



# ImproX B-SHO

## Product Specification Catalogue

The **ImproX B-SHO Fingerprint Terminal** is designed to interface with the ImproX (EC<sup>II</sup>) Ethernet Controller or IXP220 Controller in the IXP220 or IXP400i Access Control Systems. Using Fingerprint verification and/or identification, the ImproX B-SHO Fingerprint Terminal provides an advanced effective solution for access control and time and attendance applications.

From the range of available alternative biometric techniques, fingerprint imaging has substantial advantages:

- Each finger is an inalterable physical signature. This signature develops before birth and is preserved until death.
- Highly secure, your fingerprint is unique to you.

In situations where you require heightened security, we recommend installing the Fingerprint Terminal in conjunction with the following accessory:

- IBT930-0-0-GB-XX: ImproX OSCAR Door Control Unit.

## Key Features

- Cost effective Biometric solution with backbone feature support.
- Fully integrated into the IXP220 and ImproNet.
- Fast, accurate and easy to use.
- Suitable for access control and time and attendance applications.
- High quality optical scanner with 500 DPI resolution.
- Supports multiple output interfaces used in the access control industry.
- Supports intelligent distribution of templates.
- Connection to the Controller on the RS485 Bus avoiding unnecessary TCP/IP network infrastructure.
- Compact size for easy installation.
- Extensive, flexible flash memory for data storage.
- Operates using 10 V to 30 V DC at 2 A ±5 %.
- Reads DESFIRE® Tags.

## ImproX B-SHO

### Fingerprint Terminal

IBT910-4-0-GB-XX

IBT920-4-0-GB-XX

IBT930-0-0-GB-XX

## Key Features (Continued)

- Reads MIFARE® Tags.
- IBT920-4-0-GB-XX offers a 12 button numeric keypad.
- Supports multiple modes, including:
  - Fingerprint Only.
  - Fingerprint or Tag.
  - Tag and Fingerprint.
- Heightened security option using the ImproX OSCAR Door Control Unit (IBT930-0-0-GB-XX).

## Reading Range (Tag)

Tag Type	Typical Range (Minimum) (mm)	Typical Range (Minimum) (in)
MIFARE® Credit Card Tag	60	2.36
DESFIRE® Credit Card Tag	60	2.36

*NOTE: Mounting the Terminal on a metallic surface will reduce the Tag reading range slightly.*

## Physical Specifications

### IBT910 ImproX B-SHO Fingerprint Terminal

Length	: 120 mm (5 in).
Width	: 140 mm (6 in).
Height	: 45 mm (2 in).
Approximate Weight	: 324 g (11 oz).
Colour	: Black.

### IBT920 ImproX B-SHO Keypad Fingerprint Terminal

Length	: 120 mm (5 in).
Width	: 140 mm (6 in).
Height	: 49 mm (2 in).
Approximate Weight	: 341 g (12 oz).
Colour	: Black.

### IBT930 ImproX OSCAR Door Control Unit

Length	: 115 mm (5 in).
Width	: 90 mm (4 in).
Height	: 28 mm (1 in).
Approximate Weight	: 267 g (10 oz).
Colour	: 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.



## IBT910 and IBT920 ImproX B-SHO Fingerprint Terminal

Dust & Splash Resistance	: Designed to work in an indoor (dry) environment similar to IP50. The Terminal is, therefore, NOT sealed against water.
Drop Endurance	: 1 m (3 ft) drop (in packaging).

## IBT930 ImproX OSCAR Door Control Unit

Dust & Splash Resistance	: Designed to work in an indoor (dry) environment similar to IP40. The Door Control Unit is, therefore, NOT sealed against water.
Drop Endurance	: 1 m (3 ft) drop (in packaging).

## Electrical Specifications

### Power

Input Voltage	: 10 V to 30 V DC $\pm 5\%$ , polarity sensitive.
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Power Requirements	Current (mA)	Power (W)
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Supply Voltage 10 V DC Terminal only.	: 120	1.2
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Supply Voltage 30 V DC Terminal only.	: 44	1.32
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Supply Voltage 10 V DC Terminal and Door Control Unit.	: 132	1.32
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Supply Voltage 30 V DC Terminal and Door Control Unit.	: 56	1.68
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### RS485/Power Port

Electrical Interface	: RS485.
Default Baud Rate	: 38 400 and 115 200.
Data Format	: 8 Bits, No Parity, 1 Stop Bit.
Communications Protocol	: ImproX Terminal Bus.
Line Termination (RS485)	: Provision is made for line termination.

The following Electrical Specifications apply to the ImproX OSCAR Door Control Unit (IBT930) only:

### Digital Inputs

Input Type	: 2 x Dry-contact inputs.
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Detection Resistance Range	: 750 Ohm (Max).
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Protection Range	: +15 V to -12 V continuous.
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Contact Discharge	: 8 kV (Max).
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Air Discharge	: 15 kV (Max).
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### Relays

Relay Output	: 2 x Relays, each with NO, COM and NC contacts.
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Lock Relay Contact Ratings	: 8 A at 250 V AC, 5 A at 30 V DC.
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Auxiliary Relay Contact Ratings	: 0.5 A at 125 V AC, 1 A at 24 V DC.
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## User Interfaces

### ImproX B-SHO Fingerprint Terminals

#### Buzzer

Volume	: 4-step adjustable volume.
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Tone	: Multiple tones.
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### Keypad (IBT920 only)

Keys	: 12 Numeric Keys.
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**NOTE:** The ImproX B-SHO Keypad Fingerprint Terminal product does not support the use of Reason Codes.

### Scanner

False Rejection Rate	: Typical False Rejection is at 12%. This equates to a finger presentation being rejected 1 in every 8 times. It is possible to achieve better False Rejection Ratios with user education. The Reader's position also affects the results.
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False Acceptance Rate	: < 0.1 %
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### Diagnostic Indicator

Status LED	: Tri-coloured Red, Green or Blue (externally visible).
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### ImproX OSCAR Door Control Unit

#### Diagnostic Indicator

Status LED	: Red (externally visible).
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## Related Information

For extra information relating to this product refer to the:

- ImproX B-SHO Fingerprint Terminal Hardware Installation Manual (IBT300-0-0-GB-XX).

## Ordering Information

Order the ImproX B-SHO Fingerprint Terminal and/or the ImproX OSCAR Door Control Unit using the following Part Numbers:

- IBT910-4-0-GB-XX: ImproX B-SHO Fingerprint Terminal.
- IBT920-4-0-GB-XX: ImproX B-SHO Keypad Fingerprint Terminal.
- IBT930-0-0-GB-XX: ImproX OSCAR Door Control Unit.

## Warranty Details

This product conforms to our Warranty details on [www.impro.net](http://www.impro.net).

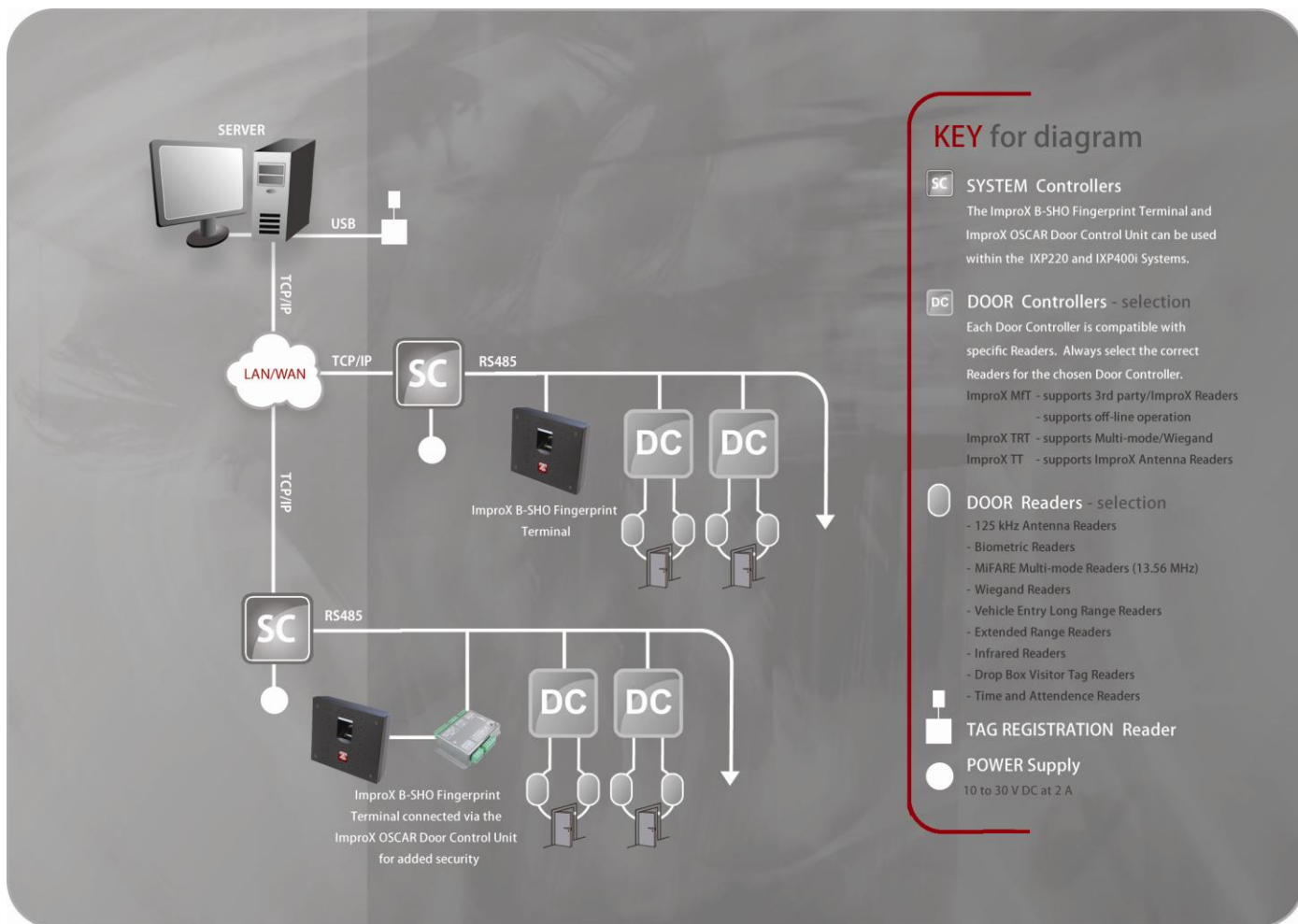


Figure 1: ImproX B-SHO Overview

This Product Specification Catalogue applies to the ImproX B-SHO Fingerprint Terminal, IBT910-4-0-GB-00, IBT920-4-0-GB-00 and the ImproX OSCAR Door Control Unit, IBT930-0-0-GB-00.

(The last two digits of the Impro stock code point to the issue status of the document or product).

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