

## INDEX

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## ABOUT

### ISOLATED CONVERTER 9000L

- 9000L is compact yet rugged 4 wire Signal isolator for conditioning and safe guarding dedicated 4-20mA or 0-10V. Field Signal is then isolated and converted to safe 4-20mA or 0-10V signal, acceptable to commercially off the shelf (COTS) automation products.
- Equipped with Advanced Extended Power Supply Range of 20V to 265V AC or DC.
- 9000L Series isolators acts as signal distributor when used with dual outputs.
- 9000L Offers good accuracy and stability delivering reliable operation in hostile environments with full 3 port isolation between input, output and power supply.
- 9000L is flexible for DIN rail mounting and easily installable. Its compact design consumes less space and hence reduces cost of overall installation.

## FEATURES

- Slimmest in its class: 35 mm Single output and Dual output
- Extended Universal Power Supply Range:20V to 265V DC or AC
- Rugged & accurate 4 wire isolator
- Up to 2 outputs with Short Circuit Protection
- Wide span adjustment limit
- 1.5KV AC Isolation between I/P, O/P and Supply
- High CMRR and NMRR
- High output Load Driving Capability

## SOP & DOP



- **Universal AC/ DC Aux. supply**
- **Front Calibration Facility**
- **Signal Isolator, dual output**
- **Three port isolation**
- **Excellent long term stability**
- **Compact DIN rail enclosure**

**SPECIFICATION****Input**

|                 |                                                             |
|-----------------|-------------------------------------------------------------|
| Input Type      | Current/Voltage                                             |
| Input Range     | 4 to 20mA or 0 to 10V                                       |
| Input Impedance | Current I/P $\leq 100\Omega$<br>Voltage I/P $\leq 1M\Omega$ |

**Output**

|                        |                                                                                                                                                          |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Type            | Current/Voltage                                                                                                                                          |
| Output Range           | 4 to 20mA or 0 to 10V                                                                                                                                    |
| Output Load resistance | mA: Load Voltage $\leq 15V$<br>(e.g. for 4-20mA: $15V/20mA \leq 750\Omega$ )<br>V: Load Current $\leq 5mA$<br>(e.g. for 0-10V: $10V/5mA \geq 2K\Omega$ ) |

**Accuracy**  $\pm 0.25\%$  of FS**Response Time**  $\leq 50ms$ **Power Supply**

|                   |                            |
|-------------------|----------------------------|
| Power Supply      | 20 to 265VDC/AC, 45Hz-65Hz |
| Power Consumption | Less than 5VA              |
| CMRR              | $>100dB$                   |
| NMRR              | $>70dB$                    |

**Isolation**

|           |                                                                                   |
|-----------|-----------------------------------------------------------------------------------|
| Isolation | Power to Input / Output, Input to Output, Output to Output- 1.5KV AC for 1 minute |
|-----------|-----------------------------------------------------------------------------------|

**Environmental**

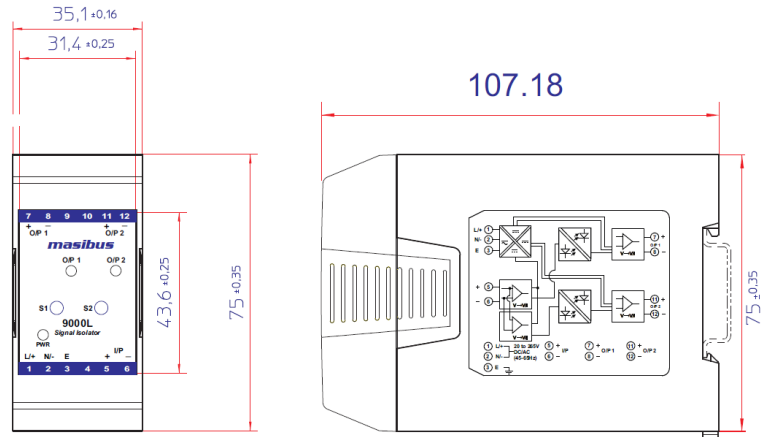
|                       |                               |
|-----------------------|-------------------------------|
| Operating temperature | 0 to 55°C                     |
| Temp. Co-efficient    | $\leq 100PPM$                 |
| Relative humidity     | 30 to 95% RH (Non-Condensing) |
| Protection            | Conformal Coating on PCB      |

**Physical**

|                    |                                                                    |
|--------------------|--------------------------------------------------------------------|
| Mounting Type      | DIN RAIL (35 mm) Mounting                                          |
| Dimensions         | 35.1(W)x75(H)x107.25(D) mm<br>(For SOP/DOP)                        |
| Weight             | Less than 120 gms For SOP model<br>Less than 150 gms For DOP model |
| Enclosure Material | ABS                                                                |

**Terminal Detail**

|                              |                                |
|------------------------------|--------------------------------|
| Terminal type and cable size | Screw type, 2.5mm <sup>2</sup> |
|------------------------------|--------------------------------|

**Dimensions****9000L SOP/ DOP**

All dimensions are in mm.

## SAFETY AND WARNING

To ensure that the device can be operated safely and All function can be used, please read these instructions Carefully before installing the device.

**⚠ Caution: Never carry out work when the Power Is turned on, this is dangerous.**

**Installation and startup** must be carried out by qualified person only. The relevant country-Specific regulations (e.g., VDE, DIN) must also be observed.

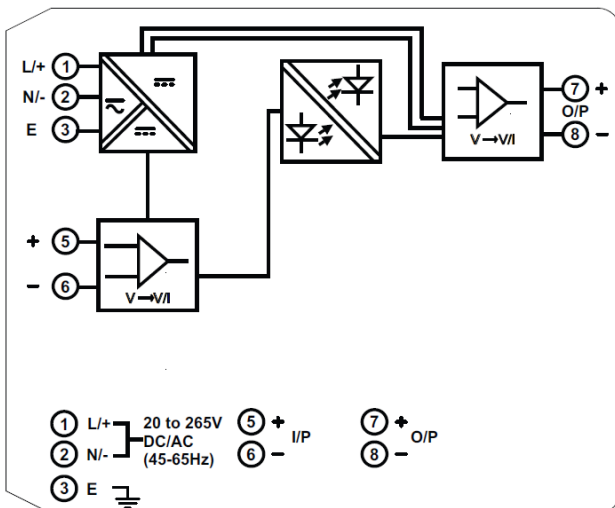
Before startup it is particularly important to ensure:

- Terminal wiring:  
Check that all cables are connected According to the connection diagram.
- The Power supply has been connected correctly.
- Protection is provided against electric shock.
- The device can be switched off outside the power Supply according to EN 60950 regulations.  
(e.g., by the line protection on the primary side)
- All supply lines should have sufficient fuse protection and are of correct size.
- All output cables are of correct size for the maximum device output current or have separate fuse protection.
- Sufficient convection is ensured.  
After installation the terminal area must be covered to provide sufficient protection against unauthorized Access to live parts.  
This is ensured by installing the device in the control Cabinet or distributor box.

## CONNECTION

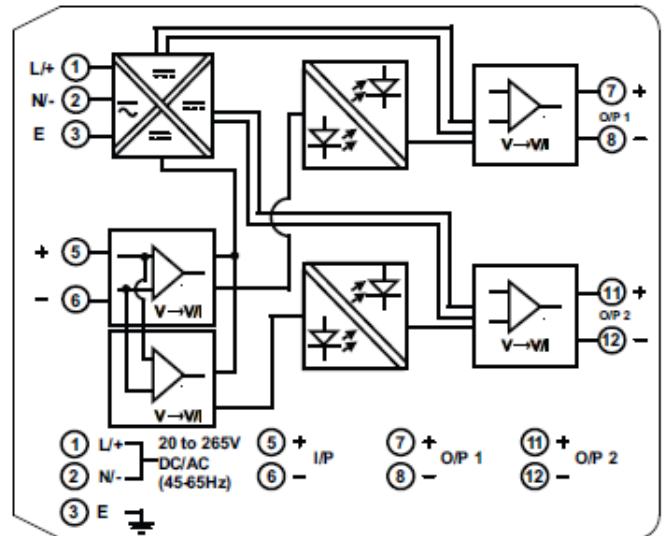
### Connection details:

#### Block Diagram and connection details of SOP.



**Note:** In case of DC supply connect DC(+) to terminal no. 1 and DC(-) to terminal no. 2.

#### Block Diagram and connection details of DOP.



**Note:** In case of DC supply connect DC(+) to terminal no. 1 and DC(-) to terminal no. 2.

## INSTALLATION

### Din Rail Mounting:

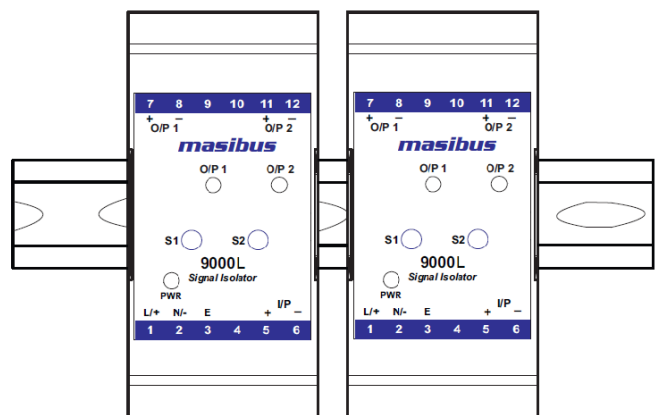
The unit can be snapped onto all DIN rails (35 mm) According to EN60715. The device must be mounted horizontally (Output terminal blocks facing upper wards). The housing is mounted on the DIN rail by swiveling it into place.

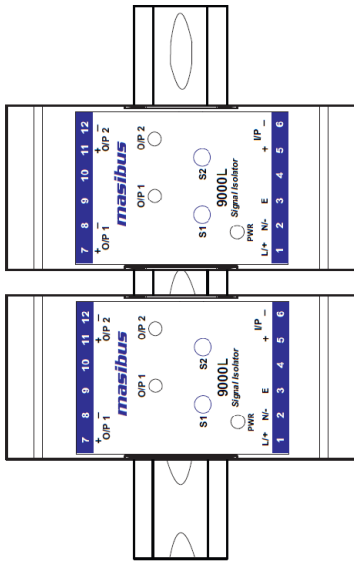
### Removal:

Release the snap-on catch using a screwdriver and then detach the module from the bottom edge of the DIN Rail.

### Installation of SOP & DOP

**Note:** If 9000L Devices installed in sequence, make sure to put 5 mm distance between each devices for vertical installation and 10mm distance between each devices for horizontal installation.





## **TROUBLE SHOOTING**

### **⚠ Unit Not Turning ON?**

If Red LED at the front side is not turned “ON”, the device is not getting sufficient supply or the connections are not as per terminal details.

**One must take care while dealing with Power wirings because it may create electrical shock**

### **⚠ Output not matching with expected value?**

Make sure the load on output of device is as per specification criteria.

Make sure the output signal is really incorrect with respect to input signal before attempting any re-calibration.

### **⚠ Unstable Reading?**

Check for loose connections.

First verify that all conventional instrumentation norms have been followed for wiring.

Make noise away from signal isolator.

### **⚠ Fluctuation in Reading**

The reason can be reverse input connections.

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