

Active high precision signal conditioning module  
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 is an active high precision isolated transmitter with 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 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 optocoupler isolation. These modules have 3-terminal 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) ±10%
	Input power		≤1W
	Power supply protection		Reverse polarity protection
Input	Input signal		See selection guide
	Input impedance		≥10MΩ
	Overload	in case of input of voltage signal	≤30V

## Output Specifications

Item	Operating Conditions		Value
Output	Output signal		See selection guide
	Load capacity	Voltage output	≥2KΩ
Adjustable output	Regulation range		The output signal range is adjustable

## 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		100MΩ, 500VDC (Between voltage input, voltage output and power supply)
Operating Temperature		-25~+75℃
Transportation and Storage Temperature		-50~+105℃
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. Port circuit diagram

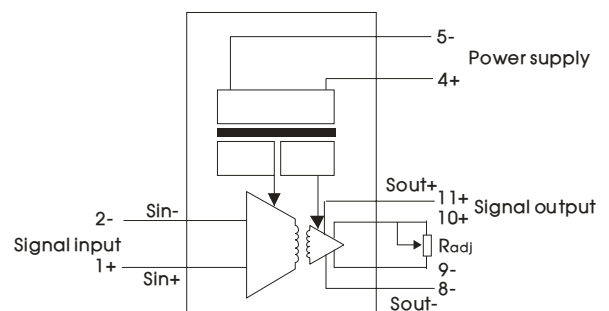
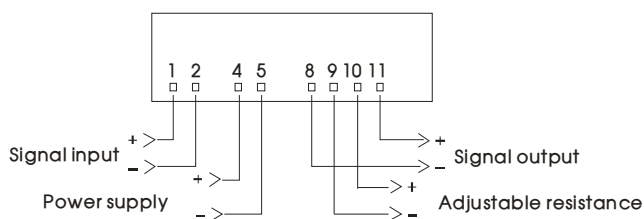


Fig. 1

Notes:

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

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

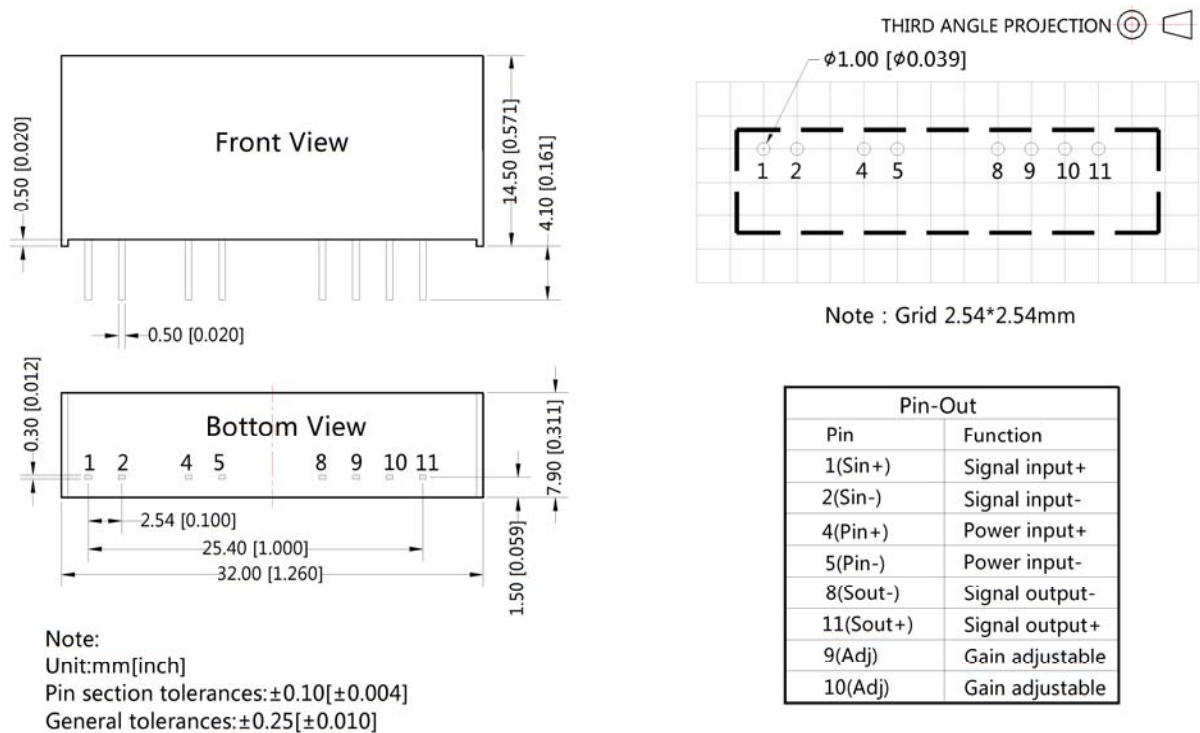
R<sub>e</sub> Reference resistor (the resistance value between 9 and 10 feet)

R<sub>adj</sub> Adjustable resistance

V<sub>adj</sub> Adjustable signal output value

2. For more information please find the application notes on [www.mornsun-power.com](http://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  $T_a=25^{\circ}\text{C}$ , 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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