



# IMPROX I16

## ImproX I16 16 Channel Input Terminal INSTALLATION MANUAL

### SPECIFICATIONS

<b>Working Environment</b> .....	Mounted vertically, with the Cable Entry Glands at the lower side, the Terminal is designed to work in an indoor or outdoor environment similar to IP43.	
<b>Input Voltage</b> .....	10 V DC to 30 V DC, polarity sensitive.	
<b>Power Requirements</b>	<b>Current (mA)</b>	<b>Power (W)</b>
Input Voltage 10 V DC		
Indicators all OFF .....	46.30	0.47
Input Voltage 30 V DC		
Indicators all OFF .....	19.70	0.60
Input Voltage 10 V DC		
Indicators all ON.....	80	0.80
Input Voltage 30 V DC		
Indicators all ON.....	31.30	0.95
<b>Digital Inputs</b>		
Type .....	16 Dry Contact Digital Inputs.	
Protection Range .....	+80 V to -80 V single pulse, +35 V to -30 V continuous.	

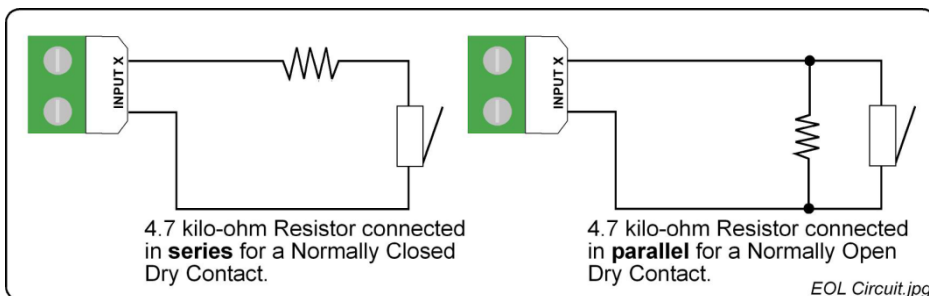


Figure 1: Options for End-of-line (EOL) Sensing

**NOTE:** *Connect the Digital Inputs to either a Normally Open or Normally Closed Dry Contact. You may then individually configure these Inputs to have End-of-line (EOL) Sensing in the Software. The ImproX I16 implements End-of-line (EOL) Sensing where one 4.7 kilo-ohm resistor is used. Figure 1 shows the recommended connection of the resistor for Normally Closed (NC) and Normally Open (NO) contacts. For Normally Closed Dry Contacts, connect the 4.7 kilo-ohm Resistor in SERIES with the contact. For Normally Open Dry Contacts connect the Resistor in PARALLEL with the contact. Mount the 4.7 kilo-Ohm resistor as close as possible to the Dry Contact (not at the ImproX I16) for effective End-of-line (EOL) Sensing. This method of End-of-line (EOL) Sensing senses a “Door Closed” event. An input shorted, input cut or door open will all yield a “Door Forced” event. That is the Software will not distinguish between a tamper condition (cut or shorted Input) and a normal door open event.*

**Status Indicators**

Input Status .....	16 Green LEDs (Software controllable, indicates when input is high or low), (externally visible).
Power Polarity Indicator .....	Red LED (internally visible).
Incoming RS485 Data .....	Flashing Green LED (externally visible).
Outgoing RS485 Data .....	Flashing Red LED (externally visible).
Unit Status .....	Red LED (Software controllable) (externally visible).

**INSTALLATION INFORMATION**

**Accessories**

Find the following when unpacking the Terminal:

- An ImproX I16 16 Channel Input Terminal housed in a Black powder-coated Aluminium extruded Cabinet. The Cabinet is sealed at each end with an Aluminium End Plate, secured with 4 Allen Head Screws (M3 x 12 mm).
- Two Plastic Bushing Plugs (20.6 mm).
- A 2.5 mm Allen Key.
- An extra Fixed Address Label.

**General**

Remember the following when installing the Terminal:

**Communications Distance**

The RS485 communications distance between the first ImproX Controller and the LAST ImproX unit in a cable run, **MUST NOT** exceed 1 km (1 094 yd). Achieve this by using good quality screened twisted pair cable, with the screen EARTHED at one end.

## Jumper Links

Long transmission lines or multiple “star” connections, may cause communication problems. Placing a Jumper Link across the jumper [LNK1] in the LAST UNIT AT THE END OF THE CABLE RUN should solve the problem.

## EARTH Connection

Connect the Terminal to a good EARTH point. Using the RS485 Port, connect the EARTH Lead to the ‘ETH’ Terminal. Mains EARTH can be used, but electrical noise may exist.

## FCC Compliance

For FCC compliance:

- Ensure the comms cable is routed through a separate grommet to the power cable.
- Ensure that you use a CE approved Power Supply Unit.

## Mounting the Terminal

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**CAUTION: Make certain that you mount the ImproX I16 on a vibration-free surface.**

Select the mounting position of the Terminal, considering accessibility, routing of wires and visibility of the externally visible LEDs.

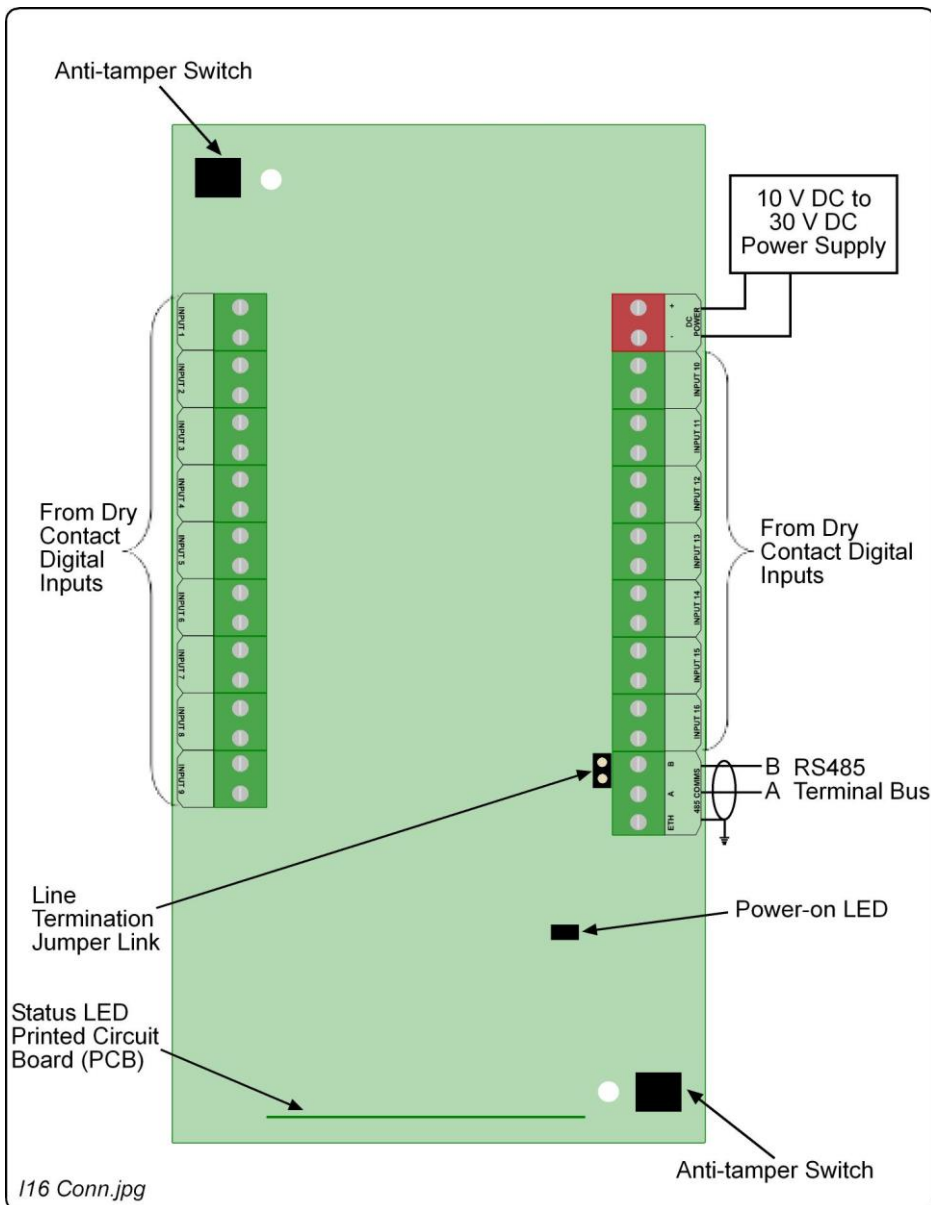
Secure the enclosure to the mounting surface, using suitable screws and wall plugs, nuts and bolts or rivets.

Blank Space

# ELECTRICAL CONNECTIONS

## Connecting the Terminal

Figure 2 shows a typical electrical connection diagram for the ImproX I16 Terminal.



**Figure 2: Typical ImproX I16 Electrical Connections**

## Fixed Address Label

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Once the ImproX I16 is installed, sketch a rough site plan. Attach the loose (additional Fixed Address Label packaged with the Terminal) Fixed Address Label in the position of the Terminal on the sketched site plan. When the system installation is complete and all the units are represented on the site plan by their Fixed Address Labels, file the site plan for future reference.

## 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](http://www.impro.net).

## USER NOTES

USER NOTES

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This manual is applicable to the ImproX I16 16 Channel Input Terminal,  
XIT900-0-0-GB-00.

(The last two digits of the Impro stock code indicate the issue status of the product).

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