

# ISOLATION MODULE FOR ELECTRONIC LOADS SERIES EE151XX & EE301XX

## PRODUCT DATA SHEET INSTALLATION INFORMATION MODEL NUMBER: EE301-ISOL

MODEL: EE301-ISOL-ADJ  
MODEL: EE301-ISOL-FIX

### Power Requirements

3 Watts for Isolation Module  
Electronic Load ( Powered by Isolator )  
Input Voltage: 9.0 - 15.0 Volts DC  
15.5 Volts DC Absolute Maximum  
Input Current: ~ 0.1-0.3 Amps

### Operates with Electronic Loads types

EE301xx (300W) series / all  
EE151xx (150W) series / all

### Isolation Inputs to Outputs

I/O for all signals 350Vdc

### Isolation Input Control I/O

0-4 Vdc ( Electronic Load current control)

### Isolation Output Current Monitor I/O

0-4 Vdc (Electronic Load current monitor)

### Isolation Output Voltage Monitor I/O

0-5 Vdc (Electronic Load scaled voltage monitor)

### Connector Mounting

Module mounts in a vertical position to the load bias connector base.

### Connector Isolation Module (cable)

Module Cable mounts in a horizontal (24 Pin Burg) type with latching connector.

### Isolation Mode

Matched Linear Opto Isolators  
5 Ports, 3 Analog, 1 Digital, 1 Power  
(Optional: Adjustable gains on analog ports)

### Noise & Linearity

Linearity Equal to a 12 bit A to D  
Internal Power Noise less than 50mV

### Temperature Range (operating)

0 Deg. C to + 50 Deg. C Air

### Size:

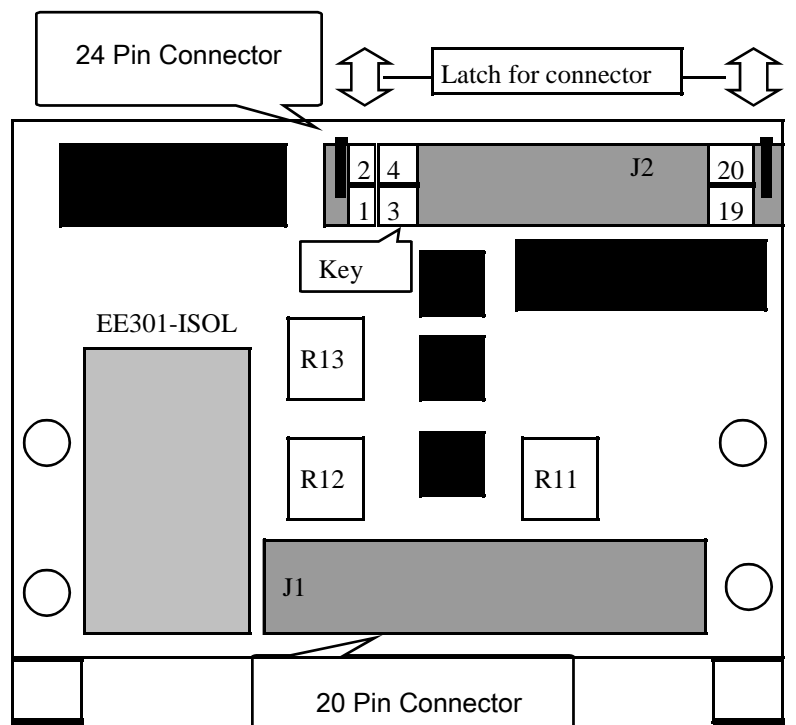
High 1.5 x Length 3.0 x Width 2.5 inches.

### Basic Operation:

The EE301-ISOL allows you to completely isolate you electronic load from your power source under test. The isolation module has 350Vdc of isolation between the input to output. The module has both input and output control and monitor information. This information is the same as a standard electronic load without the isolation module. Allowing the user to make minimal changes in wiring.

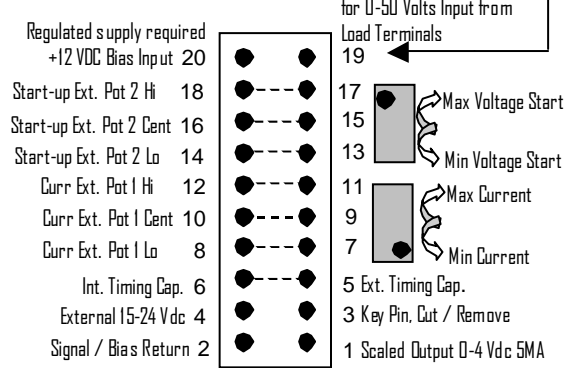
### Power Requirement:

Power for the EE301-ISOL is 12 volts just like the electronic load. However you can use an input from 9 to 15 volts if you want for this module. You can remove the connector from the load and just insert the module in place of the connector you removed (or if you want the latching option its just a simple rewire. The module supplies isolated power for the electronic load when it is in operation. You can not use the 14-24 Vdc input of the connector. That is now a ground for the none isolated power of the electronic load. The model only works with 12 volts main power input.



**VIEW IS FROM TOP OF LOAD**

Connector is on right side.



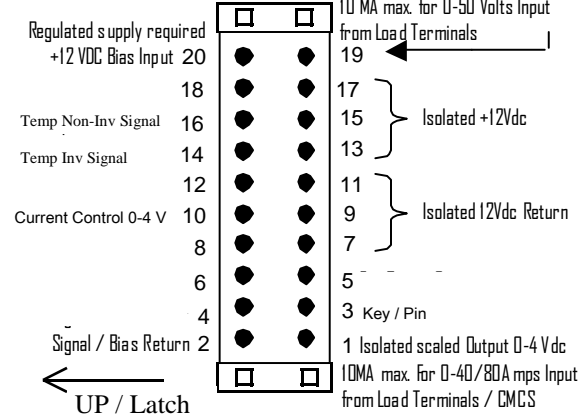
Dashed lines are default connections done through mating connector for use with load control pots/timing. -----

Pin 10, is external current share input and/or remote control for load. Maximum input is 0-4 VDC

**J3**

**VIEW IS FROM TOP OF MODULE**

Connector is on right side.



Pins 10, 1, 19, 20, 2, 14, 16 are all isolated from electronic load up to 150V.

**J2**

**Wiring Has Changed  
Please Read / Note**

**Control Pot Operation:**

The isolation module disables the control pots that are part of the electronic load. However this does not disable remote control pots used by a customer in a wiring harness. You still have the ability to use remote external pots to control your electronic load.

**Electronic Load Power Requirement:**

9-15 Volts of None-Isolation DC Powers the Isolation Module & that power the Isolated power to the Electronic Load & some of the electronics on the isolation module.

Option #2 is to power the Electronic Load with an Isolated power source & a special none powered isolation module. Consult the factory for this option.

**I/O Voltage Offsets & Drifts:**

All analog control and feedback voltage drifts and offsets should be less than 1% of the full scale voltage ~ 4-5 volts.

**Connectors: J2 & J3**

J2 connector is a 20 pins and J3 connector is a 24 pin type. J2 & J3 **DO NOT** have the same pin outs. See top of this page.

**Please Note: ... Please READ!**

The wiring from the load to the isolation module is not the same. The isolation module is not connected to the loads internal pots. Pins 17,15,13,11,9,7 are use as isolated power for the electronic load.

The isolated power should never be connected to the main 12 Vdc input. **Never connect the main 12V ground / return to the isolated ground / return!**

The 15-24 Vdc input ( Pin 4 ) is now an open circuit and can not be used. Pin 14 is a temperature warn inverting signal that goes from 0 to 12V. Pin 16 is a temperature warn non-inverting signal that goes from 12 to 0V.

If you are using the startup circuit with an external capacitor you can no longer use pin 6 to pin 5.

Please Note: The gain setting can be changed for each channel as independent gains. Some gain setting may affect the other gains. (R13 is for Load Current Gain), (R11 is for Current Monitor Gain), (R12 is for Load Voltage Gain). You should consult the factory before changing any gains on this module.

This EE301-ISOL module also comes as a fixed gain type and no adjustment can be made to this model, this model has a 5% tolerance for each channel.

J2 connector is a 20 / 24 pin connector 20 real pins with 4 extra for latching. If you are using the 12V power and constant current you can just plug in the connector to test the module with out a lot of rewiring. If you want latching you will have to wire a new connector for the 24 pins. SEE CONNECTOR WIRING ABOVE!

**Never guess at wiring this module!**

**WARRANTY:**

**What does your warranty cover:**

Any defect in material or workmanship.

**For how long after purchase:**

90 days for unit replacement. The warranty period for exchange unit begins with date sent.

**What will we do:**

Provide new or, at our option, replacement for repair of your unit.

**How do you get service:**

Get a return authorization number from the factory, or call the factory for a replacement unit and one will be charged to your account. When the returned unit arrives and is evaluated as a good unit it will be credited to your account.

**What does your warranty *not* cover:**

Customer instructions. The installation manual provides information regarding operation.

Installation and set-up. Damage from misuse or neglect. Unit that has been modified or incorporated into other products.

**How does state law relate to this warranty:**

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

## Notes

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