

## PASSIVE SIGNAL AMPLIFIER

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T1100RN/RNS/N/NS



### DESCRIPTION

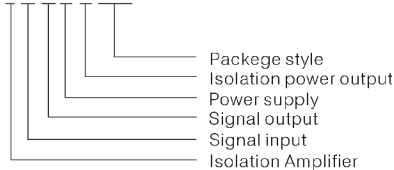
T1100 series, a standard analog amplifier, with 4~20mA current signal input and 4~20mA current signal output, is a passive signal isolation module. Adopting unique electromagnetism isolation design and high efficiency loop electric-larceny technology, independent power supply is not required for the module, realizing 4~20mA standard signal isolation with high accuracy and linearity. Besides, the modules have extremely low temperature drift (no more than 35ppm/°C under -25°C~ +71°C). The isolation voltage between the input and output can be up to 3KVDC.

### FEATURES

- Two-port isolation (Between input and output)
- High accuracy (0.1% F.S.)
- High linearity (0.1% F.S.)
- Isolation voltage(3kVDC/60s)
- Low voltage-drop(3V typ: @ 20mA input)
- High frequency response
- Extremely low temperature(35PPM/°C)
- Industry standard(Operating Temperature Range:-25°C ~ 71°C)
- High reliability(MTBF>500,000 hours)

### MODEL SELECTION

TXXXXRN



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### PRODUCT PROGRAM

Part Number	Power Supply	Input	Output	Isolation Power Output	Channels	Package
T1100RN	None	4~20mA	4~20mA	None	1	DIP16
T1100RNS	None	4~20mA	4~20mA	None	1	SOIC16
T1100N	None	4~20mA	4~20mA	None	1	DIP16
T1100NS	None	4~20mA	4~20mA	None	1	SOIC16

### ELECTRICAL CHARACTERISTICS

Power Supply Parameter	Power Supply	None
	Power Consumption	None
	Power Protection	None
Input Parameter	Input Signal	4~20mA
	Overload	≤50mA
	Voltage Drop-out	Typ: 3V (@input = 20mA)
Output Parameter	Output Signal	4~20mA
	Load Capacity	≤300Ω (@output = 20mA)
	Load Regulation	<0.05% meas.val./100Ω

### TRANSMISSION CHARACTERISTICS

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

### ISOLATION CHARACTERISTICS

Galvanic Isolation	Two-port isolation ( Between input and output)
Isolation Voltage	3KVDC (Tested for 1minute and leakage current < 1mA, humidity < 70%)
Insulation Resistance	100MΩ,500VDC(Between input and output)

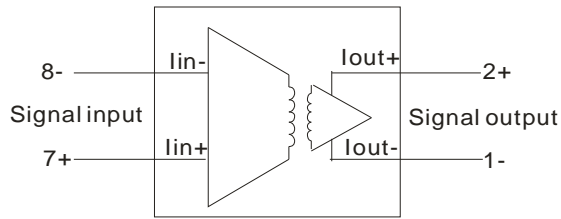
### OTHER CHARACTERISTICS

Ambient temperature	Operation temperature: -25 ~ +71°C
	Transport and Storage temperature: -50 ~ +105°C
Package	DIP16/SOIC16
Weight	About 8g
Application Environment	No dust, fierce vibration, impulsion and corrosive gas

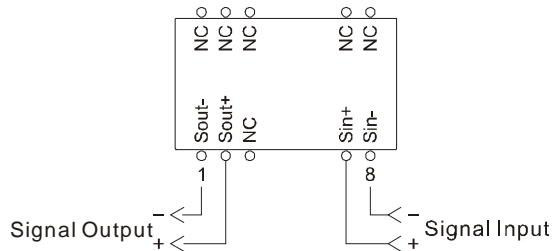
Note:

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 the instructions 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. Don't divide the product privately in case the equipments ineffective or go wrong.

## AFTER SERVICE

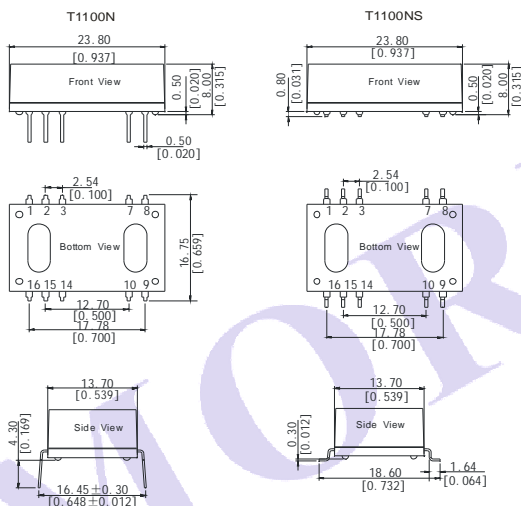
1. Products are carefully inspected and controlled before going out from our factory. If they operated abnormally or there were anything wrong in the inner parts, please contact with our agents near you or technical support in our company as soon as possible.
2. 3 years warranty since the delivery date. 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 normal using.

## APPLICATION CIRCUITS

See A GUIDE TO INSTRUMENTATION ISOLATION AMPLIFIERS for more detail.

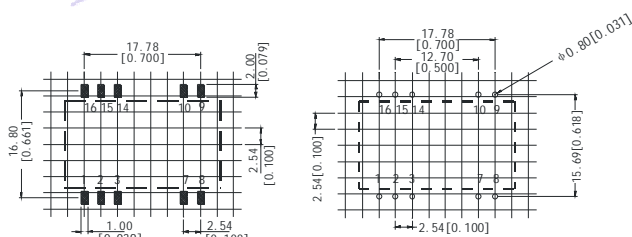
## PACKAGING SIZE AND TERMINAL DESCRIPTION

### MECHANICAL DIMENSIONS



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

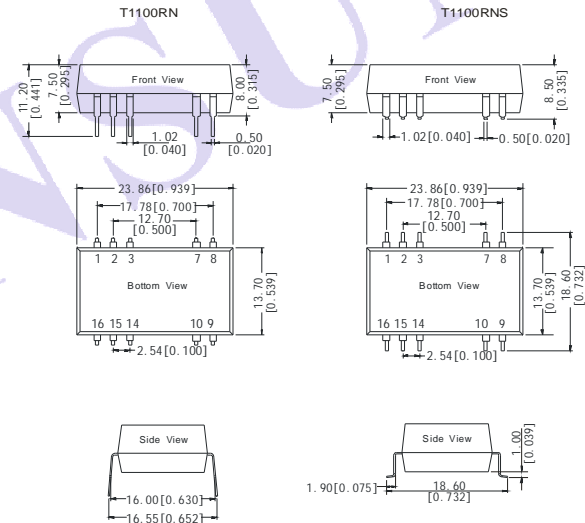
### RECOMMENDED FOOTPRINT



PIN	FUNCTION
1(Sout-)	Signal Output-
2(Sout+)	Signal output+
7(Sin+)	Signal Input+
8(Sin-)	Signal Input-
Others	NC

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

### TUBE OUTLINE DIMENSIONS



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

Unit: mm [inch]  
General tolerances:  $\pm 0.50\text{mm}$  [ $\pm 0.020\text{inch}$ ]  
L=530mm [20.866inch] Devices per tube quantity: 21pcs  
L=220mm [8.661inch] Devices per tube quantity: 8pcs  
Short tube inner package dimensions: 255\*170\*80mm  
Short tube outer package dimensions: 375\*280\*270mm  
Long tube inner package dimensions: 580\*200\*100mm  
Long tube outer package dimensions (with two inside package boxes): 600\*215\*220mm  
Long tube outer package dimensions (with three inside package boxes): 600\*215\*325mm