned on and off via the communications protocol.
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).

TAG READING RANGES

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

TAG TYPE	TYPICAL RANGE (minimum) (Remote Reader mounted on non-metallic surface)
ISO Credit Card Tag (Slim)	100 mm (3.94 in)
ImproX Credit Card Tag	100 mm (3.94 in)
ImproX Key Ring Tag	60 mm (2.36 in)
ISO Credit Card WriTag 128	60 mm (2.36 in)
ISO Credit Card WriTag 2048	60 mm (2.36 in)
NOTE: <i>Mounting the Reader on a metallic surface will decrease the read/write range by up to 15%.</i>	

Table 1: Typical Read/Write Ranges

ACCESSORIES

The Reader is supplied with the following accessories:

- Wall mounting plugs and screws.

INTERNATIONAL STANDARDS

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

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-Emissions.
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.

APPROVALS

CE Approval: Approved.



TAMPER PROOFING

The Reader is potted, and therefore is tamper-resistant. Any wire cut between the ImproX DT, ImproX PT or ImproX TA and the ImproX KR will result in an alarm being sent to the Controller.

RELATED IMPRO PRODUCTS

The ImproX KR Remote Reader is designed to be used in conjunction with the ImproX (DT) Door Terminal, ImproX (PT) Portal Terminal or the ImproX (TA) Time and Attendance Terminal.

ORDERING INFORMATION

The ImproX KR Remote Reader can be ordered, under the Impro code XKR900-1-0-GB-XX.

APPLICABILITY OF THIS CATALOGUE

The last two digits of the standard Impro stock code indicate the issue status of the item concerned.

This catalogue is applicable to the ImproX KR Keypad Remote Reader, code XKR900-1-0-GB-01

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