



## Active Single channel Analog signal Isolation barrier (In & Out)

T11/12/21/22\_B

### APPLICATIONS

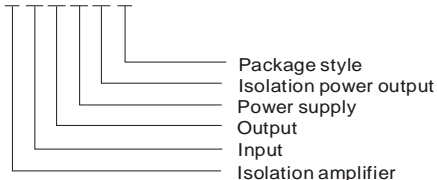
Analog signal isolating barrier, is a signal conditioner with electrical insulation between input and output, which can receive the standard or non-standard analog signal input from the scene, and transmit a standard output signal to the control room or DCS, to get three-port isolated among power supply, input and output. It is designed for translating signals of apparatus in hazardous area, isolating and transforming these signals into standard signals which can be accepted by industry computer, DCS, PLC, or user-specified special signals. It is widely used in the industrial measurement systems, medical electronic equipment, electrical equipment etc. We adopt high efficiency magnetism and electricity isolated technology to achieve signal isolation, with characteristics of high output accuracy, good linearity and low temperature drift.

### FEATURES

- Three port Isolation(input, output, power supply)
- High accuracy (0.1% F.S.)
- High linearity (0.1% F.S.)
- Isolation voltage(2500VDC/60S)
- High frequency response(15KHz)
- Low temperature drift(35PPM/°C)
- Industry class(Operation temp.: -25°C to +71°C)
- High reliability(MTBF > 500,000 hours)

### MODEL SELECTION

TXXXXB



### 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
T1133B	24V	4-20mA	4-20mA	24V	1
T1130B	24V	4-20mA	4-20mA	NONE	1
T2233B	24V	0-20mA	0-20mA	24V	1
T2230B	24V	0-20mA	0-20mA	NONE	1

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

### ELECTRICAL CHARACTERISTICS

Power Supply Data	Power Supply	(Nominal Power Supply)±5%
	Power Dissipation	≤2W
	Power Protection	Reverse protection
Isolation Power Output Data	Output Voltage	(Nominal)±10%
	Output Current	≤25mA
Input Data	Input Signal	See above
	Input Impedance	Input 20mA with voltage drop about 250mV
	Overload	≤300mA
Output Data	Output Signal	See above
	Load	≤500Ω(At Output =20mA)

### TRANSMISSION CHARACTERISTICS

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

### ISOLATION CHARACTERISTICS

Galvanic Isolation	Three port Isolation(input, output, power supply)
Isolation Voltage	2.5KVDC (Tested for 1minute and 1mA max, humidity < 70%)
Insulation Resistance	100MΩ, 500VDC(Among signal input ,signal output, power supply and isolation power output)

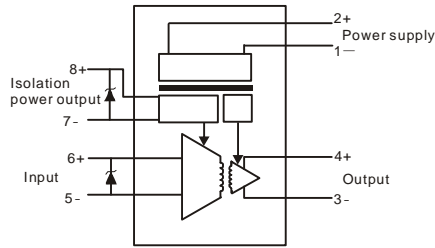
### OTHER CHARACTERISTICS

Ambient temperature	Operation temperature:-25°C to +71°C
	Transport and Storage temperature:-50°C to +105°C
Package	35mm DIN-rail package
Safety Class	IP20(IEC60529 / EN60529)
EMC compliance	GB/T 18268(IEC61326-1)
Weight	About 60g
Application environment	No dusts, gases of fiercely vibration, impulsion or gases that may erode to the components surrounded

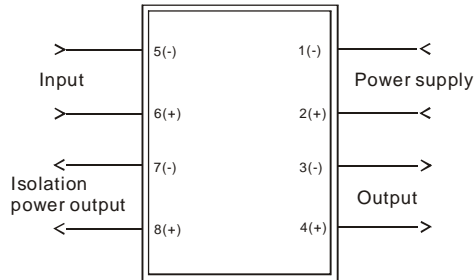
Note:

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.

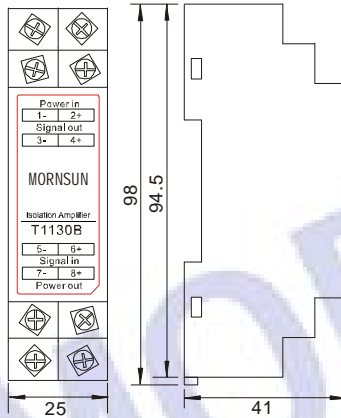
## SINGLE CHANNEL SCHEMATIC DIAGRAM



## APPLICATION CIRCUIT DIAGRAM



## PACKAGING SIZE AND TERMINAL DESCRIPTION



1-	Power supply-
2+	Power supply+
3-	Output-
4+	Output+
5-	Input-
6+	Input+
7-	Isolation power output-
8+	Isolation power output+

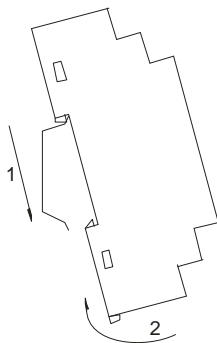
Unit: mm

Tolerance:±0.5

## INSTALLATION

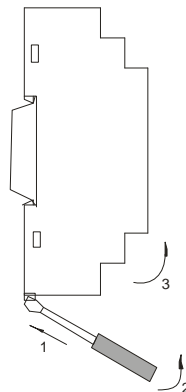
DIN35mm standard rail installation

- Upside of the instrument card in the rail;
- Push underside of the instrument into the rail.



## DISASSEMBLY

- Use a screwdriver (Width of edge≤6mm), cut in the metal card lock from the underside;
- Boost up the screwdriver and prize the metal card lock downwards;
- Pull the instrument out of the rail.



## CONNECTION

- Cross section area of wiring:  $0.5\text{mm}^2\text{-}2.5\text{mm}^2$ ;
- Multi-strand wire, the length of bare wire is about 8mm, fixed by the M4 bolt.

## Application Note

- Please read the user manual carefully before using. If any questions please contact our technical support department.
- Please do not use this product in hazardous area.
- The power supply of this product should be DC power source. It is forbidden to use 220VAC power supply.
- To avoid equipment invalidation, or any failure, users' disassembling this product is forbidden.

## AFTER SERVICE

- 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.
- 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.