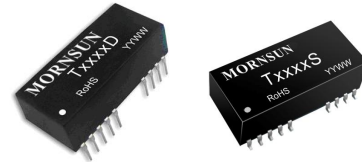


ACTIVE SIGNAL AMPLIFIER

lin & lout

T11/22_D/S



RoHS

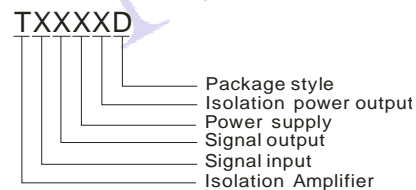
DESCRIPTION

The series is a high integration, high efficiency linear active isolation amplifier module, with current signal input and 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 transmitter 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).

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/°C)
- Industry standard(Operating Temperature Range: -25 ~ 71°C)
- High reliability(MTBF>500,000 hours)

MODEL SELECTION



MORNSUN 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: 86-20-28203030

Fax: 86-20-28203068

[Http://www.mornsun-power.com](http://www.mornsun-power.com)

PRODUCT PROGRAM

Part Number	Power Supply	Input	Output	Isolation Power Output	Channels
T1130D/S	24V	4~20mA	4~20mA	NONE	1
T1133D/S	24V	4~20mA	4~20mA	24V	1
T2230D/S	24V	0~20mA	0~20mA	NONE	1
T2233D/S	24V	0~20mA	0~20mA	24V	1
T2250D/S	12V	0~20mA	0~20mA	NONE	1

Note: We could also offer customer design for special input and output.

ELECTRICAL CHARACTERISTICS

Power Supply Parameter	Power Supply	(Nominal Power Supply) $\pm 5\%$
	Power consumption	$\leq 2W$
	Power Protection	Reverse protection
Isolation Power Output Parameter	Output Voltage	(Nominal) $\pm 10\%$
	Output Current	$\leq 25mA$
Input Parameter	Input Signal	See product program
	Input Impedance	Voltage Drop-outs $\leq 250mV$ (@input=20mA)
	Overload	$\leq 50mA$
Output Parameter	Output Signal	See product program
	Load Capacity	$\leq 500\Omega$ (@output=20mA)

TRANSMISSION CHARACTERISTICS

Zero Offset	0.1%F.S.
Gain Error	0.1%F.S.
Temperature Drift	0.0035%F.S./°C (-25 ~ +71°C)

ISOLATION CHARACTERISTICS

Galvanic Isolation	Four-port isolation (mutually isolated between input, output, power supply and isolation power output)
Isolation Voltage	2.5kVDC (Tested for 1minute and leakage current < 1mA, humidity < 70%) (Note: It is 500VDC between input and isolation power out when there is isolation power out)
Insulation Resistance	100MQ, 500VDC (Between signal input, signal output, power supply and isolation power output)

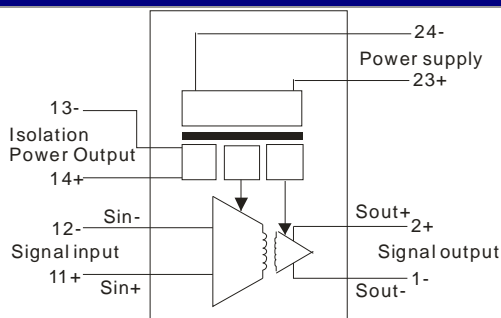
OTHER CHARACTERISTICS

Ambient temperature	Operation temperature: -25 ~ +71°C
	Transport and Storage temperature: -50 ~ +105°C
Package	DIP24/SOIC24
Weight	About 10g
Application environment	No dust, fierce vibration, impulsion and corrosive gas

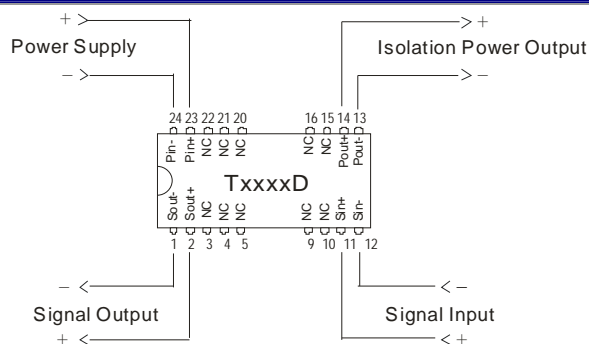
Note:

1. All specifications measured at TA=25°C, humidity<75%, nominal input voltage and rated output load unless otherwise specified.
2. Only typical models listed, specifications of custom product may be different. Please contact our service people directly for certain conditions.

SCHEMATIC DIAGRAM



APPLICATION CIRCUIT DIAGRAM



APPLICATION NOTE

1. Please read instruction book carefully before using the product. If you have any question, please contact with our technical support.
2. Please don't install in the dangerous zone.
3. The power supply is DC power source. It is forbidden to use 220VAC power supply.
4. Don't divide the product privately in case the equipments ineffective or go wrong.

AFTER SERVICE

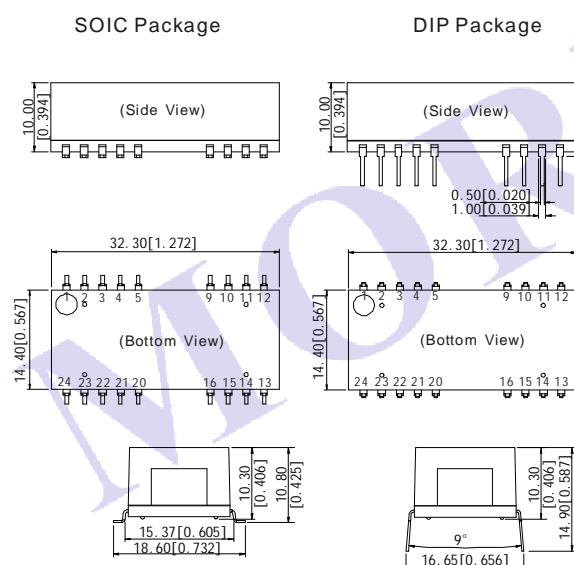
1. Products are carefully inspected and controlled before going out from our factory. If they operated abnormally or there were anything wrong in the inner parts, please contact with our agents near you or technical support in our company as soon as possible.
2. 3 years warranty since the delivery date. During the period of quality guarantee, our company will repair or change free of charge if product has any quality problem in the process of normally using.

APPLICATION CIRCUITS

See A GUIDE TO INSTRUMENTATION ISOLATION AMPLIFIERS for more detail.

PACKAGING SIZE AND PIN CONNECTION

MECHANICAL DIMENSIONS



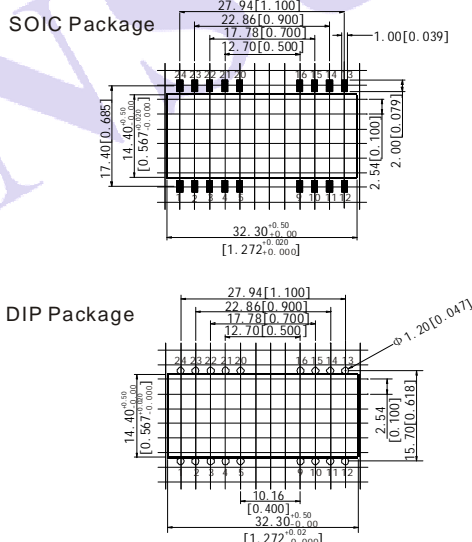
Note:
Unit:mm[inch]
Pin tolerances: $\pm 0.10\text{mm}[\pm 0.004\text{inch}]$
General tolerances: $\pm 0.25\text{mm}[\pm 0.010\text{inch}]$

FOOTPRINT DETAILS

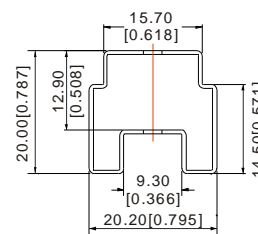
Pin	Function	Pin	Function
1(Sout-)	Signal output-	13(Pout-)	Isolation power output-
2(Sout+)	Signal output+	14(Pout+)	Isolation power output+
11(Sin+)	Signal input+	23(Pin+)	Power supply+
12(Sin-)	Signal input-	24(Pin-)	Power supply-
--	--	Others	NC

NC: No connection, or the module will be damaged.

RECOMMENDED FOOTPRINT(TOP VIEW)



TUBE OUTLINE DIMENSIONS



Note:
Unit :mm[inch]
General tolerances: $\pm 0.50\text{mm}[\pm 0.020\text{inch}]$
L=530mm[20.866inch] Devices per tube quantity: 15pcs
L=220mm[8.661inch] Devices per tube quantity: 6pcs
Short tube inner packaging dimensions: L*W*H=255*170*80mm
Short tube outer packaging dimensions: L*W*H=580*200*100mm
Long tube inner packaging dimensions: L*W*H=600*215*220mm
Long tube outer packaging dimensions(with two inner packaging boxes): L*W*H=600*215*220mm
Long tube outer packaging dimensions(with three inner packaging boxes): L*W*H=600*215*325mm