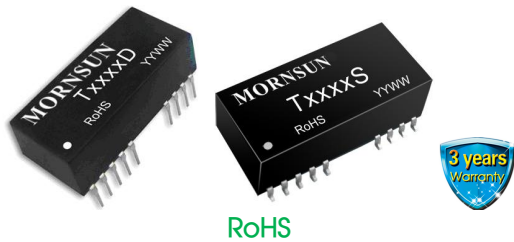
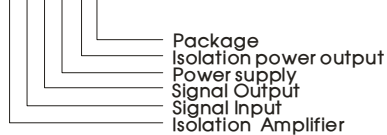


Active high precision isolated transmitter



PART NUMBER SYSTEM

TxxxxD



TxxxxD/S series signal conditioning modules (also called isolated transmitter), are the analog signal isolated modules with preceding voltage/current signal input and post voltage/current signal output. With an embedded high-efficient micro-power supply, the product supplies power to the internal signal processing circuit and inputs a line of isolated power to the preceding-stage transducer at the same time. The electromagnetism isolated technology of the product features that the input, output, power supply, power distribution are isolated from each other, which can completely replace the traditional linear optocoupler isolation, also, it has superior temperature-coefficient characteristics, linearity and precision. TxxxxD/S series are widely applied in PLC, DCS, MCU and other signal isolation & conversion uses.

FEATURES

- Four-port isolation (signal input, signal output, power input and isolation power output are mutually isolated)
- High precision (0.1% F.S.)
- High linearity (0.1% F.S.)
- Isolation voltage(2.5kVDC/60s)
- Extremely low temperature drift (35PPM/°C)
- Operating temperature range: -25°C to +71°C
- High reliability(MTBF>500,000 hours)

Selection Guide

Part No.	Power Supply Input (VDC)	Input Signal	Output Signal	Isolation Power Output (VDC)
T2233D	24V	0-20mA	0-20mA	24V
T5230D	24V	0-10V	0-20mA	None

Input Specifications

Item	Operating Conditions		Value
Power Input	Input voltage		(Nominal Power Supply) ±5%
	Input power	Signal, power full load	≤2W
	Power supply protection		Reverse polarity protection
Single Input	Input signal		See selection guide
	Input impedance	In case of max. input of current signal	≤250mV
		in case of input of voltage signal	≥10MΩ
	Overload	in case of input of current signal	≤50mA
		in case of input of voltage signal	≤30V

Output Specifications

Item	Operating Conditions		Value
Isolation Power Output	Output voltage	Power, current full load	(Nominal value)±10%
	Output current		≤25mA
Single Output	Output signal		See selection guide
	Load capacity	Voltage output	≥1KΩ
		Current output @ 20mA	≤500Ω
	Load regulation		0.050%

Transmission Specifications

Item	Operating Conditions		Value
Zero Offset			0.1%F.S.
Signal Precision			0.1%F.S.
Temperature Coefficient	Operating temperature range of -25°C to +71°C		35PPM/°C

General Specifications

Item	Operating Conditions	Value
Electric Isolation		Four-terminal isolation (signal input, signal output, input power supply and output of isolated power supply are mutually isolated)
Degree of Isolation*	Testing for 1 minute, leakage current <1mA, humidity <70%	2.5KVDC (Between input signal port, output signal port and input power supply port)
Isolation Resistance		100M Ω , 500VDC (Between signal input, signal output, power supply and isolation power output)
Operating Temperature		-25℃ to +71℃
Storage Temperature		-50℃ to +105℃
Application Environment		The presence of dust, fierce vibration, impulsion and corrosive gas may cause damage to the product

Note: *Isolated power supply provided; the isolation voltage between the port of isolated power output and the signal input port is 500VDC.

Physical Specifications

Casing Material	Black flame-retardant heat-proof plastic
Package	DIP24/SOIC24
Weight	8.2g(Typ.)
Cooling methods	Free convection

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.
5. For TxxxxS products is prohibited reflow.

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

Please refer to Isolated Transmitter application notes.

Design Reference

1. Typical application

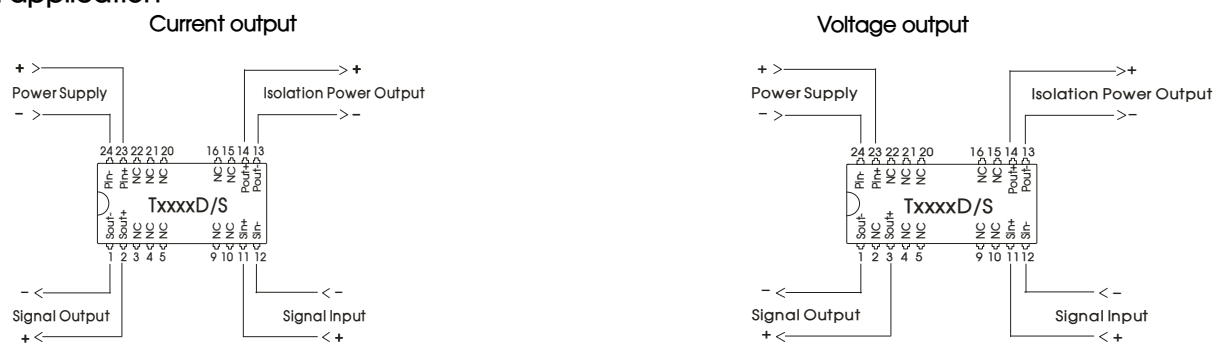


Fig. 1

2. Signal input and output correspondence diagram(Ideal state)

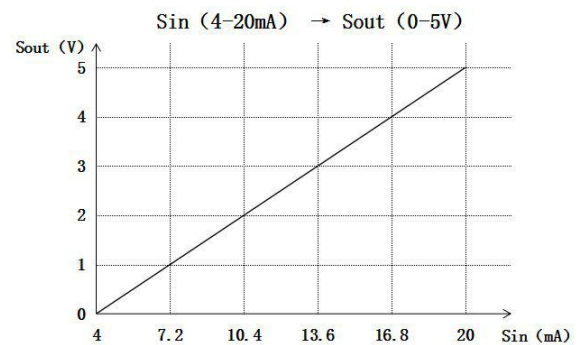
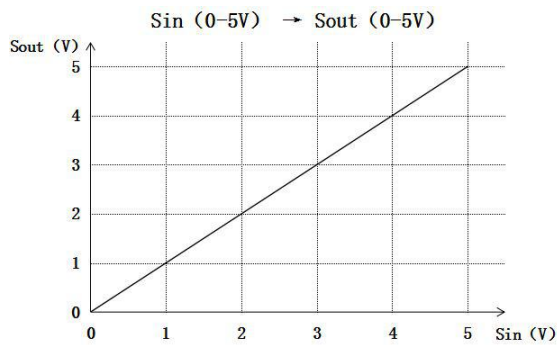
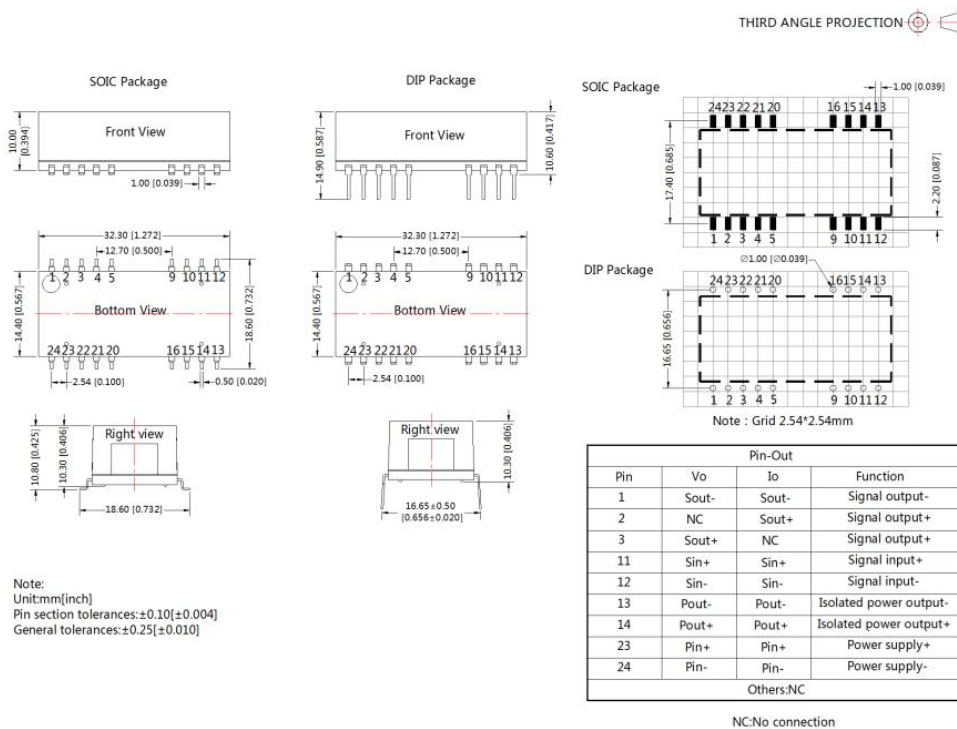


Fig. 2

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 which can be downloaded from www.mornsun-power.com. Packing bag number: 58200017;
2. Unless otherwise specified, parameters in this datasheet were measured under the conditions of $T_a=25^{\circ}\text{C}$, humidity < 75%RH with nominal input voltage and rated output load;
3. All index testing methods in this datasheet are based on our Company's corporate standards;
4. The performance parameters of the product models listed in this manual are as above, but some parameters of non-standard model products may exceed the requirements mentioned above. Please contact our technicians directly for specific information;
5. We can provide product customization service, please contact our technicians directly for specific information;
6. Specifications are subject to changes without prior notice.

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