

MORNSUN

PASSIVE SIGNAL AMPLIFIER

lin&lout

T1100RN/RNS/N/NS



DESCRIPTION

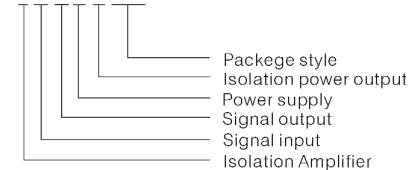
T1100 series, a standard analog amplifier, with anterior circuit 4~20mA current signal input and posterior 4~20mA current signal output, is a passive signal isolation module. The series adopt magneto design and high efficiency loop electric-larceny technology, efficiently reducing the reliance of current signal isolation on the power, realize 4~20mA standard signal isolation with high accuracy and line regulation. 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 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(3000VDC/60s)
- Low voltage-drop(3V typ: at 20mA input)
- High frequency response(15kHz)
- Extremely low temperature(35PPM/°C)
- Industry standard(Operating Temperature Range:-25°C ~ 71°C)
- High reliability(MTBF>500,000 hours)

MODEL SELECTION

TXXXXRN



MORNSUN Science & Technology co.,Ltd.

Address: 2th floor 6th building, Huangzhou Industrial District, Guangzhou, China
 Tel: 86-20-38601850
 Fax:86-20-38601272
[Http://www.mornsun-power.com](http://www.mornsun-power.com)

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 Data | Power Supply | None |
| | Power Dissipation | None |
| | Power Protection | None |
| Input Data | Input Signal | 4~20mA |
| | Overload | ≤50mA |
| | Voltage Drop | Typ: 3V(At input = 20mA) |
| Output Data | Output Signal | 4~20mA |
| | Load | ≤300Ω (At output = 20mA) |
| | Load Regulation | <0.05% meas.val./100Ω |

TRANSMISSION CHARACTERISTICS

| | |
|-------------------|-------------------------------|
| 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 1mA max, humidity < 70%) |
| Insulation Resistance | 1000MΩ, 500VDC (Between input and output) |

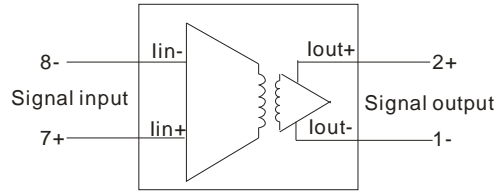
OTHER CHARACTERISTICS

| | |
|-------------------------|---|
| Ambient temperature | Operation temperature: -25 ~ +71°C |
| | Transport and Storage temperature: -50 ~ +105°C |
| Package | DIP16/SOIC16 |
| Weight | About 8g |
| Application Environment | No dusts, gases of fiercely vibration, impulsion or gases that may erode to the components surrounded |

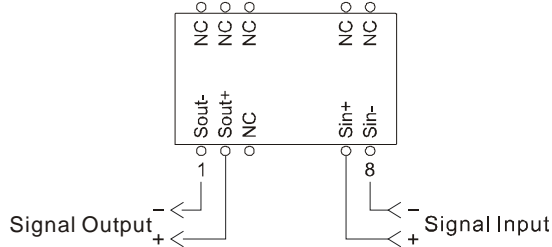
Note:

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

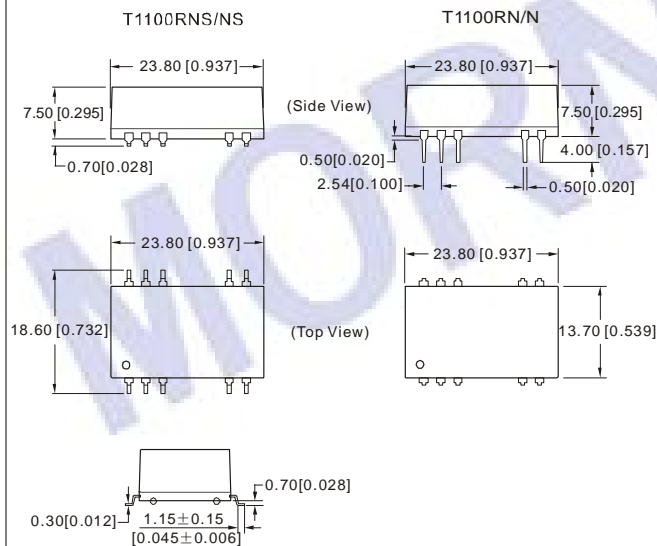
1. Products are carefully inspected and controlled before going out from our factory. If they operated abnormally or there were anything wrong in the inner parts, please contact with our agents near you or technical support in our company as soon as possible.
2. 3 years warranty since the delivery date.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

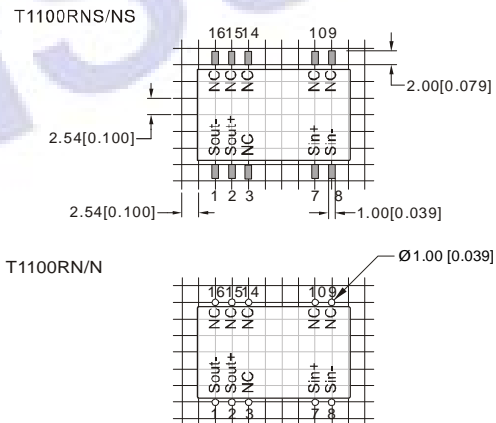


| FOOTPRINT DETAILS | |
|-------------------|----------------|
| Pin | Function |
| 1(Sout-) | Signal output- |
| 2(Sout+) | Signal output+ |
| 7(Sin+) | Signal input+ |
| 8(Sin-) | Signal input- |
| Others | NC |

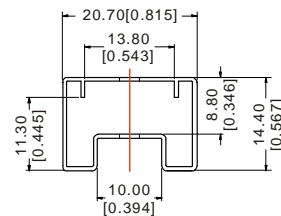
NC: No connection

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

RECOMMENDED FOOTPRINT



TUBE OUTLINE DIMENSIONS



Note:
Unit :mm[inch]
General tolerances: ±0.50mm[±0.020inch]
L=530mm[20.866inch] Devices per tube quantity: 21pcs
L=220mm[8.661inch] Devices per tube quantity: 8pcs