impro®

MODEL NUMBER: XIC902-1-0-GB-XX

IXP200 CONTROLLER

IXP200 LCD Keypad Controller
INSTALLATION MANUAL

SPECIFICATIONS

Working Environment	Designed to work in an indoor (dry) environment similar to IP40. The Controller is, therefore, NOT sealed against water.	
Input Voltage	10 V DC to 30 V DC.	
Power Requirements	**Current (mA)**	**Power (W)**
Supply Voltage 10 V DC Relays all OFF	175	1.75
Supply Voltage 10 V DC Relays all ON	270	2.70
Supply Voltage 30 V DC Relays all OFF	65	1.95
Supply Voltage 30 V DC Relays all ON	90	2.70
Relays		
Relay Output	2 x Relays, each with NO, COM and NC contacts.	
Relay Contact Ratings	10 A at 28 V DC, 5 A at 220 V AC.	
Digital Inputs		
Type	4 x Dry-contact inputs.	
Protection Range	+15 V and -15 V continuous.	
Memory		
RAM (Non-volatile)	512 KBytes.	
Flash ROM	128 KBytes.	
Battery Backup (for RAM)		
Battery Type	1 x 3.6 V, size ½ AA.	
Battery Life	5 Years (with power OFF).	

Installer Interfaces

Liquid Crystal Display (LCD)

Characters.....	16 Characters by 4 lines.
Character Sets.....	English, Katakana.
Contrast.....	Adjustable in 8 steps via the Communications Protocol.
Back-lighting.....	Turned on and off via the Communications Protocol.

Keypad

Buttons	20 Alphanumeric and function keys.
Back-lighting.....	Turned on and off via the Communications Protocol.

NOTE: The LCD and Keypad back-lighting operate in conjunction.

Buzzer

Volume and Tone	5-Step adjustable volume, 36 tones. Selectable via the Communications Protocol.

LED Indicators

Power-on Indicator	Red LED (internally visible).
Incoming RS485 Data	Flashing Green LED (internally visible).
Outgoing RS485 Data	Flashing Red LED (internally visible).
Incoming RS232 Data	Flashing Green LED (internally visible).
Outgoing RS232 Data	Flashing Red LED (internally visible).
Status Indicator.....	Bi-colour Red or Green LED (externally visible), function programmable via the Communications Protocol.

Blank Space

INSTALLATION INFORMATION

Accessories

Find the following when unpacking the IXP200 Controller:

- An IXP200 LCD Keypad Controller housed in a Dark Grey ABS Plastic Cabinet. The Cabinet will consist of a Front and Back Cover secured with an M4 x 10 mm Screw.
- One copy of IXP200 Software on CD.
- An M4 x 10 mm Screw.
- A 3 m (9.84 ft) flat, 4-core RS232 Cable, with a 9-way, D-type female connector at one end.
- A 3.6 V, >950 mAH, ½ AA Cylindrical Lithium Battery.
- Four Wood Screws (3.5 mm x 25 mm).
- Four Wall Plugs (7 mm).
- An extra Fixed Address Label.

General

Remember the following when installing your IXP200 Controller:

Communications Distance

- The RS485 communications distance between the IXP200 Controller and the LAST ImproX Unit in a cable run, MUST NOT exceed 1 km (1 090 yd). Achieve this by using good quality screened, 2-pair, twisted pair cable, EARTHED on one side.
- The maximum cable distance between the IXP200 Controller and the PC (or peripheral device) is 25 m (27.34 yd). Achieve this by using good quality screened, 4-core cable, with a cross sectional area not less than 0.2 mm^2 (0.0003 in^2).

Termination Resistors for RS485 Bus Communications

Long transmission lines or multiple “star” connections, may cause communication problems. Placing the Terminating Resistor Jumper Link in the LAST UNIT AT THE END OF THE CABLE RUN should solve the problem (depending on the bus).

EARTH Connection

Connect the IXP200 Controller to a good EARTH point. Using either of the RS485 Ports, connect the EARTH Lead to the “ETH” Terminal. Mains EARTH can be used, but electrical noise may exist. The EARTH Lead to the IXP200 Controller should have a minimum cross-sectional area of 1 mm^2 (0.001 in^2) and can be either solid or stranded.

Blank Space

Installing the Battery

First Time Use

CAUTION: Insert the Battery into the Battery Holder BEFORE powering up the IXP200 Controller.

The Battery Holder is located in the middle right-hand side of the IXP200 Controllers Printed Circuit Board (PCB), directly below the “Bus Activity LED Indicators”.

Insert the 3.6 V Lithium Battery into the Battery Holder, with the "+" Terminal facing AWAY from the Terminal Blocks.

Replacement

CAUTION: DO NOT disconnect Power from the IXP200 Controller during this operation. Disconnecting the Power could result in the RAM loosing data.

1. With the Controller powered up, remove the Controllers Front Cover. DO NOT disconnect the Ribbon Cable Connectors.
2. Remove the Battery from the Battery Holder.
3. Insert the new 3.6 V Lithium Battery into the Battery Holder, with the "+" Terminal facing AWAY from the Terminal Blocks.
4. Attach the Controllers Front Cover.

Mounting the Controller

CAUTION: Make certain that you mount the Controller on a vibration-free surface.

Select the mounting position of the IXP200 Controller, considering accessibility, routing of wires and visibility of the externally visible LED.

Secure the Controller to the mounting surface, using four suitable screws and wall plugs (supplied), nuts and bolts, rivets or double-sided adhesive tape.

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ELECTRICAL CONNECTIONS

Connecting the IXP200 Controller

Figure 1 shows various connection options for the IXP200 Controller.

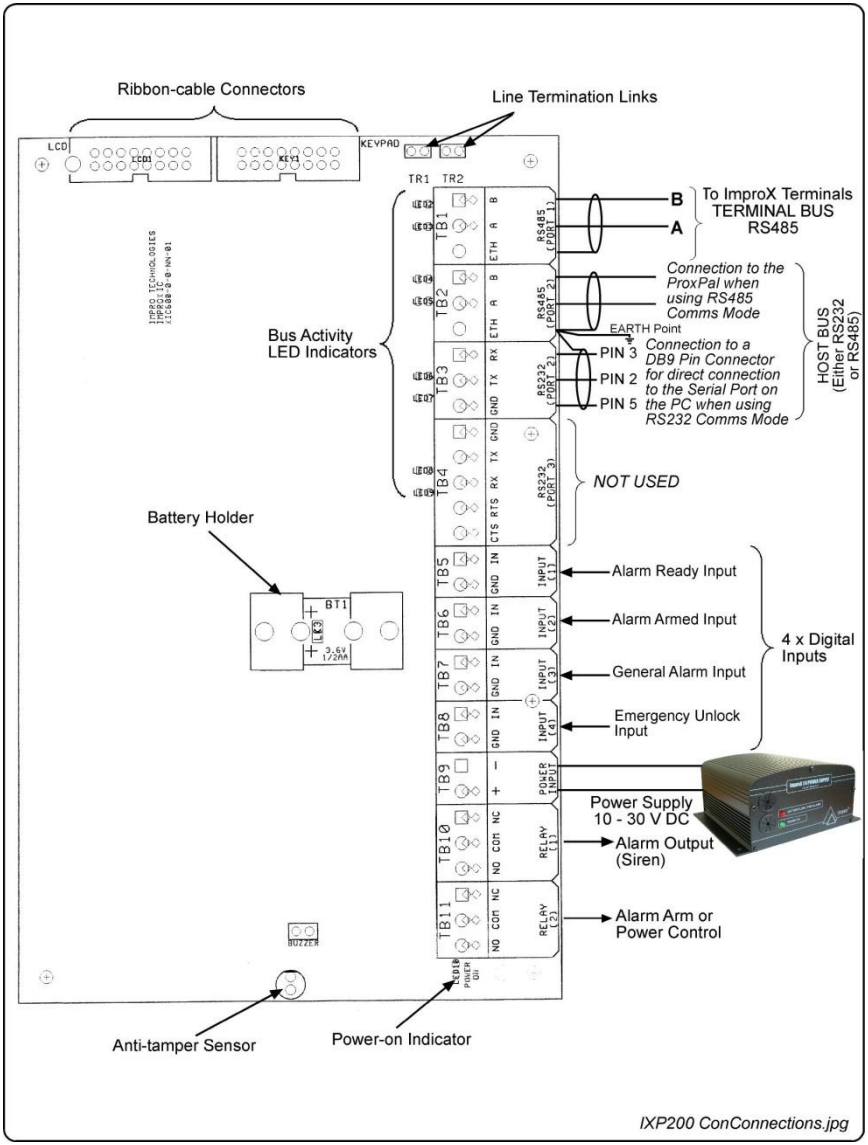

Figure 1: Typical IXP200 Controller Electrical Connections

Power-on Self-test

The Power-on Self-test tests the RAM, Flash-ROM checksums, RTC, read/write circuitry and stuck keys.

The results of the Self-test are made available as diagnostic information via the protocol to the associated Controller or PC.

If any parameter in the Self-test fails, the Controller emits a continuous beep for 2 seconds.

When the Controller passes the Self-test, the Controller emits two short beeps of 200 ms duration, separated by a 200 ms inter-beep pause.

Fixed Address Label

Once the IXP200 Controller is installed attach the additional loose Fixed Address Label (packaged with the Controller) in position on the Unit Location Chart. When the system installation is complete and all the units are represented on the Unit Location Chart by their Fixed Address Labels, file the document for future reference.

Unit Location Chart

Fixed Address Label	Unique Location Description

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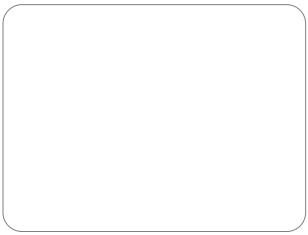	

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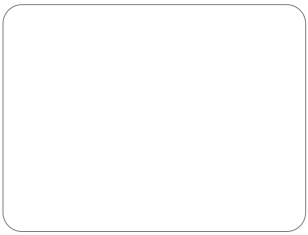	

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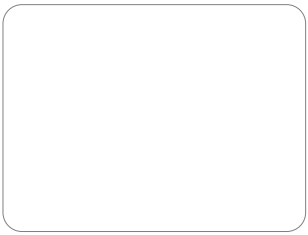	

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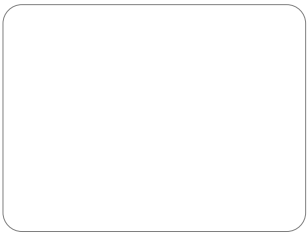	

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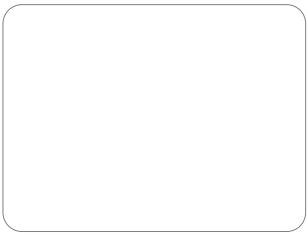	

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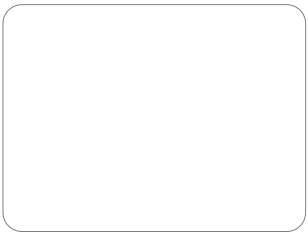	

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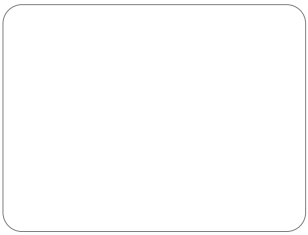	

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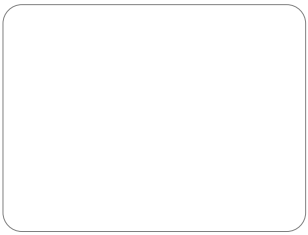	

Table 1: Unit Location Chart

GUARANTEE OR WARRANTY

This product conforms to our Guarantee or Warranty details placed on our Web Site, to read further please go to www.impro.net.

USER NOTES

This manual is applicable to the IXP200 LCD Keypad Controller, XIC902-1-0-GB-01. (The last two digits of the Impro stock code indicate the issue status of the product).			
XIC304-0-0-GB-04	Issue 05	Jun 2007	IXP200 Controller\English Manuals\LATEST ISSUE\IXP200C-insm-en-05.docx