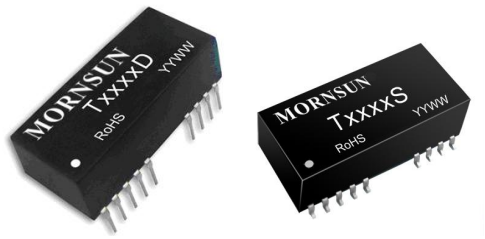
Active high precision isolated transmitter



RoHS

FEATURES

- Four-port isolation(mutually isolated between input, output, power supply and Isolation power output)
- High accuracy (0.1% F.S.)
- High linearity (0.1% F.S.)
- Isolation voltage(2.5kVDC/60s)
- Extremely low temperature drift (35PPM/℃)
- Industrial grade (range of operating temperature: -25 to +71℃)
- High reliability(MTBF>500,000 hours)

TxxxxD/S series is a high integration, high efficiency linear active isolation amplifier module, with circuit voltage/current signal input and voltage/current signal output. These modules, with a high efficiency isolated micro-power source built-in, can provide energy for inner signal processing circuit and a isolation power out for front-end circuit. In the two-wire, three-wire and four-wire amplifier 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 more than photocoupler isolation. These modules have four-port isolation (input, output, power supply and Isolation power output).

Selection Guide

Part No.	Power Supply input (VDC)	Input Signal	Output Signal	Isolation Power Output (VDC)
T1130D/S	24V	0~5V	0~20mA	None
T1133D/S	24V	0~5V	0~20mV	24V
T1150D/S	24V	0~5V	0~20mA	None
T2230D/S	24V	0~5V	0~20mA	None
T2233D/S	24V	0~5V	0~20mA	24V
T2250D/S	12V	0~5V	0~20mA	None
T1433D/S	12V	0~5V	0~20mA	24V
T1455D/S	12V	0~5V	0~20mA	12V
T1530D/S	24V	0~1V	4~20mA	None
T1533D/S	5V	0~3.3V	4~20mA	24V
T1550D/S	24V	0~2.5V	0~20mA	None
T1630D/S	24V	0~4.95V	0~20mA	None
T1633D/S	24V	1~5V	0~5V	24V
T1650D/S	24V	0~10V	0~10V	None
T2S30D/S-2.5	24V	0~10V	0~10V	None
T1S33D/S-3.3	24V	0~10V	0~10V	24V
T2530D/S	15V	0~10V	0~10V	None
T2630D/S	15V	0~10V	0~10V	None
T2633D/S	15V	0~10V	0~10V	24V
T2650D/S	12V	0~10V	0~10V	None
T3130D/S	12V	0~10V	0~10V	None
T4130D/S	12V	0~10V	0~10V	None
T5130D/S	24V	0~10V	0~5V	None
T5133D/S	5V	0~10V	0~5V	24V
T5150D/S	24V	0~10V	0~2.5V	None
T5230D/S	24V	0~5V	0~10V	None
T5250D/S	12V	0~5V	0~10V	None
T6130D/S	24V	0~5V	0~5V	None
T6133D/S	12V	0~5V	0~5V	24V
T6135D/S	5V	0~5V	0~3V	12V
T6150D/S	12V	1~5V	0~20mA	None
T6155D/S	12V	2~10V	2~10V	12V
T6160D/S	5V	0~5V	0~20mA	None

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Selection Guide

Part No.	Power Supply input (VDC)	Input Signal	Output Signal	Isolation Power Output (VDC)
T6230D/S	24V	0~5V	0~5V	None
T6232D/S	8V	0~5V	0~5V	±12V
T6233D/S	24V	0~2V	4~20mA	24V
T6235D/S	5V	0~2V	4~20mA	12V
T6236D/S	24V	0~4V	0~20mA	5V
T6250D/S	24V	0~5V	0~5V	None
T6253D/S	12V	0~5V	0~5V	24V
T6255D/S	5V	0~5V	0~5V	12V
TS130D/S-1	24V	0~3.3V	0~20mA	None
TS160D/S-3.3	5V	0~5V	0~3.3V	None
TS230D/S-2.5	15V	0~1V	0~5V	None
TS230D/S-4.95	15V	0~5V	0~5V	None
T4630D/S	5V	0~5V	0~5V	None
T5530D/S	0~10V	0~10V	24V	None
T5533D/S	0~10V	0~10V	24V	24V
T5535D/S	0~10V	0~10V	24V	12V
T5540D/S	0~10V	0~10V	15V	None
T5541D/S	0~10V	0~10V	15V	±15V
T5544D/S	0~10V	0~10V	15V	15V
T5550D/S	0~10V	0~10V	12V	None
T5552D/S	0~10V	0~10V	12V	±12V
T5553D/S	0~10V	0~10V	12V	24V
T5630D/S	0~10V	0~5V	24V	None
T5660D/S	0~10V	0~5V	5V	None
T5S30D/S-2.5	0~10V	0~2.5V	24V	None
T6530D/S	0~5V	0~10V	24V	None
T6555D/S	0~5V	0~10V	12V	12V
T6630D/S	0~5V	0~5V	24V	None
T6650D/S	0~5V	0~5V	12V	None
T6S60D/S-3	0~5V	0~3V	5V	None
T4250D/S	1~5V	0~20mA	12V	None
T3355D/S	2~10V	2~10V	12V	12V
T6260D/S	0~5V	0~20mA	5V	None
T6635D/S	0~5V	0~5V	24V	12V
T66S0D/S-8	0~5V	0~5V	8V	None
TS130D/S-2	0~2V	4~20mA	24V	None
TS160D/S-2	0~2V	4~20mA	5V	None
TS230D/S-4	0~4V	0~20mA	24V	None
T6633D/S	0~5V	0~5V	24V	24V
T6655D/S	0~5V	0~5V	12V	12V
T6660D/S	0~5V	0~5V	5V	None
TS230D/S-3.3	0~3.3V	0~20mA	24V	None
T6S60D/S-3.3	0~5V	0~3.3V	5V	None
TS646D/S-1	0~1V	0~5V	15V	5V
T6640D/S	0~5V	0~5V	15V	None
T6666D/S	0~5V	0~5V	5V	5V

Notes: Customization products are available if required.

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Input Specifications

Item		Operating Conditions	Value
Input Power Supply	Input voltage		(Nominal Power Supply) ±5%
	Input power	Signal, power full load	≤2W
	Power supply protection		Reverse polarity protection
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
Output of Isolated Power Supply	Output voltage	Power, current full load	(Nominal value)±10%
	Output current		≤25mA
Output	Output signal		See selection guide
	Load capacity	Voltage output	≥1KΩ
		Current output @ 20mA	≤500Ω

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℃	0.0035%F.S./℃

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 (Note: It is 500VDC between input and isolation power out when there is isolation power out)
Insulation Resistance	500VDC (Between signal input, signal output, power supply and isolation power output)	100MΩ,
Operating Temperature		-25 ~ +71℃
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	DIP24/SOIC24
Weight	10g, typ.
Cooling methods	Free air 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.

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Applied circuit

See *Application Notes for Isolated Transmitter* for details.

Design Reference

1. Typical application

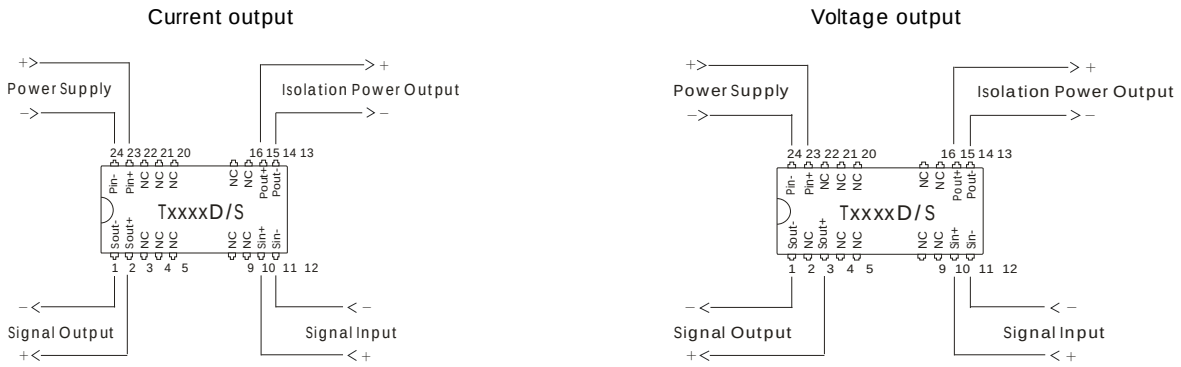
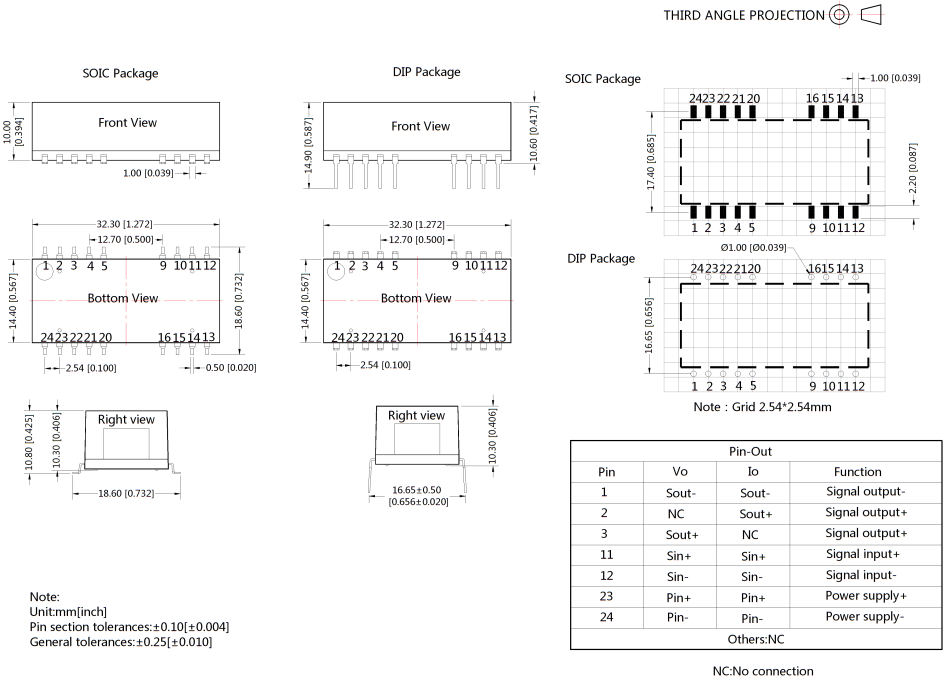


Fig. 1

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

Dimensions and Recommended Layout



Note:
Unit:mm[inch]
Pin section tolerances:±0.10[±0.004]
General tolerances:±0.25[±0.010]

Pin-Out			
Pin	Vo	Io	Function
1	Sout-	Sout-	Signal output-
2	NC	Sout+	Signal output+
3	Sout+	NC	Signal output+
11	Sin+	Sin+	Signal input+
12	Sin-	Sin-	Signal input-
23	Pin+	Pin+	Power supply+
24	Pin-	Pin-	Power supply-
Others:NC			

NC:No connection

Notes:

1. Packing information please refer to "Product Packing Information". Packing bag number: 58200017;
2. Unless otherwise specified, parameter indexes in this datasheet is measured under the conditions of Ta=25℃, humidity<75% with nominal input voltage and rated output load;
3. All testing methods in this datasheet are based on our Company's corporate standards;
4. The parameter indexes above are for the modules listed in this datasheet, for non-standard module's parameter indexes, please contact our technicians for specific information;
5. We can provide custom design;
6. Specifications are subject to change without prior notice.

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