

Active high precision isolated transmitter
Vin & Vout



FEATURES

- | Three-terminal isolation (signal input, signal output, and power supply are mutually isolated)
- | High precision grade (0.1% F.S.)
- | High linearity (0.1% F.S.)
- | Isolation voltage (3KVDC/60s)
- | Extremely low temperature drift (35PPM/°C)
- | Industrial grade (range of operating temperature: -25 to +75°C)
- | High reliability (MTBF >500,000 hours)

The TxxxxL series with circuit voltage signal input and voltage signal output. A part of modules, with a high efficient isolated micro-power source built-in, to provide power for internal signal processing circuit and a isolated power for front-end circuit. In the two-wire, three-wire and four-wire applications, our products largely predigest customers' design and helpfully improve the using room ratio of PCB. Adopting electromagnetism isolation technology, it is available to keep higher accuracy and extremely lower temperature drift compare with photo-coupler isolation. These modules have 3-way isolation (input, output and power supply each other 3KVDC).

Selection Guide

| Part No. | Power Supply input (VDC) | Input Signal | Output Signal | Isolation Power Output (VDC) |
|-------------|--------------------------|--------------|---------------|------------------------------|
| T6650L | 12 | 0~5V | 0~5V | None |
| T6S60L-6.25 | 5 | 0~5V | 0~6.25V | None |

Notes: Customization products are available if required.

Input Specifications

| Item | Operating Conditions | Value |
|--------------------|-------------------------|--------------------------------------------------|
| Input Power Supply | Input voltage | (Nominal value of power supply input) $\pm 10\%$ |
| | Input power | $\leq 1W$ |
| | Power supply protection | Reverse polarity protection |
| Input | Input signal | See selection guide |
| | Input impedance | $\geq 10M\Omega$ |
| | Overload | in case of input of voltage signal $\leq 30V$ |

Output Specifications

| Item | Operating Conditions | Value |
|--------|----------------------|--------------------------------|
| Output | Output signal | See selection guide |
| | Load capacity | Voltage output $\geq 2K\Omega$ |
| | Load regulation | 0.050% |
| | Ripple & noise | Bandwidth 20MHz $\leq 30mVpp$ |

Transmission Specifications

| Item | Operating Conditions | Value |
|-------------------|---------------------------------------------|----------------|
| Zero Offset | | 0.1%F.S. |
| Precision | | 0.1%F.S. |
| Temperature Drift | Operating temperature range of -25 to +75°C | 0.0035%F.S./°C |

General Specifications

| Item | Operating Conditions | Value |
|-----------------------|-----------------------------------------------------------|------------------------------------------------------------------------------------------------|
| Electric Isolation | | three-terminal isolation (signal input, signal output, and power supply are mutually isolated) |
| Degree of Isolation | testing for 1 minute, leakage current <1mA, humidity <70% | 3KVDC |
| Insulation Resistance | | 100M Ω , 500VDC (Between voltage input, voltage output and power supply) |

| | | |
|----------------------------------------|--|-----------------------------------------------------------------------------------------------------|
| Operating Temperature | | -25~+75 °C |
| Transportation and Storage Temperature | | -50~+105 °C |
| Application Environment | | The presence of dust, fierce vibration, impulsion and corrosive gas may cause damage to the product |

Physical Specifications

| | |
|--------------------|-----------------|
| Casing Material | WH8100-F [1] |
| Package Dimensions | SIP12 |
| Weight | 8g (Typ.) |
| Cooling method | Natural cooling |

Application Precautions

1. Please read the instructions carefully before use; contact our technical support if you have any problem.
2. Do not use the product in hazardous areas.
3. Use DC power supply for the product and 220V AC power supply is prohibited.
4. Do not dismount and assemble the product without permission to avoid failure or malfunction of equipment.

After-sales service

1. Ex-factory inspection and quality control have been strictly conducted for the product; if there occurs abnormal operation or possibility of failure of internal module, please contact the local representative or our technical support.
2. The warranty period for the product is 3 years as calculated from the date of delivery. If any quality problem occurs under normal use within the warranty period, the product can be repaired or changed for free.

Applied circuit

See *Application Notes for Isolated Transmitter* for details.

Design Reference

1. Typical application

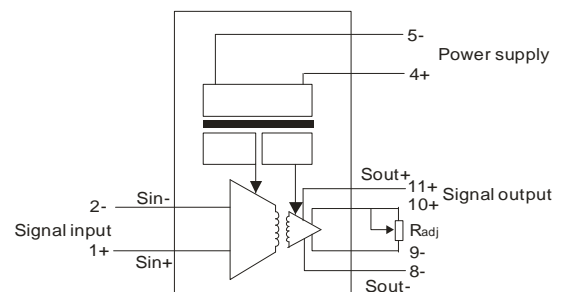
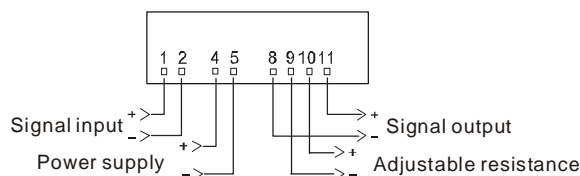


Fig. 1

Notes:

$$V_{adj} = \frac{S.F. \cdot R_e \cdot R_{adj}}{R_e + R_{adj}}$$

S.F. Full-scale value of the product model

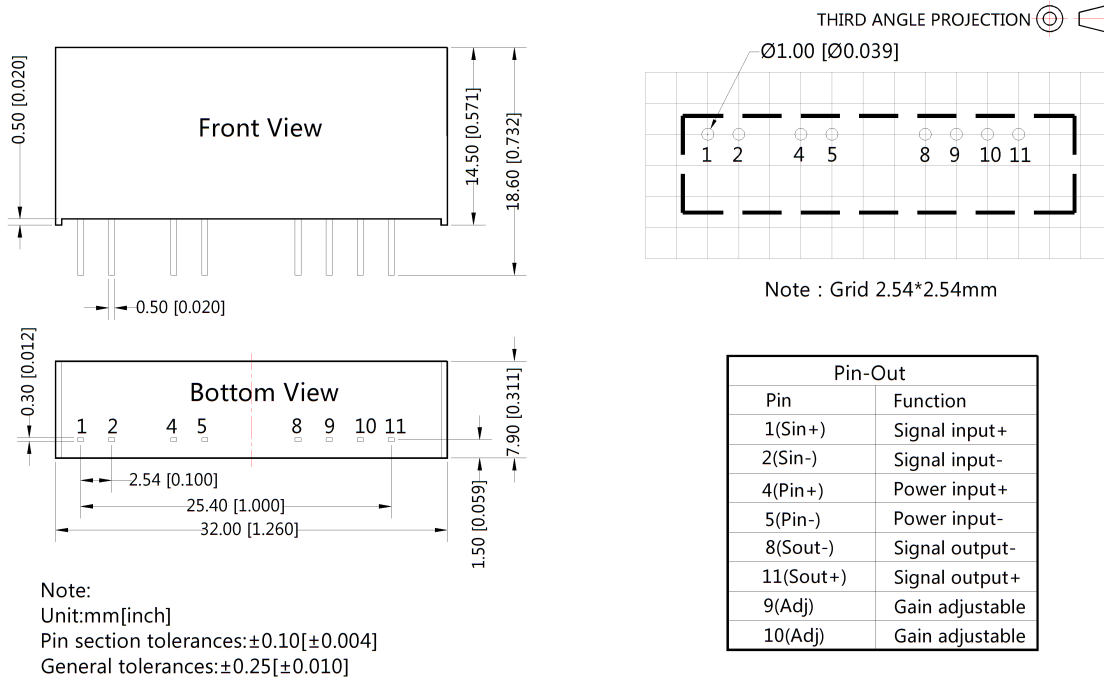
R_e Reference resistor (the resistance value between 9 and 10 feet)

R_{adj} Adjustable resistance

V_{adj} Adjustable signal output value

2. For more information Please find the application notes on www.mornsun-power.com

Dimensions and Recommended Layout



Notes:

1. Packing Information please refer to 'Product Packing Information'. Packing bag number: 58210017;
2. Unless otherwise specified, data in this datasheet should be tested under the conditions of Ta=25°C, humidity<75% when inputting nominal voltage and outputting rated load;
3. All index testing methods in this datasheet are based on our Company's corporate standards;
4. The performance indexes of the product models listed in this datasheet are as above, but some indexes of non-standard model products will exceed the above-mentioned requirements, and please directly contact our technician for specific information;
5. We can provide product customization service;
6. Specifications of this product are subject to changes without prior notice.

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