

# Elpas 6x6 Input/Output Module

## For P/N: 5-IOB00485 (BUS Version)

## Wiring Guide

### Introduction

This wiring guide provides basic instructions for common Elpas I/O Module (BUS Version) installation scenarios.

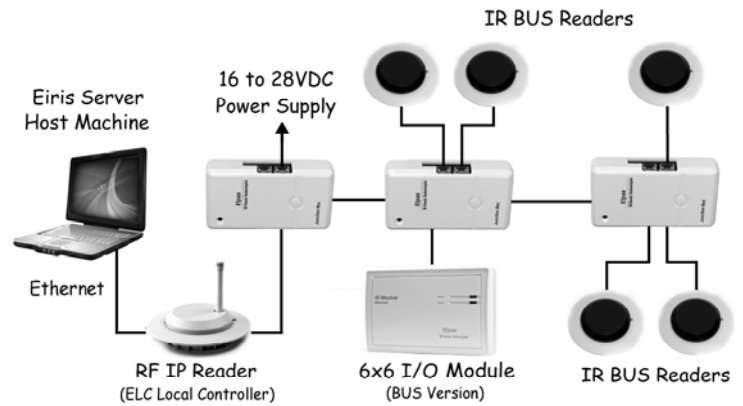
**Note:** VT is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.

### Product Description

The Elpas 6x6 I/O Module (BUS Version) has six supervised inputs for monitoring alarm sensors and six relay outputs that actuate local output devices. The device also delivers up to 100Amp of 12Vdc output current via a dedicated terminal block.

The Elpas I/O Module includes a RJ-11 connector for communication with either an Elpas Local Controller or an RF IP Reader via an Elpas RS-485 BUS.

**Note:** An Elpas RS-485 BUS may contain up to fifteen Elpas BUS devices (such as RF or IR Readers, Elpas Display Panels, LF Exciters or other I/O modules) which are wired together using Elpas RS-485 Junction Boxes (P/N: 5-JBA00485). See page 2 for details.



Elpas I/O Module (BUS Version) - Sample Network Topology

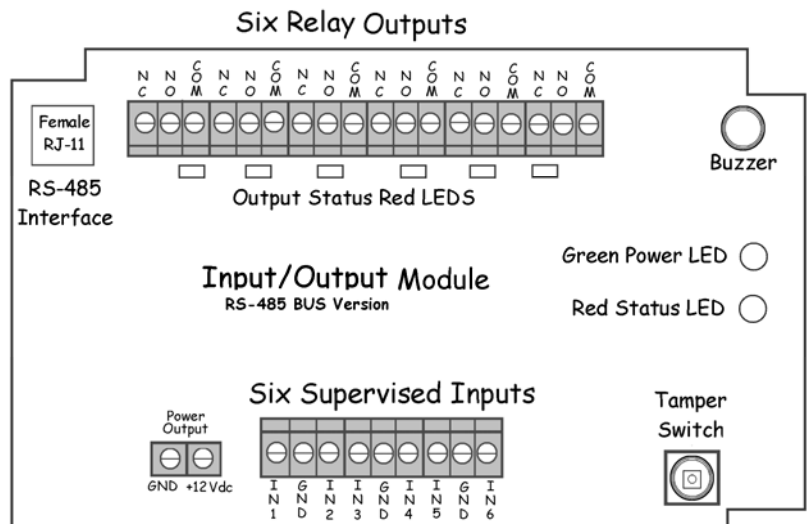
### Circuit Board Terminal Blocks

**RS-485 Interface:** The I/O Module has one female RJ-11 connector for linking to the RS-485 Junction Module. This connector is used for both power & data. (See page 2 for details)

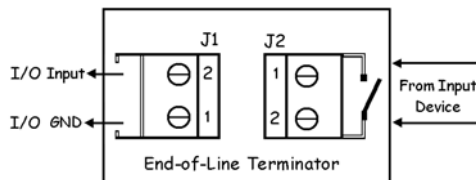
**Device Power Requirements:** 150mA@ 24Vdc

**Tamper Switch:** The I/O Module contains a tamper switch that when pressed, generates a 'State' message for registering the device in the host application. Once registered, the tamper switch indicates non-authorized attempts to remove the device's cover.

**Supervised Inputs:** The I/O Module has six supervised inputs (three, three-position removable terminal blocks). EOL supervision may be added to any of the inputs to detect: Open, Close, Line Cut and Line Short circuit conditions using Elpas End-of-Line Terminators (P/N: 5-IOX00001),



Elpas I/O Module (BUS Version) – Circuit Board Details



**Recommended Cable:** 22 AWG, unshielded/twisted pair

**Output Relays:** The I/O Module has six three-position removable terminal blocks for wiring six digital relay outputs (10A Max).

**Recommended Cable:** 22 AWG, unshielded/twisted pair.

**Power Output:** The I/O Module has a two position terminal block for powering 12Vdc (100mA Max) external devices.

**Recommended Cable:** 22 AWG, unshielded/twisted pair.

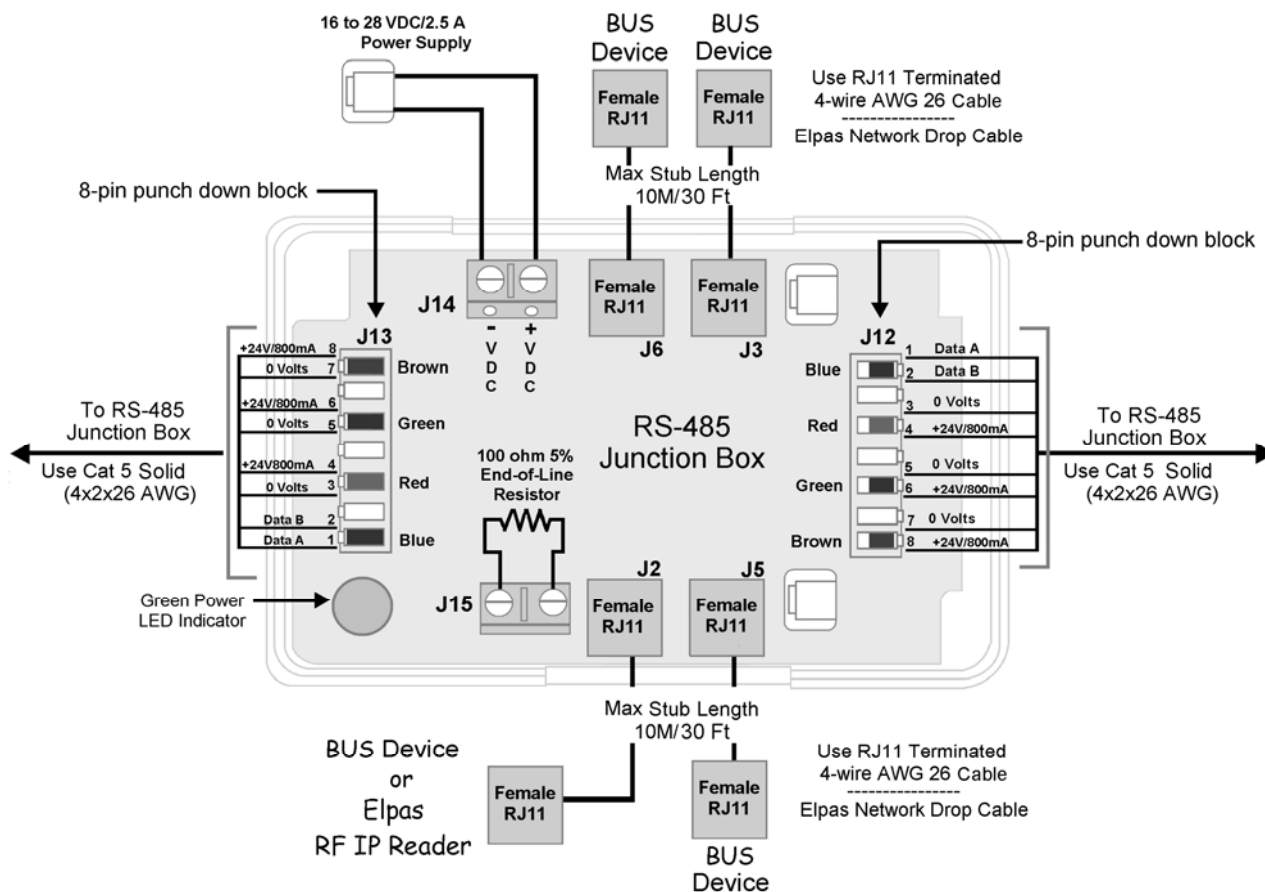
**IMPORTANT:** The I/O Module **MUST BE** powered-down while wiring the unit's I/Os and when connecting to the RS-485 BUS. This will prevent accidental shorts/spikes to cause damage to the device

## RS-485 BUS/Stub Topology

The RS-485 BUS **MUST Be** wired using a BUS/Stub topology where the BUS Master (a RF IP Reader or an ELC Controller) is connected anywhere along the BUS. The topology supports data transmission between the BUS Master and up to 15 Elpas BUS Devices (such as RF or IR Readers; LF Exciters, Elpas Display Panels and 6x6 I/O Modules) using multiple Elpas RS-485 Junction Boxes (P/N: 5-JBA00485).

**IMPORTANT NOTE:** Only 1 RF IP Reader/ELC Controller and up to 7 RF BUS Readers may coexist together on a single BUS.

**200M/650Ft:** Max. BUS length    **10M/30Ft:** Max. Stub length    **100 Ohm Termination:** Required each end of the BUS.



RS-485 Junction Module - Sample Wiring Topology

**Recommended RS-485 Backbone Cable Type:** CAT5 Solid (4x2x26AWG)

**For Power:** Use three-twisted pairs (six conductors) between RS-485 Junction Boxes

**For Data:** Use one-twisted pair (two conductors) between RS-485 Junction Boxes



### W.E.E.E. Product Recycling Declaration

For information regarding the recycling of this product, you must contact the company from which you originally purchased it. If you are discarding this product and not returning it for repair then you must ensure that it is returned as identified by your supplier. This product is not to be thrown away with everyday waste. Directive 2002/96/EC Waste Electrical and Electronic Equipment.