

TB-IP Series Current Input Distribution Isolator

- DC24V power supply provides power distribution for on-site transmitters, while isolating and transmitting the current signals generated by the transmitters from the site to the control room, PLC/DCS, etc.
- Input interface current source, universal for two wire and three wire transmitters; Internally, efficient magnetoelectric isolation technology is used, with input, output, and power sources isolated from each other, featuring high accuracy, high linearity, and low temperature drift.
- DIN rail independent installation method.

| SELECTION TABLE | | | | |
|-----------------|---|---|---|--------------|
| TB-IP | X | X | X | Instructions |
| Channel | 1 | | | 1 IN 1 OUT |
| | 2 | | | 1 IN 2 OUT |
| Input Signal | 1 | | | 4-20mA |
| | 2 | | | 0-20mA |
| | 3 | | | 0-10mA |
| Output Signal | | 1 | | 4-20mA |
| | | 2 | | 0-20mA |
| | | 4 | | 0-5V |
| | | 6 | | 0-10V |

Note: Customers need to determine the input signal form and output signal form when placing an order. If there are special needs, they can customize it

Product Selection

TB-IPXXX
Eg: TB-IP111,1 IN 1 OUT,both input and output are DC 4-20mA.

MAIN TECHNICAL PARAMETERS

Input

Input signal: 4-20mA;0-20mA
Distribution voltage:≥21V DC (max driving current 30mA)
Input impedance: ≤50Ω

Output

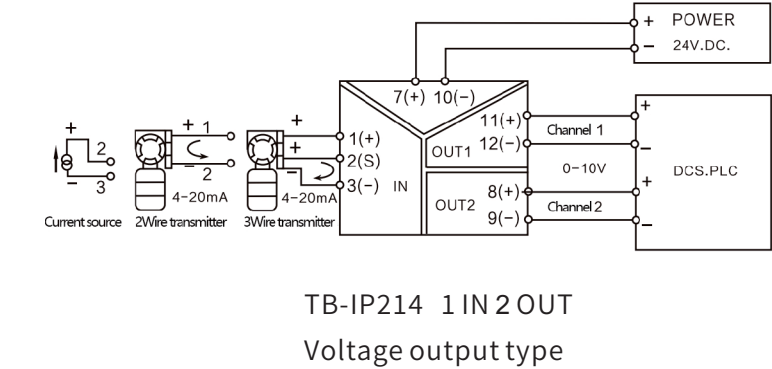
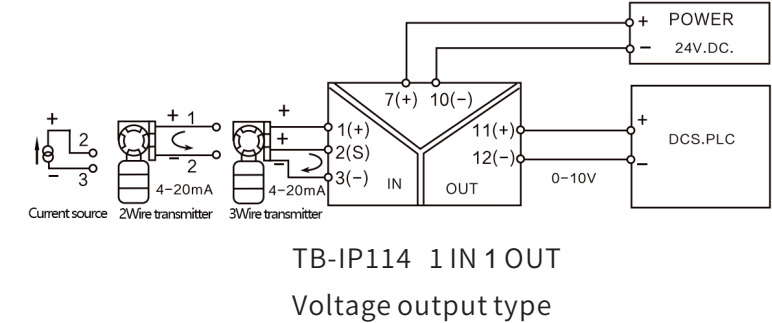
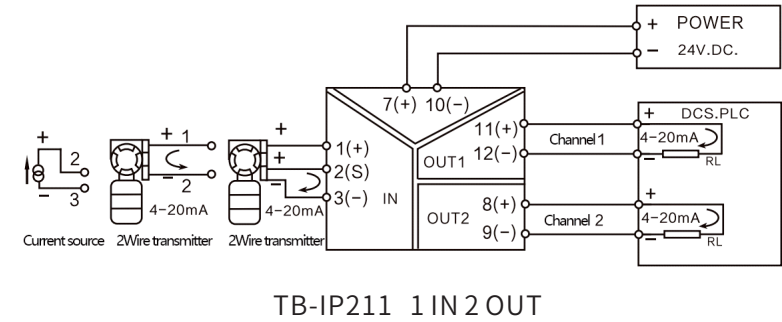
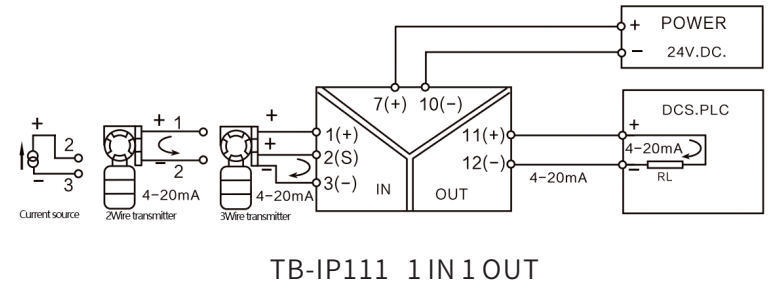
Output signal:4-20mA;0-20mA;0-5v;0-10v
Output load resistance:RL≤500Ω (Output is current signal)
RL≥10KΩ (Output is voltage signal)

Basic Parameter

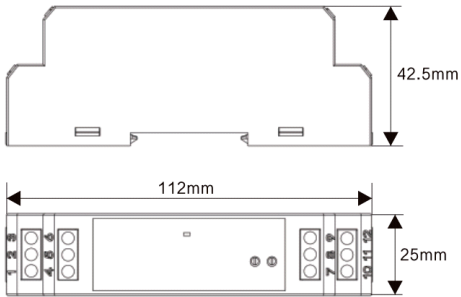
Power supply: DC24V,Voltage range:DC18-36V
Consumption current: ≤50mA (1 IN 1 OUT,DC24V,when 20mA output)
≤70mA (1 IN 2 OUT,DC24V,when 20mA output)
Basic accuracy: ≤0.1%F.S
Temperature drift:0.005%F.S/°C (-20°C~+55°C)
Response time:≤20mS(0-90%)(TYP)
Insulation strength:2500VAC/1min(Between input,output and power)
Insulation resistance:≥100MΩ(Between input,output and power)
Working temperature range:-20~+55°C

Electromagnetic Compatibility: According to GB/T 18268.1(IEC61326-1)
Applicable Field Equipment: 2Wire,3wire transmitter,current source

WIRING DIAGRAM



OVERALL DIMENSION



TB-I/U Series Current/Voltage Input Distribution Isolator (Loop power supply)

- The TB-IP series passive isolators are used to connect on-site two wire transmitters, provide power to them, and receive 4-20mA current signals from the two wire equipment output. After isolation, they output 4-20mA current signals. Adopting a two wire loop power supply method, there is no need for external power supply.
- The TB-I/U series passive isolator receives DC current or DC voltage signals from the site, and after interference suppression, isolates and outputs a 4-20mA current signal. Adopting a two wire loop power supply method, there is no need for external power supply.
- DIN rail independent installation method.

| SELECTION TABLE | | | | |
|-----------------|---|---|---|-----------------------------------|
| TB-I/U | X | X | X | Instructions |
| Channel | 1 | | | 1 IN 1 OUT |
| | 5 | | | 1 IN 2 OUT |
| Input Signal | | 1 | | 4-20mA |
| | | 2 | | 0-20mA |
| | | 4 | | 0-75mA |
| | | 5 | | 0-5V |
| | | 7 | | 0-10V |
| Output Signal | | 0 | | 4-20mA (Output side power supply) |
| | | | | |

Note: Customers need to determine the input signal form and output signal form when placing an order. If there are special needs, they can customize it

Product Selection

TB-IXXX
EG:TB-I150,1 IN 1 OUT,Loop power supply, input:0-5V, output: DC 4-20mA.
TB-IPXXX
EG:TB-IP110,Distribution type,1 IN 1 OUT,Loop power supply, input&output: DC 4-20mA.

MAIN TECHNICAL PARAMETERS

Input

Input signal: 4-20mA;0-20mA;0-75mA,0-5V;0-10V
Input impedance: Current input≤100Ω,voltage input≥300KΩ

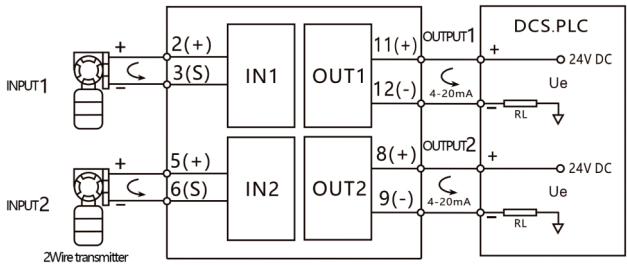
Output

Output signal:4-20mA
Output load resistance:RL≤500Ω

Basic Parameter

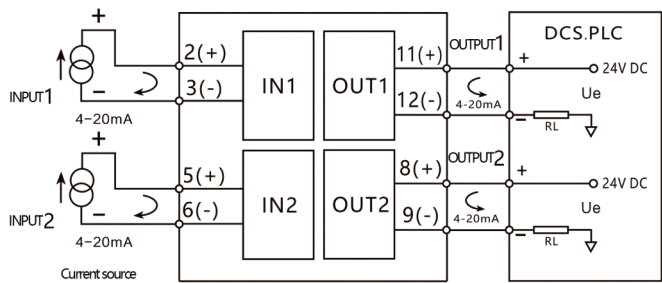
Power supply: None
Basic accuracy: 0.2%F.S
Temperature drift:0.005%F.S/°C (-20°C~+55°C)
Response time:≤10mS(0-90%)(TYP)
Insulation strength:1500VAC/1min(Between input,output and power)
Insulation resistance:≥100MΩ(Between input,output and power)
Working temperature range:-20~+55°C
Electromagnetic Compatibility: According to GB/T 18268.1(IEC61326-1)
Applicable Field Equipment: 2Wire transmitter,current source

WIRING DIAGRAM



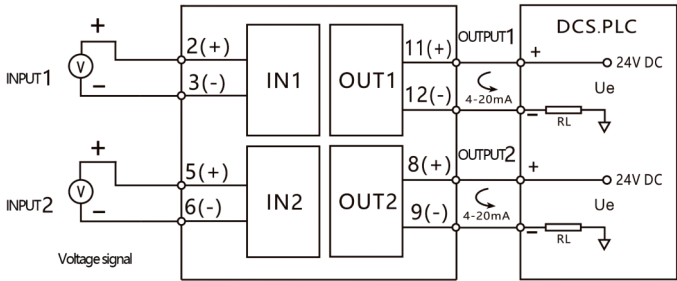
TB-IP510 1 IN 1 OUT

Note:TB-IP110 1 IN 1 OUT,only include input 1,output 1



TB-I510 2 IN 2 OUT

Note:TB-I110 1 IN 1 OUT,only include input 1,output 1

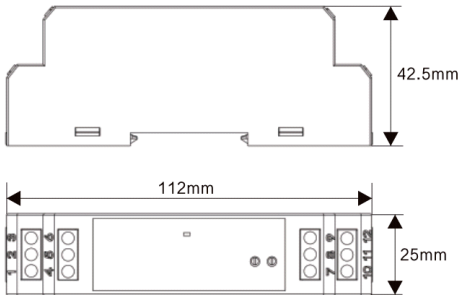


TB-U550 2 IN 2 OUT

Note:TB-U150 1 IN 1 OUT,only include input 1,output 1



OVERALL DIMENSION



TB-U Series Voltage Input Signal Isolator

- DC24V power supply provides power distribution for on-site transmitters, while isolating and transmitting the current signals generated by the transmitters from the site to the control room, PLC/DCS, etc.
- DIN rail independent installation method; Internally, efficient magnetoelectric isolation technology is used, with input, output, and power sources isolated from each other, featuring high accuracy, high linearity, and low temperature drift.

| SELECTION TABLE | | | | |
|-----------------|---|---|---|--------------|
| TB-U | X | X | X | Instructions |
| Channel | 1 | | | 1 IN 1 OUT |
| | 2 | | | 1 IN 2 OUT |
| Input Signal | 4 | | | 0-75mV |
| | 5 | | | 0-5V |
| | 7 | | | 0-10V |
| | 8 | | | -5V~+5V |
| | 9 | | | -10V~+10V |
| Output Signal | 1 | | | 4-20mA |
| | 2 | | | 0-20mA |
| | 4 | | | 0-5V |
| | 6 | | | 0-10V |
| | 8 | | | -5V~+5V |
| | 9 | | | -10V~+10V |

Note: Customers need to determine the input signal form and output signal form when placing an order. If there are special needs, they can customize it

Product Selection

TB-UXXX
EG:THT-U141,1 IN 1 OUT,Input 0-75mV,output 4-20mA.

MAIN TECHNICAL PARAMETERS

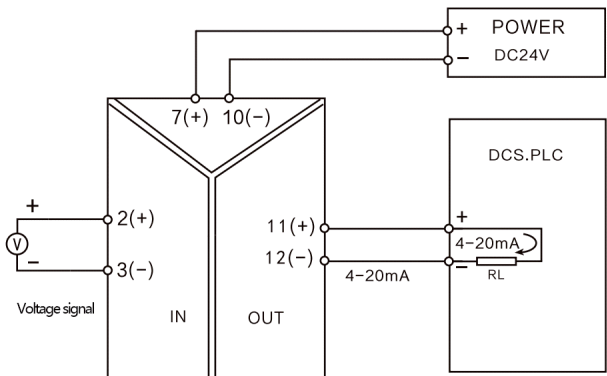
Input
Input signal: 4-20mA;0-20mA;0-75mA,0-5V;0-10V
Input impedance: ≥300KΩ

Output
Output signal:4-20mA;0-20mA;0-5v;0-10v
Output load resistance:RL≤500Ω (Output is current signal)
RL≥10KΩ (Output is voltage signal)

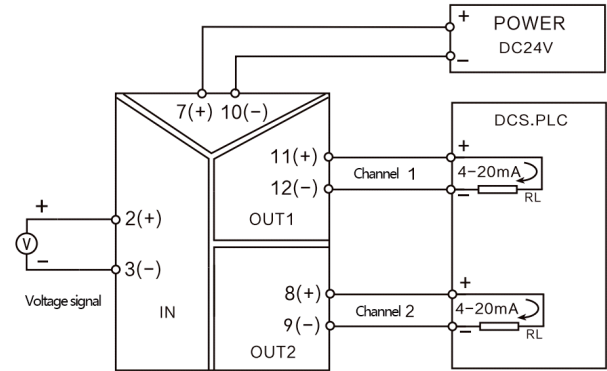
Basic Parameter
Power supply: DC24V,Voltage range:DC18-36V
Consumption current: ≤30mA (1 IN 1 OUT,DC24V,when 20mA output)
≤50mA (1 IN 2 OUT,DC24V,when 20mA output)
Basic accuracy: ≤0.1%F.S
Temperature drift:0.005%F.S/°C (-20°C~+55°C)
Response time:≤20mS(0-90%)(TYP)
Insulation strength:2500VAC/1min(Between input,output and power)
Insulation resistance:≥100MΩ(Between input,output and power)
Working temperature range:-20~+55°C

Electromagnetic Compatibility: According to GB/T 18268.1(IEC61326-1)
Applicable Field Equipment: Voltage output equipment

WIRING DIAGRAM



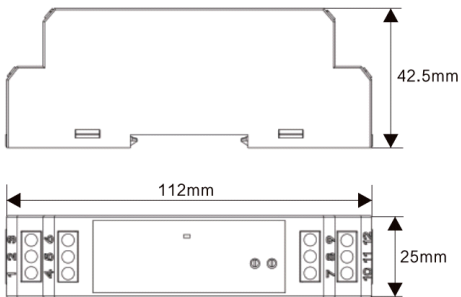
TB-U171 1 IN 1 OUT



TB-U271 1 IN 2 OUT



OVERALL DIMENSION



TB-I Series Passive Isolator

- The TB-I series passive isolators do not require external power supply before inputting signals for power, and isolate the 4-20mA DC current of various equipment in the industrial field after interference suppression.
- DIN rail independent installation method. High reliable isolation of input and output ports.

| SELECTION TABLE | | | | |
|-----------------|---|---|---|-----------------------------------|
| TB-I | X | X | X | Instructions |
| Channel | 1 | | | 1 IN 1 OUT |
| | 5 | | | 2 IN 2 OUT |
| Input Signal | | 0 | | 4-20mA (Output side power supply) |
| | | | | |
| | | | | |
| | | | | |
| Output Signal | | 1 | | 4-20mA |
| | | | | |

Note: Customers need to determine the input signal form and output signal form when placing an order. If there are special needs, they can customize it

Product Selection

Product Selection:
TB-IXXX
EG:TB-I101,1 IN 1 OUT,Input side power supply,Both nput and output are DC 4-20mA.

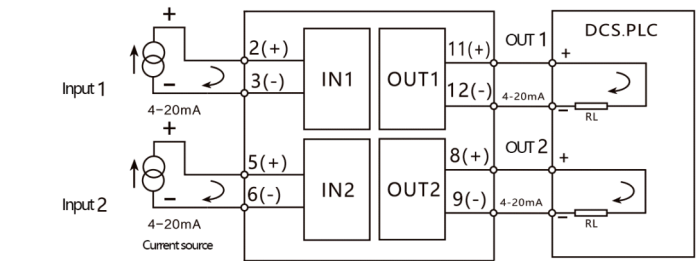
MAIN TECHNICAL PARAMETERS

Input
Input signal: 4-20mA;0-20mA
Voltage drop:3V,TYP
Input impedance: 150Ω±Output load resistance

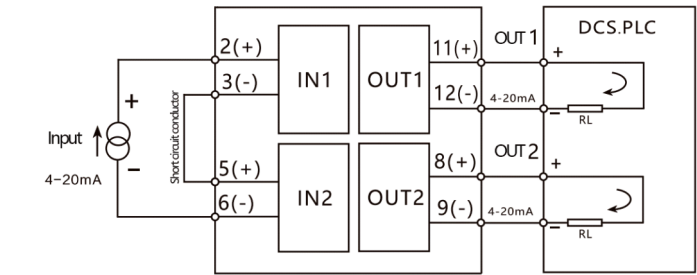
Output
Output signal:4-20mA
Output load resistance:RL≤650Ω

Basic Parameter
Power supply: None
Basic accuracy: 0.1%F.S
Temperature drift:0.005%F.S/°C (-20°C~+55°C)
Response time:≤10mS(0-90%)(TYP)
Insulation strength:2500VAC/1min(Between input,output and power)
Insulation resistance:≥100MΩ(Between input,output and power)
Working temperature range:-20~+55°C
Electromagnetic Compatibility: According to GB/T 18268.1(IEC61326-1)
Applicable Field Equipment: Current source

WIRING DIAGRAM



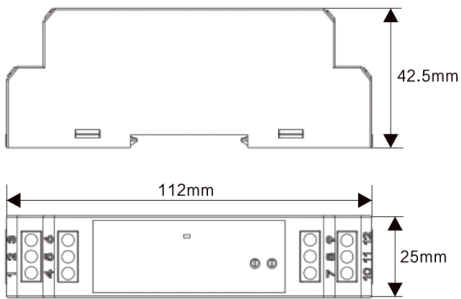
TB-I501 2 IN 2 OUT
Note:TB-I101 1 IN 1 OUT only include input1,output1



Passive isolator 1 IN 2 OUT
Note: For the specification of 1 in 2 out, if only 1 output is used, the unused output terminal of the other channel must be short circuited with a wire, otherwise the isolator cannot work properly.



OVERALL DIMENSION



TB-RP Series Potentiometer Signal Isolator

- Receive on-site sliding resistance signals, transform them into standard signals such as 4-20mA, 0-5V that are linear with the resistance value, and output them to DCS or other secondary instruments. Contains a sensor constant voltage source.
- DIN rail independent installation method.

| SELECTION TABLE | | | | |
|-----------------|---|---|---|-----------------------------------|
| TB-RP | X | X | X | Instructions |
| Channel | 1 | | | 1 IN 1 OUT |
| | 2 | | | 1 IN 2 OUT |
| Input Signal | | A | | 0-500Ω |
| | | B | | 0-1KΩ |
| | | C | | 0-5KΩ |
| | | D | | 0-10KΩ |
| | | | | |
| Output Signal | | 0 | | 4-20mA (Output side power supply) |
| | | 1 | | 4-20mA |
| | | 2 | | 0-20mA |
| | | 5 | | 0-5V |
| | | 7 | | 0-10V |

Note: Customers need to determine the input signal form and output signal form when placing an order. If there are special needs, they can customize it

Product Selection

Product Selection:
TB-RP1XX
EG: TB-RP1D1, 1 IN 1 OUT, Input: 0-10KΩ, output: 4-20mA.

MAIN TECHNICAL PARAMETERS

Input

Input signal: Potentiometer signal, Input total resistance value: 500Ω-10KΩ
Excitation voltage: 2.5V or 5V

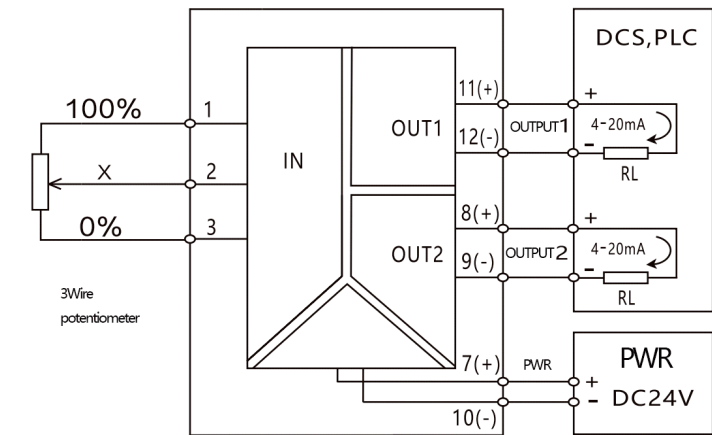
Output

Output signal: 4-20mA; 0-20mA; 0-5V; 0-10V
Output load resistance: $RL \leq 500\Omega$ (When output is current signal)
 $RL \geq 10K\Omega$ (When output is voltage signal)

Basic Parameter

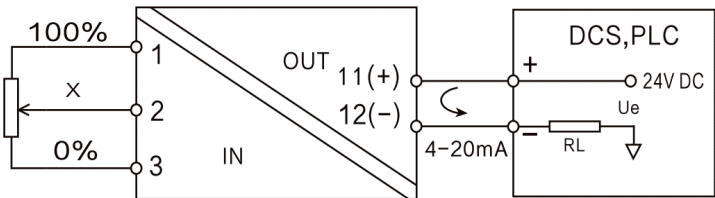
Power supply: DC24V, Voltage range: DC18~36v
Consumption current: $\leq 50mA$ (1 IN 1 OUT, 24V, When output is 20mA)
Basic accuracy: 0.1%F.S
Temperature drift: 0.005%F.S/°C (-20°C~+55°C)
Response time: $\leq 20mS$ (0-90%) (TYP)
Insulation strength: 2500VAC/1min (Between input, output and power)
Insulation resistance: $\geq 100M\Omega$ (Between input, output and power)
Working temperature range: -20~+55°C
Electromagnetic Compatibility: According to GB/T 18268.1 (IEC61326-1)
Applicable Field Equipment: Potentiometer

WIRING DIAGRAM



TB-RP2XX 1 IN 2 OUT

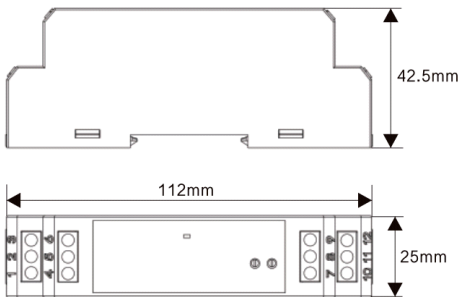
TB-RP1XX I IN 1 OUT only include channel 1 part



TB-RP1X0 1 IN 1 OUT
(Loop power supply)



OVERALL DIMENSION



TB-R Series Resistance Signal Isolator

- Isolate and convert resistance signals into standard signals such as 4-20mA and 0-5V. Contains precise constant current source excitation.
- DIN rail independent installation method.

| SELECTION TABLE | | | | |
|-----------------|---|---|---|-----------------------------------|
| TB-R | X | X | X | Instructions |
| Channel | 1 | | | 1 IN 1 OUT |
| | 2 | | | 1 IN 2 OUT |
| Input Signal | A | | | 0-500Ω |
| | B | | | 0-1KΩ |
| | C | | | 0-5KΩ |
| | D | | | 0-10KΩ |
| | | | | |
| Output Signal | | 0 | | 4-20mA (Output side power supply) |
| | | 1 | | 4-20mA |
| | | 2 | | 0-20mA |
| | | 5 | | 0-5V |
| | | 7 | | 0-10V |

Note: Customers need to determine the input signal form and output signal form when placing an order. If there are special needs, they can customize it

Product Selection

Product Selection:
TB-R1XX
EG: TB-R1D1, 1 IN 1 OUT, Input: 0-10KΩ, output: 4-20mA.

MAIN TECHNICAL PARAMETERS

Input

Input signal: Resistance signal, resistance range: 0-100KΩ
Excitation voltage: Built-in precision constant current source excitation

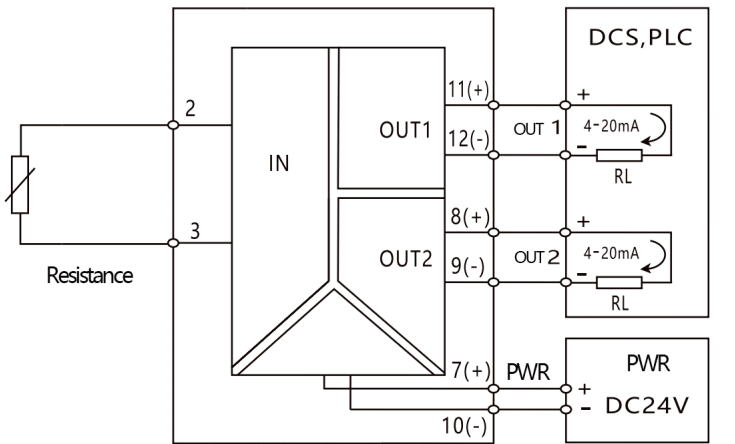
Output

Output signal: 4-20mA; 0-20mA; 0-5V; 0-10V
Output load resistance: $RL \leq 500\Omega$ (When output is current signal)
 $RL \geq 10K\Omega$ (When output is voltage signal)

Basic Parameter

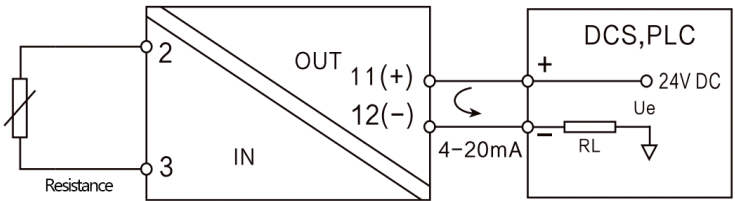
Power supply: DC24V, Voltage range: DC18~36v
Consumption current: $\leq 50mA$ (1 IN 1 OUT, 24V, When output is 20mA)
Basic accuracy: 0.1%F.S
Temperature drift: 0.005%F.S/°C (-20°C~+55°C)
Response time: $\leq 20ms$ (0-90%) (TYP)
Insulation strength: 2500VAC/1min (Between input, output and power)
Insulation resistance: $\geq 100M\Omega$ (Between input, output and power)
Working temperature range: -20~+55°C
Electromagnetic Compatibility: According to GB/T 18268.1 (IEC61326-1)

WIRING DIAGRAM



TB-R2XX 1 IN 2 OUT

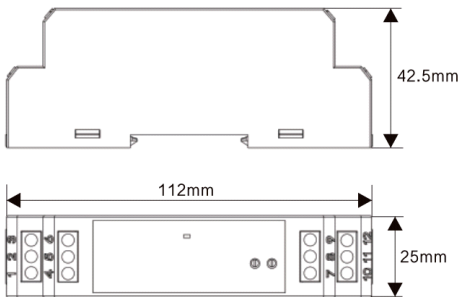
TB-R1XX I IN 1 OUT only include channel 1 part



TB-R1X0 1 IN 1 OUT
(Loop power supply)



OVERALL DIMENSION



TB-F Series Frequency Signal Isolator

- The TB-F series frequency signal isolation converter isolates industrial site frequency signals and converts them into standard signals such as 4-20mA and 0-5V.
- This product requires independent power supply; Adopting DIN35mm standard guide rail independent installation method; Triple isolation of input, output, and power supply.

| SELECTION TABLE | | | | |
|-----------------|---|---|---|--------------|
| TB-F | X | X | X | Instructions |
| Channel | 1 | | | 1 IN 1 OUT |
| | | | | |
| Input Signal | A | | | 0-60Hz |
| | B | | | 45-55Hz |
| | C | | | 0-1Kz |
| | D | | | 0-10Kz |
| | E | | | Customized |
| Output Signal | 1 | | | 4-20mA |
| | 2 | | | 0-20mA |
| | 5 | | | 0-5V |
| | 7 | | | 0-10V |
| | | | | |

Note: Customers need to determine the input signal form and output signal form when placing an order. If there are special needs, they can customize it

Product Selection

Product Selection:
TB-F1XXX
EG:TB-F1D1,1 IN 1 OUT,Input 0-10KHZ,output:DC 4-20mA.

MAIN TECHNICAL PARAMETERS

Input

Input signal: Sine wave, triangular wave, square wave
Input method:3Wire NPN,PNP sensor,active frequency signal, dry node signal,2wire proximity switch
Distribution voltage:24V±10%、12V±10% or 8V±10%
Distribution current:≤20mA
Frequency range:0.1HZ~100KHZ
Amplitude range:0.5~350Vpp

Output

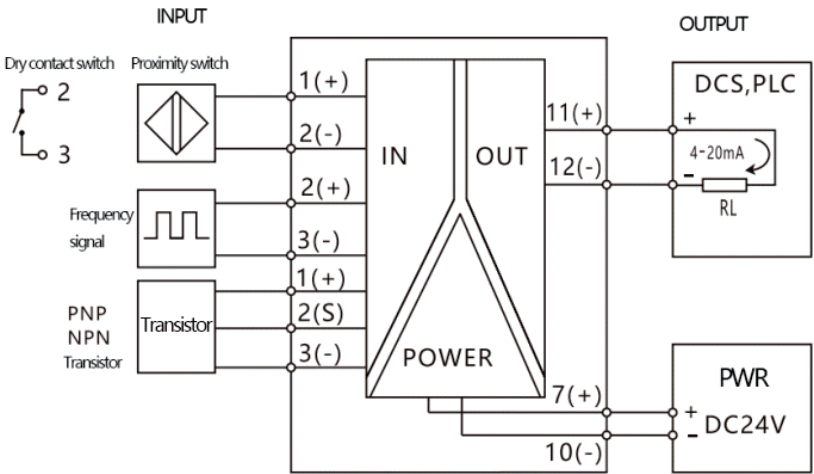
Output signal:4-20mA;0-20mA;0-5v;0-10v
Output load resistance:RL≤400Ω (Output is current signal)
RL≥10KΩ (Output is voltage signal)

Basic Parameter

Power supply: DC24V,Voltage range:DC18~36v
Consumption current:≤60mA(1 IN 1 OUT,24V,When output is 20mA)
Measurement accuracy: ±0.05%
Current output accuracy:±0.015mA
Voltage output accuracy:±0.008V
Temperature drift:0.01%F.S/°C (-20~+55°C)

Response time:≤1S(0-90%)(TYP)
Insulation strength:1500VAC/1min(Between input,output and power)
Insulation resistance:≥100MΩ(Between input,output and power)
Working temperature range:-20~+55°C
Electromagnetic Compatibility: NAMUR proximity switches, dry contact switches, and other field devices that comply with DIN19234, including level pulse signals, three wire NPN/PNP sensor outputs, incremental encoders, etc.

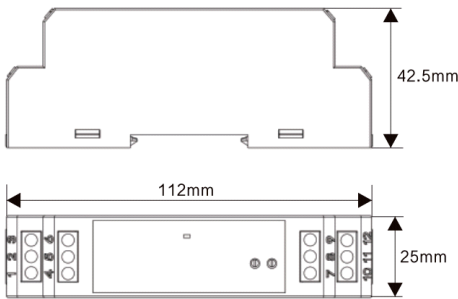
WIRING DIAGRAM



TB-F1X1 1 IN 1 OUT



OVERALL DIMENSION



TB-TC Series Thermocouple Signal Isolator

- The TB-TC series thermocouple signal isolator accepts thermocouple signals from the site and outputs standard current/voltage signals to the control room, PLC/DCS, display instruments, etc. through isolation and transmission.
- Connect the PC upper computer through the mini USB interface to configure the graduation number, range range, alarm output value, output range range, type, etc. of the input signal.
- This product requires independent power supply and adopts DIN35mm standard guide rail independent installation method (optional bus power supply function), with input, output, and power supply isolated.

| SELECTION TABLE | | | | |
|--------------------------------|---|---|---|--------------|
| TB-TC | X | X | X | Instructions |
| Channel | 1 | | | 1 IN 1 OUT |
| | 2 | | | 1 IN 2 OUT |
| Input Signal (Thermocouple) | | B | | 400~+1820℃ |
| | | E | | -100~+1000℃ |
| | | J | | -100~+1200℃ |
| | | K | | -180~+1372℃ |
| | | N | | -180~+1372℃ |
| | | R | | -50~+1760℃ |
| | | S | | -50~+1760℃ |
| | | T | | -200~+400℃ |
| Output Signal | | | 1 | 4-20mA |
| | | | 2 | 0-20mA |
| | | | 4 | 0-5V |
| | | | 6 | 0-10V |

Note: Customers need to determine the input signal form and output signal form when placing an order. If there are special needs, they can customize it

Product Selection

Product Selection:
TB-TCXX
EG:TB-TC1K1/0-500,Input:Model K thermocouple(0~500℃),output:DC 4-20mA.

MAIN TECHNICAL PARAMETERS

Output

Output signal

| Signal Type | Measurement Range | Absolute error(±) |
|----------------|-------------------|-------------------|
| Current Signal | DC 0-20mA | 0.01mA |
| Voltage Signal | DC 0-10V | 0.008V |

Note:

1. Output accuracy=absolute error/output range, the larger value should be taken during application.
2. The type and range of current and voltage signals can be set by the PC upper computer.

Output load resistance: $RL \leq 400 \Omega$ (when the output is a current signal)
 $RL \geq 10K \Omega$ (when outputting as a voltage signal)

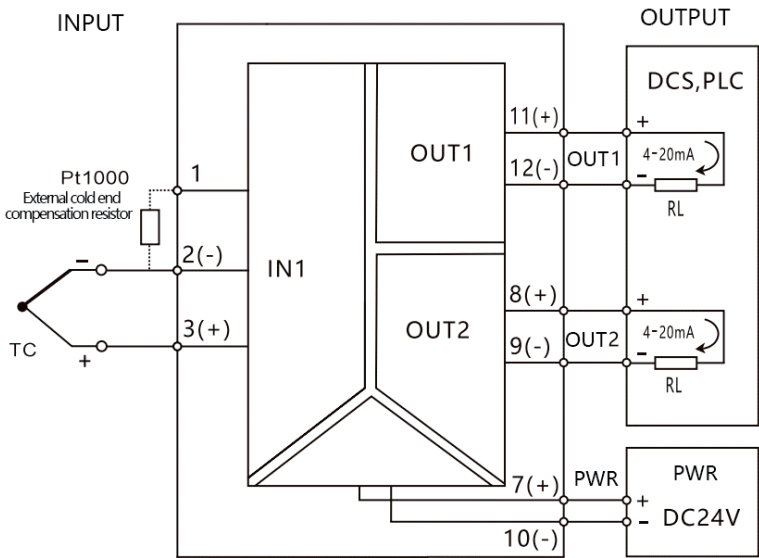
Input

Input signal:Thermocouple

| Graduation | Measurement range | Min range | Absolute error/Accuary |
|------------|-------------------|-----------|------------------------|
| B | 400~+1820℃ | 500℃ | 1.5℃/±0.1% |
| E | -100~+1000℃ | 50℃ | 0.5℃/±0.1% |
| J | -100~+1200℃ | 50℃ | 0.5℃/±0.1% |
| K | -180~+1372℃ | 50℃ | 0.5℃/±0.1% |
| N | -180~+1300℃ | 50℃ | 0.5℃/±0.1% |
| R | -50~+1760℃ | 500℃ | 1.5℃/±0.1% |
| S | -50~+1760℃ | 500℃ | 1.5℃/±0.1% |
| T | -200~+400℃ | 50℃ | 0.5℃/±0.1% |

Note: 1. Measurement accuracy=absolute error/input range. When applying, the larger value of range error and absolute error is taken.
2. Measurement accuracy does not include cold end compensation error.When inputting B-type thermocouples, the lower limit of the temperature range must be greater than 600 ℃ to ensure that the accuracy indicators are met.

WIRING DIAGRAM



TB-TC2XX 1 IN 2 OUT
TB-TC1XX 1 IN 1 OUT Only Include input and output 1 part

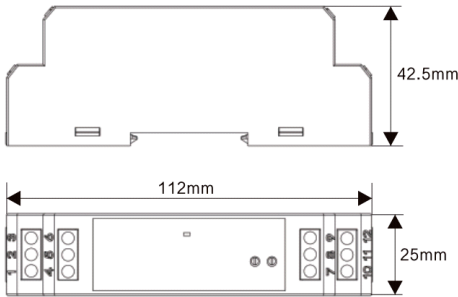
Note: When inputting thermocouples,the compensation wire should be directly connected to the input terminal, and wires of other materials should not be connected in the middle, otherwise it will cause measurement errors.
Cold end compensation:accuracy: $\pm 1^{\circ}\text{C}$, compensation range:-20℃~+60℃
Compensation method:internal compensation (default);External compensation (optional). When selecting external compensation,we need to order our dedicated external cold end compensation terminal.
Alarm indication:The input is below the lower limit of the range,the red indicator light is constantly on,and the output current is about 3.8mA.The input is above the upper limit of the range,the red indicator light is constantly on, and the output current is about 20.5mA.When the input is disconnected, the red indicator light flashes and the output current is approximately 22mA.

Basic parameter

Power supply: DC24V, voltage range: DC18-32V
Consumption current: $\leq 50\text{mA}$ (1 in 1 out, 24V,20mA output)
Basic accuracy: $\pm 0.1\%$ F.S or 0.2% F.S (20%)
Temperature drift: $\pm 0.01\%$ F.S/℃ (-20℃~+55℃)
Insulation strength: 1500V AC/1min
Working temperature range: -20~+55℃



OVERALL DIMENSION



TB-TR Series Thermal Resistance Signal Isolator

- The TB-TR series thermal resistance signal isolator receives thermal resistance signals from the site and outputs standard current/voltage signals to the control room, PLC/DCS, and display instruments through isolation and transmission.
- The TB-TR series thermal resistance signal isolator receives thermal resistance signals from the site and outputs standard current/voltage signals to the control room, PLC/DCS, and display instruments through isolation and transmission.Connect the PC upper computer through the mini USB interface to measure the graduation number, range, and alarm output value of the input signal; Configure the range and type of output range.
- This product requires independent power supply; Adopting DIN35mm standard guide rail independent installation method (optional bus power supply function); Input, output, and power isolation.

| SELECTION TABLE | | | | |
|--------------------------------------|----|---|---|---------------------------------|
| TB-TR | X | X | X | Instructions |
| Channel | 1 | | | 1 IN 1 OUT |
| | 2 | | | 1 IN 2 OUT |
| Input Signal (Thermal resistance) | C5 | | | Cu50(-50~+150℃) |
| | C1 | | | Cu100(-50~+150℃) |
| | P1 | | | Pt100(-200~+850℃) |
| | P2 | | | Pt1000(-200~+250℃) |
| | P5 | | | Ni100(-60~+180℃) |
| | N1 | | | Ni1000(-60~+150℃) |
| | N2 | | | N500(-60~+180℃) |
| | N5 | | | -200~+400℃ |
| | N5 | | | Resistance,potentiometer(0~3KΩ) |
| | N5 | | | Resistance,potentiometer(0~5KΩ) |
| Output Signal | | 1 | | 4-20mA |
| | | 2 | | 0-20mA |
| | | 4 | | 0-5V |
| | | 6 | | 0-10V |

Note: Customers need to determine the input signal form and output signal form when placing an order. If there are special needs, they can customize it

Product Selection

Product Selection:

TB-TRXX

EG:TB-TR1P1/0-500,Input:PT100 Model thermal resistance(0~500℃),output:DC 4-20mA.

MAIN TECHNICAL PARAMETERS

Output

| Signal Type | Measurement Range | Absolute error(±) |
|----------------|-------------------|-------------------|
| Current Signal | DC 0-20mA | 0.01mA |
| Voltage Signal | DC 0-10V | 0.008V |

- Note:
1. Output accuracy=absolute error/output range, the larger value should be taken during application.
 2. The type and range of current and voltage signals can be set by the PC upper computer.

Output load resistance: $RL \leq 400 \Omega$ (when the output is a current signal)
 $RL \geq 10K \Omega$ (when outputting as a voltage signal)

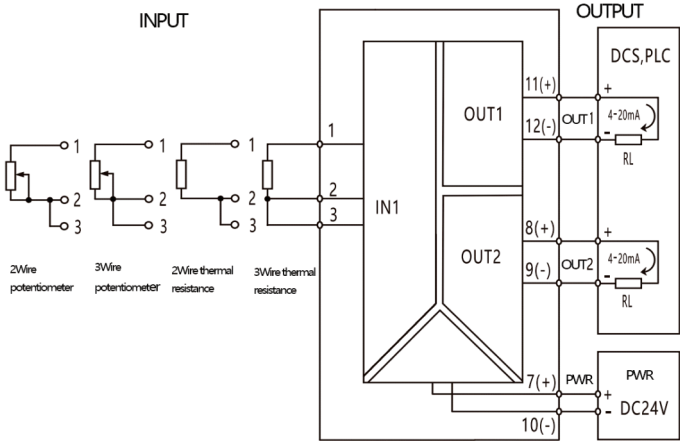
Input

| Input signal:Thermal resistance,resistance,potentiometer | | | |
|--|-------------------|-----------|------------------------|
| Graduation | Measurement range | Min range | Absolute error/Accuary |
| Cu50 | -50~+150℃ | 20℃ | 0.2℃/±0.1% |
| Cu100 | -50~+150℃ | 20℃ | 0.2℃/±0.1% |
| Pt100 | -200~+850℃ | 20℃ | 0.2℃/±0.1% |
| Pt1000 | -200~+250℃ | 20℃ | 0.1℃/±0.1% |
| Pt500 | -200~+250℃ | 20℃ | 0.1℃/±0.1% |
| Ni100 | -60~+180℃ | 20℃ | 0.1℃/±0.1% |
| Ni1000 | -60~+150℃ | 20℃ | 0.1℃/±0.1% |
| Ni500 | -60~+180℃ | 10Ω | 0.1℃/±0.1% |
| R3 | 0~1KΩ | 10Ω | 0.1Ω/±0.1% |
| R3 | 0~3KΩ | 10Ω | 0.5Ω/±0.1% |
| R5 | 0~5KΩ | 10Ω | 3Ω/±0.1% |

Note: 1. Measurement accuracy=absolute error/input range. When applying, the larger value of range error and absolute error is taken.

2. Input wire allowable line resistance:≤50Ω (3 wire)

WIRING DIAGRAM



TB-TR2XX 1 IN 2 OUT

TB-TR1XX 1 IN 1 OUT Only Include input and output 1 part

Note: 1. When inputting signals from a two wire heating resistor or potentiometer, terminals 2 and 3 must be short circuited. The two wire connection method cannot eliminate wire resistance, and the error will increase.

Alarm indication:The input is below the lower limit of the range,the red indicator light is constantly on,and the output current is about 3.8mA.The input is above the upper limit of the range,the red indicator light is constantly on, and the output current is about 20.5mA.When the input is disconnected, the red indicator light flashes and the output current is approximately 22mA.

Basic parameter

Power supply: DC24V, voltage range: DC18-32V

Consumption current: ≤ 50mA(1 in 1 out, 24V,20mA output)

Basic accuracy: ± 0.1% F.S or 0.2% F.S (20%)

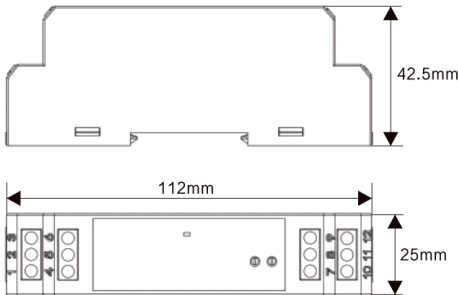
Temperature drift: ± 0.01% F.S/℃ (-20℃~+55℃)

Insulation strength: 1500V AC/1min

Working temperature range: -20~+55℃



OVERALL DIMENSION



TB-AI/AU Series AC Current/Voltage Transmitter

- The TB-AI series AC current transmitter converts AC signals from AC transformers into standard process signals, used for central monitoring of motors, pumps, or heating networks by DCS, and monitoring power supply lines and their currents.
- High reliable isolation of input, output, and power ports.

| SELECTION TABLE | | | | |
|-----------------|---|---|---|--------------|
| TB-TR | X | X | X | Instructions |
| Channel | 1 | | | 1 IN 1 OUT |
| | | | | |
| | | | | |
| Input Signal | | A | | 0-1A |
| | | B | | 0-5A |
| | | C | | 0-10A |
| | | D | | 0-100V |
| | | E | | 0-300V |
| | | F | | 0-500V |
| | | Z | | Customized |
| Output Signal | | 1 | | 4-20mA |
| | | 2 | | 0-20mA |
| | | 5 | | 0-5V |
| | | 7 | | 0-10V |

Note: Customers need to determine the input signal form and output signal form when placing an order. If there are special needs, they can customize it

Product Selection

Product Selection:
TB-AIXXX
EG:TB-AI1B1,1 IN 1 OUT,ac current input 0-5A,output:DC 4-20mA.

MAIN TECHNICAL PARAMETERS

Input

Input current range:AC 0-10A
Input voltage range:AC 0-500v
Frequency range:40Hz-60Hz

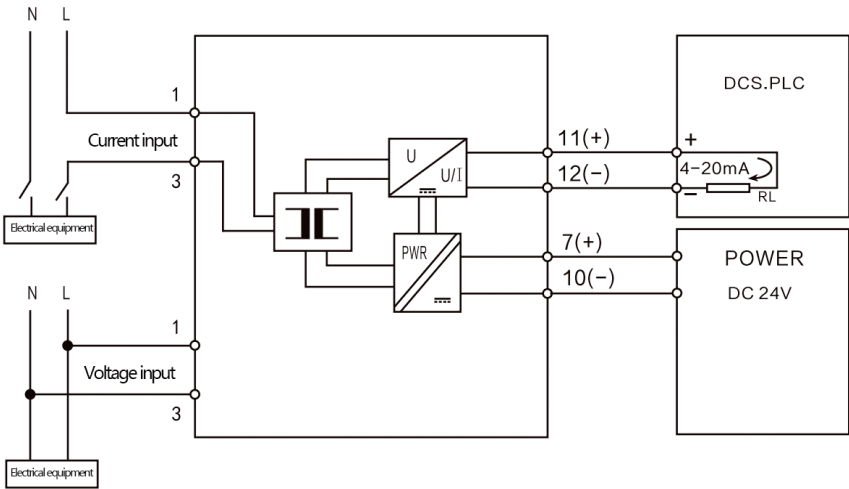
Output

Output signal:4-20mA;0-20mA;0-5v;0-10v
Output load resistance:RL≤500Ω (Output is current signal)
RL≥10KΩ (Output is voltage signal)

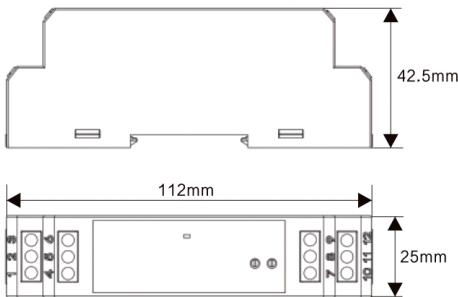
Basic parameter

Power supply: DC24V, voltage range: DC18-36V
Rate power:≤1W (1 IN 1 OUT,DC24V,when 20mA output)
Basic accuracy: ≤0.5%F.S
Temperature drift: 0.02%F.S/℃
Response time:≤400mS(0-90%)(TYP)
Insulation strength: 2000VAC/1min(Between input,output and power)
Insulation resistance:≥100MΩ(Between input,output and power)
Working temperature range: -20~+55 ℃
Electromagnetic compatibility:In accord with GB/T 18268(IEC61326-1)

WIRING DIAGRAM



OVERALL DIMENSION



TB-AI/AU Series AC Current/Voltage Transmitter(Loop power supply)

- The TB-AI/AU1X0 series AC current/voltage transmitter converts AC signals from AC transformers into standard process signals, used by DCS for central monitoring of motors, pumps, or heating networks, and monitoring the current/voltage of power supply machines.
- Adopting a two wire loop power supply method, without the need for power supply; High reliable isolation of input and output.

| SELECTION TABLE | | | | |
|-----------------|---|---|---|---------------------------|
| TB-TR | X | X | X | Instructions |
| Channel | 1 | | | 1 IN 1 OUT |
| | | | | |
| | | | | |
| Input Signal | A | | | 0-1A |
| | B | | | 0-5A |
| | C | | | 0-10A |
| | D | | | 0-100V |
| | E | | | 0-300V |
| | F | | | 0-500V |
| | Z | | | Customized |
| Output Signal | | 0 | | 4-20mA(Loop power supply) |

Note: Customers need to determine the input signal form and output signal form when placing an order. If there are special needs, they can customize it

Product Selection

Product Selection:
TB-AIXX0
EG:TB-AI1B0,1 IN 1 OUT,ac current input 0-5A,output:DC 4-20mA.

MAIN TECHNICAL PARAMETERS

Input

Input current range:AC 0-10A
Input voltage range:AC 0-500v
Frequency range:40Hz-60Hz

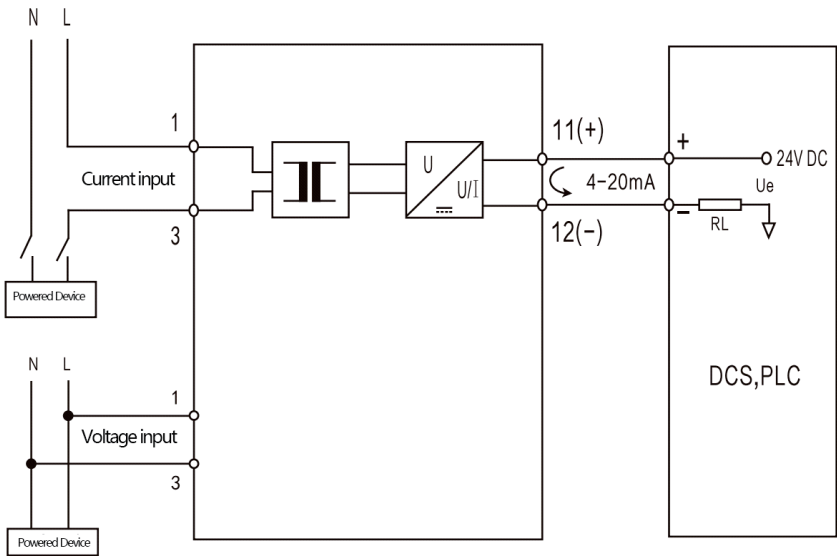
Output

Output signal:4-20mA
Output load resistance:RL≤500Ω（Output is current signal）

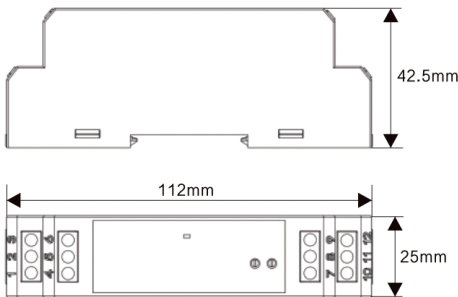
Basic parameter

Basic accuracy: ≤0.5%F.S
Temperature drift: 0.02%F.S/℃ (-20~+55℃)
Response time:≤400mS(0-90%)(TYP)
Insulation strength: 2000VAC/1min(Between input,output and power)
Insulation resistance:≥100MΩ(Between input,output and power)
Working temperature range: -20~+55℃
Electromagnetic compatibility:In accord with GB/T 18268(IEC61326-1)

WIRING DIAGRAM



OVERALL DIMENSION



TB-AI/AU Series AC Current/Voltage Transmitter(Loop power supply)

● TB-DI/U is a process signal that converts DC current and voltage signals into standard signals. Used for central monitoring of motors, pumps, or heating networks by DCS, monitoring power supply lines and their currents.

● The three ports of input, output, and power supply are highly reliable and isolated.

| SELECTION TABLE | | | | |
|-----------------|---|---|---|---------------------------|
| TB-DI/U | X | X | X | Instructions |
| Channel | 1 | | | 1 IN 1 OUT |
| | | | | |
| | | | | |
| Input Signal | | A | | 0-1A |
| | | B | | 0-5A |
| | | C | | 0-10A |
| | | D | | 0-100V |
| | | E | | 0-300V |
| | | F | | 0-500V |
| | | Z | | Customized |
| Output Signal | | 0 | | 4-20mA(Loop power supply) |
| | | | | |
| | | | | |
| | | | | |

Note: Customers need to determine the input signal form and output signal form when placing an order. If there are special needs, they can customize it

Product Selection

Product Selection:
TB-AIXX0
EG:TB-AI1B0,1 IN 1 OUT,ac current input 0-5A,output:DC 4-20mA.

MAIN TECHNICAL PARAMETERS

Input

Input current range:AC 0-10A
Input voltage range:AC 0-500v
Frequency range:40Hz-60Hz

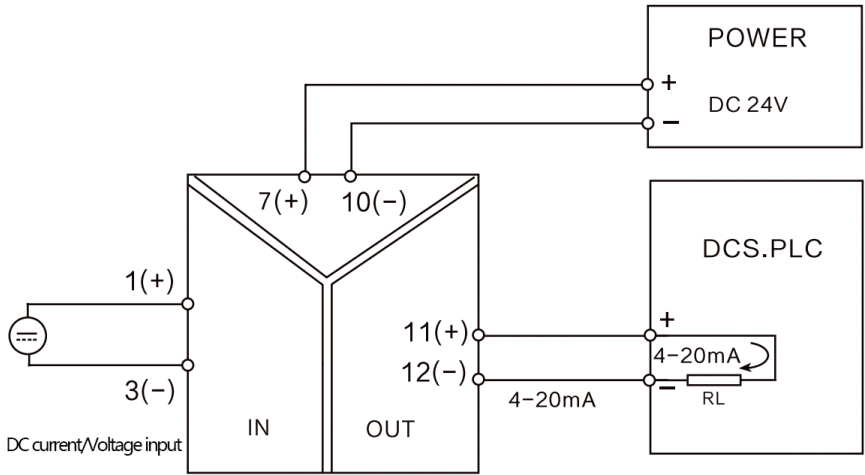
Output

Output signal:4-20mA
Output load resistance:RL≤500Ω（Output is current signal）

Basic parameter

Basic accuracy: ≤0.5%F.S
Temperature drift: 0.02%F.S/℃ (-20~+55℃)
Response time:≤400mS(0-90%)(TYP)
Insulation strength: 2000VAC/1min(Between input,output and power)
Insulation resistance:≥100MΩ(Between input,output and power)
Working temperature range: -20~+55℃
Electromagnetic compatibility:In accord with GB/T 18268(IEC61326-1)

WIRING DIAGRAM



OVERALL DIMENSION

