



ImproX ER

Product Specification Catalogue

The **ImproX (ER) Extended Range Terminal** is available, in an Aluminium Cabinet with one or two external Antennas.

The ImproX ER is ideally suited for use as an access control Terminal or for OEM custom requirements where extended read range is necessary (livestock identification, vehicle identification or product and asset management). The Terminal is designed to be used as an access point and will interface into the IXP300 and IXP400 Access Control Systems.

Due to its extended read range, this Terminal is capable of being used in situations where the use of a normal short-range Passive Proximity Reader would not be effective.

A simple, auto-tuning procedure allows the Terminal to be placed in various locations where different amounts of metal are found.

The Terminal is enclosed in an Aluminium Cabinet, and is intended for indoor use only. The ImproX ER is, NOT waterproof.

Key Features

General

- Tag read function for the following read-only Tags: Slim Tags, Omega Tags and ISO Animal Tags.
- Certain Access Control situations (as a 'hands free' door Terminal).
- For OEM developments.
- Interfaces with the IXP300 and IXP400 Access Control Systems.
- RS485 Terminal Bus interface.
- Two Digital Inputs.
- Single bi-colour Red or Green Status LED.
- Single Relay, SPDT NO, NC and Common contacts provided.

ImproX (ER)

Extended Range Terminal & External Antenna(s)

XER901-3-0-GB-XX	XER902-3-0-GB-XX	XER903-3-0-GB-XX
XER904-3-0-GB-XX	XER905-3-0-GB-XX	

General (Continued)

- Internal, low intensity Red and Green LEDs indicating data transfer on the RS485 Terminal Bus.
- Internal, low intensity Green LEDs indicating auto-tuning status.
- Buzzer, four discrete volume levels including "off".
- Operation from 10 V to 16 V DC.
- Remote Firmware upgrade facility while installed on site.

Reading Range (Tag)

Tag Type	Typical Range (Minimum) (mm)	Typical Range (Minimum) (in)
ISO Credit Card (Slim)	500	19.68
ISO Animal Bolus	800	31.49
Ring Tag	250	9.84
Sheep Tag	600	23.62
200 mm Round Tag	1 200	47.24
100 mm Round Tag	800	31.49
Tear Drop Tag	250	9.84

NOTE: Tag ranges stated are for one Antenna only.

Physical Specifications

ImproX (ER) Extended Range Terminal

Length	: 150 mm (5.90 in).
Width	: 116 mm (4.56 in).
Height	: 51 mm (2.00 in).
Approximate Weight	: 430 g (15.16 oz).
Cabinet Material	: Aluminium.
Colour	: Black.

ImproX ER 350 mm x 350 mm Fibreglass Antenna

Length	: 350 mm (13.78 in).
Width	: 350 mm (13.78 in).
Height	: 16 mm (0.63 in).
Approximate Weight	: 630 g (22.20 oz).
Cabinet	: Fibreglass.
Colour	: Black and Satin Nickel.

ImproX ER 400 mm x 400 mm ABS Plastic Antenna

Length	: 400 mm (15.74 in).
Width	: 400 mm (15.74 in).
Height	: 20 mm (0.78 in).
Approximate Weight	: 1.15 kg (2.53 lb).
Cabinet	: ABS Plastic.
Colour	: Dove Grey.



ImproX ER 400 mm x 1 200 mm ABS Plastic Antenna

Length	: 400 mm (15.74 in).
Width	: 1 200 mm (47.24 in).
Height	: 20 mm (0.78 in).
Approximate Weight	: 2.25 kg (4.96 lb).
Cabinet	: ABS Plastic.
Colour	: Black.

ImproX ER 400 mm x 800 mm ABS Plastic Antenna

Length	: 400 mm (15.74 in).
Width	: 800 mm (31.49 in).
Height	: 23 mm (0.90 in).
Approximate Weight	: 1.86 kg (4.10 lb).
Cabinet	: ABS Plastic.
Colour	: Dove Grey.

Environmental Specifications

Operating Temperature	: -25°C to +60°C (-13°F to +140°F).
Storage Temperature	: -40°C to +80°C (-40°F to +176°F).
Humidity Range	: 0 to 95% relative humidity at +40°C (+104°F) non-condensing.

Approvals

CE Approval	: EN 55022, EN55024, IEC61000-4-2, IEC61000-4-3, IEC61000-4-4, IEC61000-4-5, IEC61000-4-6 and IEC61000-4-8.
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FCC Approval	: Pending.
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Dust & Splash Resistance	: Designed to work in an indoor (dry) environment similar to IP30. The ImproX ER is, therefore, NOT sealed against water.
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Drop Endurance	: 1 m (3.28 ft) drop (in packaging).
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Antenna(s)

Operating Temperature	: -25°C to +60°C (-13°F to +140°F).
Humidity Range	: 0 to 95% relative humidity at +40°C (+104°F) non-condensing.

Dust & Splash Resistance (IP591)	: Designed to work in an indoor or outdoor environment similar to IP66. The Antenna(s) is(are), therefore, sealed against water.
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Electrical Specifications

Power

ImproX (ER) Extended Range Terminal

Input Voltage	: 10 V DC to 16 V DC, polarity sensitive.
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<i>Power Requirements</i>	Current (mA)	Power (W)
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Input Voltage 10 V DC	: 500	5
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Input Voltage 16 V DC	: 500	8
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Permissible Input Supply Ripple Voltage (Max)	: 0.5 V PP at 50 Hz.
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Power Input Protection	: Reverse polarity, over-voltage and over-current protection are provided on the Terminal.
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Terminal Bus

Electrical Interface	: RS485, ASCII with 16-bit CRC checking.
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Baud Rates	: 1 200, 2 400, 4 800, 9 600, 19 200, 28 800, 38 400 (default), 57 600 and 76 800 selectable via the Communications Protocol.
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Data Format	: 8 data bits, no parity, 1 stop bit.
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Communications Protocol	: ImproX Secure Communications Protocol.
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Digital Inputs

Input Type	: 2 Dry-contact inputs.
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Protection	: +50 V to -50 V continuous, +80 V to -80 V surge.
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Relays

Relay Output	: 1 Relay, SPDT, with NO, COM and NC contacts.
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Contact Rating	: 12 A at 120 V AC, 6 A at 220 V AC or 12 A at 28 V DC.
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Processor

Type	: 16-bit Micro-controller operating at 16 MHz.
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RAM Memory	: 2 K Byte.
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Flash Memory	: 64 K Byte.
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Antenna(s)

Frequency	: 134.2 kHz.
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Factory Defaults

Baud Rate	: Factory-set to 38 400.
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Mode	: Receive (Slave Mode).
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Buzzer Volume	: Level 3 (maximum).
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Fails Power-on Self-test Beep Codes	: Continuous beep for 2 seconds.
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Passes Power-on Self Test Beep Codes	: Two short beeps of 200 ms duration, separated by a 200 ms inter-beep pause.
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User Interfaces

LED Indicators

Status LED	: Red or Green LED (externally visible).
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Incoming RS485 Data	: Green LED (flashing) (internally visible).
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Outgoing RS485 Data	: Red LED (flashing) (internally visible).
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Auto-tuning Status	: Green LED (internally visible).
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Related Information

For extra information relating to this product refer to the:

- ImproX ER Hardware Installation Manual (XER300-0-0-GB-XX).

Ordering Information

Order the ImproX (ER) Extended Range Terminal or the Antenna(s) using the following Part Numbers:

- XER901-3-0-GB-XX: ImproX (ER) Extended Range Terminal.
- XER902-3-0-GB-XX: ImproX ER 350 mm x 350 mm Fibreglass Antenna.
- XER903-3-0-GB-XX: ImproX ER 400 mm x 1 200 mm ABS Plastic Antenna.
- XER904-3-0-GB-XX: ImproX ER 400 mm x 800 mm ABS Plastic Antenna.
- XER905-3-0-GB-XX: ImproX ER 400 mm x 400 mm ABS Plastic Antenna.

Warranty Details

This product conforms to our Warranty details on www.impro.net.

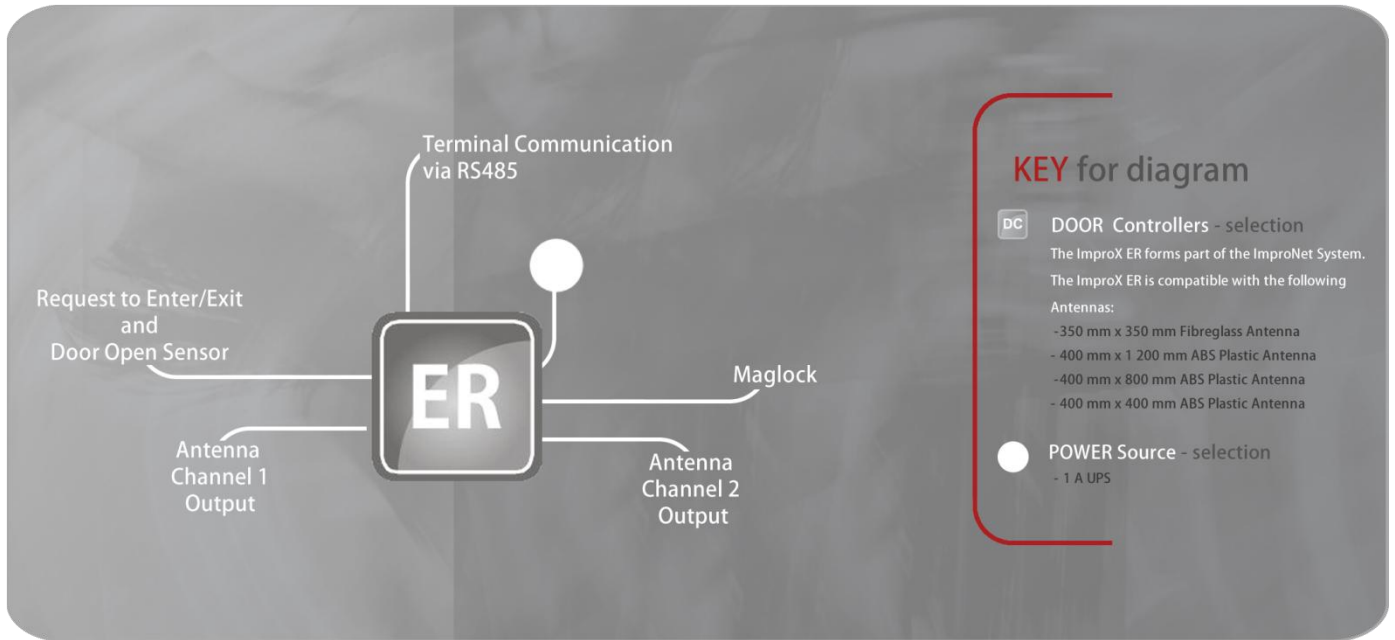


Figure 1: ImproX ER Overview

This Product Specification Catalogue applies to the ImproX (ER) Extended Range Terminal XER901-3-0-GB-03, ImproX ER 350 mm x 350 mm Fibreglass Antenna XER902-3-0-GB-01, ImproX ER 400 mm x 1 200 mm ABS Plastic Antenna XER903-3-0-GB-01, ImproX ER 400 mm x 800 mm ABS Plastic Antenna XER904-3-0-GB-01 and the ImproX ER 400 mm x 400 mm ABS Plastic Antenna XER905-3-0-GB-01.
(The last two digits of the Impro stock code point to the issue status of the document or product).

XER350-0-0-GB-06	Issue 07	July 2011	ImproX ER\Product Specification Catalogue\LATEST ISSUE\ ImprX ER-psc-en-07.docx
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