

mV-level signal isolated transmitter



RoHS

FEATURES

- Three-terminal isolation (signal input, signal output, power supply)
- High precision grade (0.1% F.S.)
- High linearity (0.1% F.S.)
- Extremely low temperature drift (50PPM/°C)
- Industrial grade (range of operating temperature: -25 to +71°C)
- High reliability (MTBF >500,000 hours)

TMxxxxP series ----are mV-level isolation amplifier can receive the mV-voltage signal input from the field, and transmit a standard output signal to the control room or DCS after isolated. With characteristics of high output accuracy, good linearity and low temperature drift, it needs an independent power supply. These modules have three-port isolation(input, output and power supply).

Selection Guide

Part No.	Power Supply input (VDC)	Input Signal	Output Signal	Isolation Power Output (VDC)
TM1130P	24	0~10 mV	4~20mA	None
TM3130P	24	0~30mV	4~20mA	None
TM4130P	24	0~50mV	4~20mA	None
TM4150P	12	0~50mV	4~20mA	None
TM5230P	24	0~75mV	0~20mA	None
TM6130P	24	0~100mV	4~20mA	None
TM4530P	24	0~50mV	0~10V	None
TM2550P	12	0~20mV	0~10V	None
TM2650P	12	0~20mV	0~5V	None
TM3650P	12	0~30mV	0~5V	None
TM4530P	24	0~50mV	0~10V	None
TM4630P	24	0~50mV	0~5V	None
TM4650P	12	0~50mV	0~5V	None
TM4660P	5	0~50mV	0~5V	None
TM4S30P-2.5	24	0~50mV	0~2.5V	None
TM4S50P-2.5	12	0~50mV	0~2.5V	None
TM5530P	24	0~75mV	0~10V	None
TM5630P	24	0~75mV	0~5V	None
TM5650P	12	0~75mV	0~5V	None
TM6530P	24	0~100mV	0~10V	None
TM6630P	24	0~100mV	0~5V	None
TM6650P	12	0~100mV	0~5V	None
TM6S50P-3.3	12	0~100mV	0~3.3V	None
TM2S60P-2.5	5	0~20mV	0~2.5V	None
TM5130P	24	0~75mV	4~20mA	None
TM6660P	5	0~100mV	0~5V	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) $\pm 5\%$
	Input power	$\leq 1W$
	Power supply protection	Reverse polarity protection

Input	Input signal		See selection guide
	Input impedance		$\geq 10M\Omega$
	Overload		$\leq 5V$

Output Specifications

Item		Operating Conditions	Value
Output	Output signal		See selection guide
	Load capacity	Voltage output	$\geq 2K\Omega$
		Current output @ 20mA	$\leq 500\Omega$

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 +71°C	0.005%F.S./°C

General Specifications

Item	Operating Conditions	Value
Electric Isolation		Three-terminal isolation (signal input, signal output, input power supply)
Degree of Isolation	testing for 1 minute, leakage current <1mA, humidity <70%	2.5KVDC
Insulation Resistance		100M Ω , 500VDC (signal input terminal, signal output terminal, power supply terminal)
Operating Temperature		-25°C~+71°C
Transportation and Storage Temperature		-50°C~+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	DIP24
Weight	10g(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

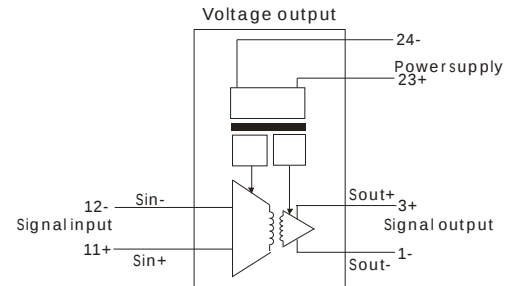
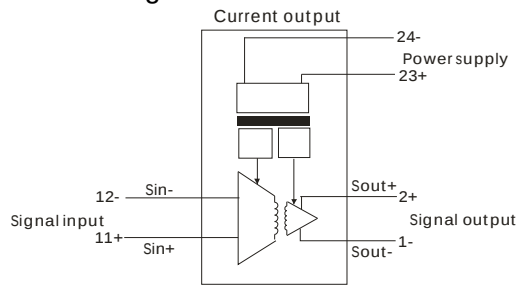
1. Ex-factory inspection and quality control have been strictly conducted for the product; if there occurs abnormal operation or possibility of failure of internal module, please contact the local representative or our technical support.
2. The warranty period for the product is 3 years as calculated 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

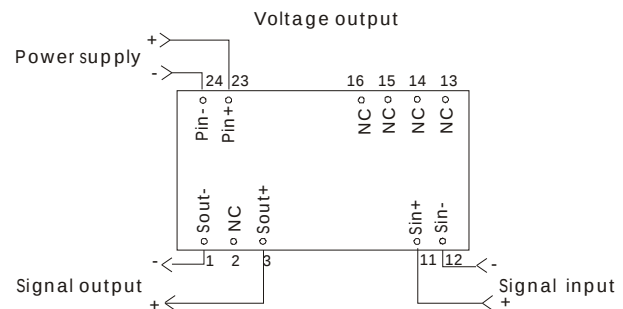
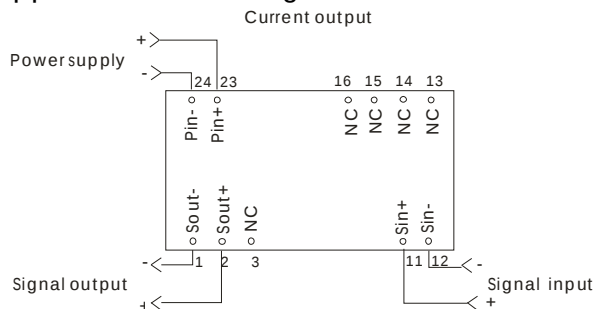
See *Application Notes for Isolated Transmitter* for details.

Design Reference

1. Schematic diagram

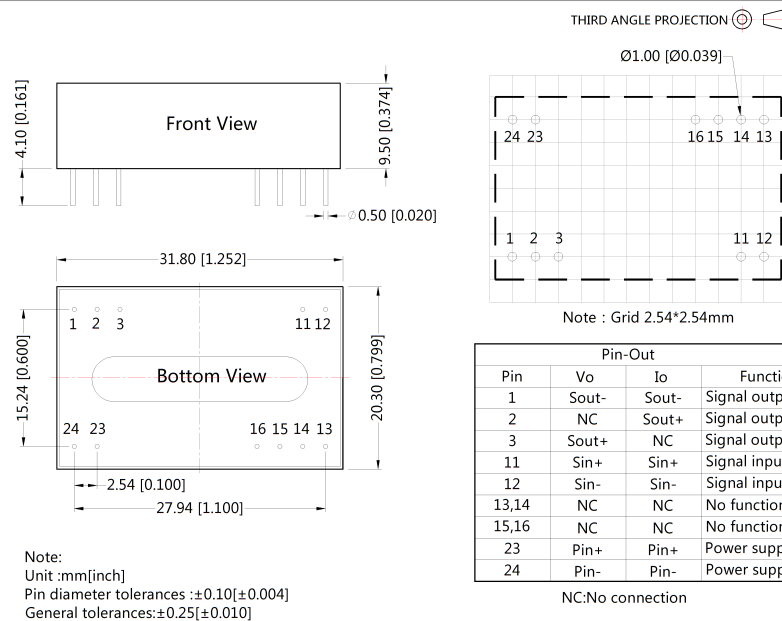


2. Application circuit diagram



3. 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: 58210008;
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.

Mornsun Guangzhou Science & Technology Co., Ltd.

Address: No. 5, Kehui St. 1, Kehui Development Center, Science Ave., Guangzhou Science City, Luogang District, Guangzhou, P. R. China
Tel: 86-20-38601850-8801 Fax: 86-20-38601272 E-mail: info@mornsun.cn