THT-IP Series Current Input Distribution Isolator

- DC24V power supply provides isolated distribution power for on-site transmitters, while transmitting the current signal generated by the transmitter from the on-site isolation 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, input, and power sources isolated from each other, featuring high accuracy, high linearity, and low temperature drift.

- DIN rail independent installation method.

SELECTION TABLE				
THT-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

THT-IPXXX
Eg: THT-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:24V DC (max driving current 30mA)
Input impedance: ⩽50Ω

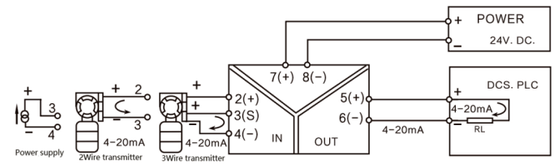
Output

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)

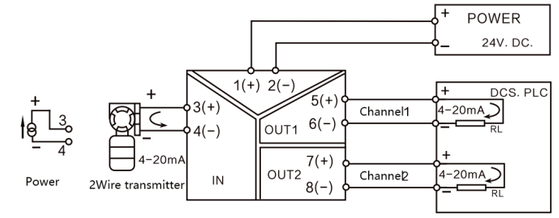
Basic Parameter

Power supply: DC24V±10%
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/℃ (-20℃~+55℃)
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℃
Electromagnetic Compatibility: According to GB/T 18268.1(IEC61326-1)
Applicable Field Equipment: 2Wire,3wire transmitter,current source

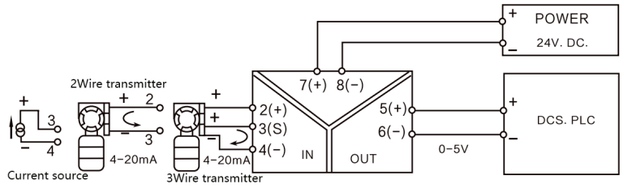
WIRING DIAGRAM



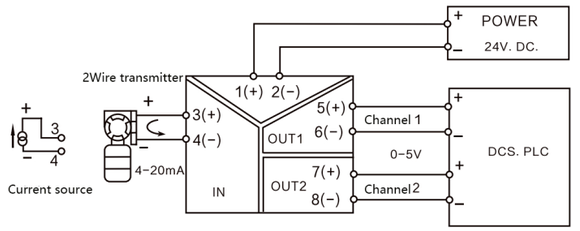
THT-IP111,1 IN 1 OUT



THT-IP211,1 IN 2 OUT

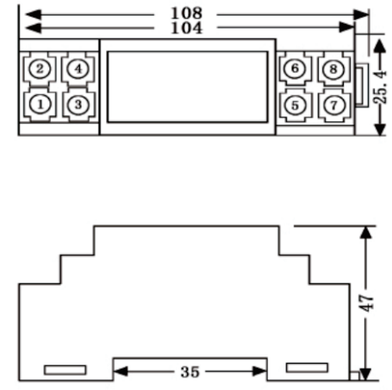


THT-IP114,1 IN 1 OUT
Voltage output type



THT-IP214,1 IN 2 OUT
Voltage output type

OVERALL DIMENSION



THT-I/U Series Current/Voltage Input Signal Isolator

- DC24V Isolates and converts various signals such as voltage, current, and mv from industrial sites into standard current and voltage signals, and transmits them to control rooms, PLCs, DCS, and display instruments.

- DC24V Isolates and converts various signals such as voltage, current, and mv from industrial sites into standard current and voltage signals, and transmits them to control rooms, PLCs, DCS, and display instruments.

SELECTION TABLE

THT-I/U	X	X	X	Instructions
Channel	1			1 IN 1 OUT
	2			1 IN 2 OUT
Input Signal		1		4-20mA
		2		0-20mA
		4		0-75mV
		5		0-5V
		7		0-10V
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

THT-IXXX
Eg: THT-I111,Current input,1 IN 1 OUT,both input and output are DC 4-20mA.
THT-UXXX
Eg: THT-U141,Voltage input,1 IN 1 OUT,input:0-75mv, output:4-20mA.

MAIN TECHNICAL PARAMETERS

Input

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

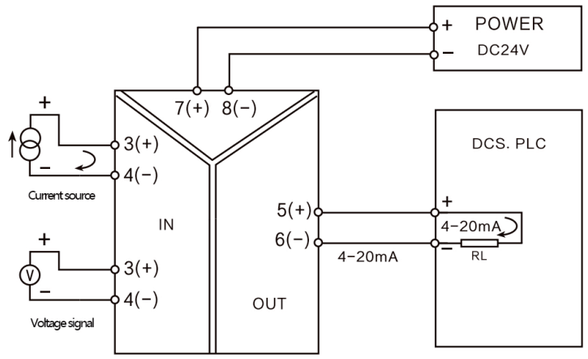
Output

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)

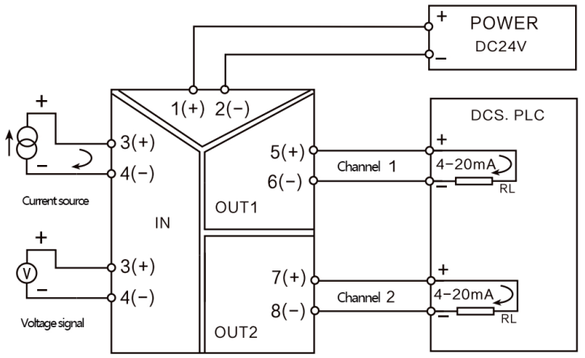
Basic Parameter

Power supply: DC24V±10%
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/℃ (-20℃~+55℃)
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℃
Electromagnetic Compatibility: According to GB/T 18268.1(IEC61326-1)
Applicable Field Equipment: Current source,voltage signal output device.

WIRING DIAGRAM

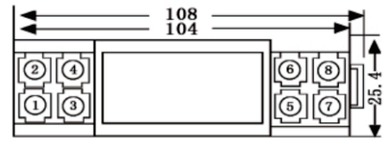


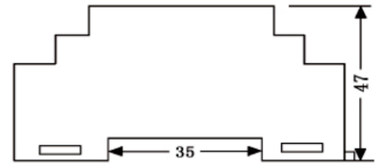
THT-U171,1 IN 1 OUT



THT-U271,1 IN 2 OUT

OVERALL DIMENSION





THT-I/U Series Current/Voltage Input Signal Isolator(Loop power supply)

● The THT-IP series passive isolator is used to connect to on-site two wire transmitters, provide power to them, and receive 4-20mA current signals from the two wire equipment output. After isolation, it outputs a 4-20mA current signal. Adopting a two wire loop power supply method, there is no need for external power supply.

● The THT-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				
THT-I/U	X	X	X	Instructions
Channel	1			1 IN 1 OUT
Input Signal		1		4-20mA
		2		0-20mA
		4		0-75mV
		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

THT-IXXX
Eg: THT-I150,Loop power supply,1 IN 1 OUT,input：0-5V，output：4-20mA.
THT-UXXX
Eg: THT-IP110,Distribution type,1 IN 1 OUT,Loop power supply，both input&output are 4-20mA.

MAIN TECHNICAL PARAMETERS

Input

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

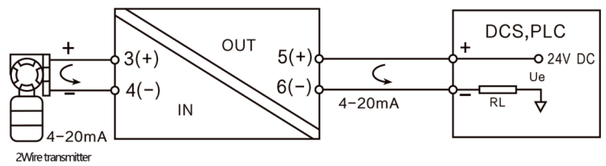
Output

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

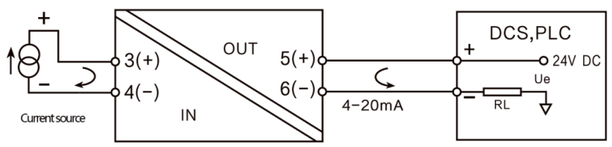
Basic Parameter

Power supply: None
Basic accuracy: 0.2%F.S
Temperature drift:0.005%F.S/℃ (-20℃~+55℃)
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℃
Electromagnetic Compatibility: According to GB/T 18268.1(IEC61326-1)
Applicable Field Equipment: 2Wire transmitter,Current source.

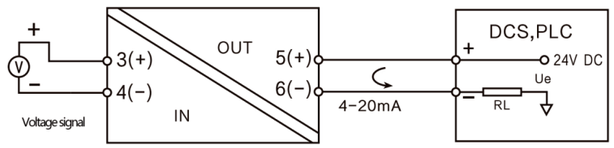
WIRING DIAGRAM



THT-IP110,1 IN 1 OUT

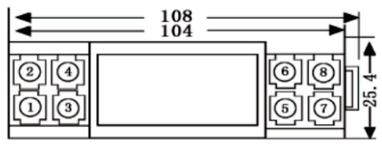


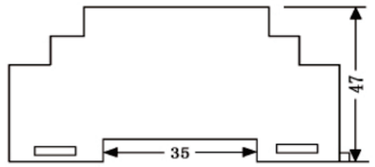
THT-I110,1 IN 1 OUT



THT-U150,1 IN 1 OUT

OVERALL DIMENSION





THT-I Series Passive Isolator

● The THT-I series passive isolator does not require external power supply, and takes power from the input signal to isolate and output the 4-20mA DC current signals of various equipment in the industrial field after interference suppression.

● DIN rail independent installation method. Input and output two port high reliability isolators.

SELECTION TABLE				
THT-I	X	X	X	Instructions
Channel	1			1 IN 1 OUT
	2			1 IN 2 OUT
	5			2 IN 2 OUT
Input Signal		0		4-20mA (Input 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

THT-IXXX
Eg: THT-I101,1 IN 1 OUT,Input side power supply, input&output：4-20mA.

MAIN TECHNICAL PARAMETERS

Input

Input signal: 4-20mA;0-20mA
Pressure drop：3V，TYP
Input impedance: 150Ω+output load resistance(THT-I101)

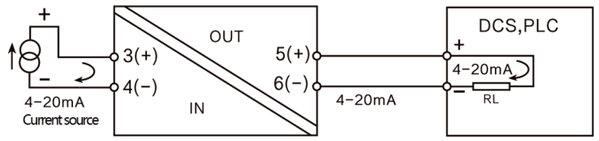
Output

Output signal:4-20mA
Output load resistance:RL≤350Ω（THT-I101）

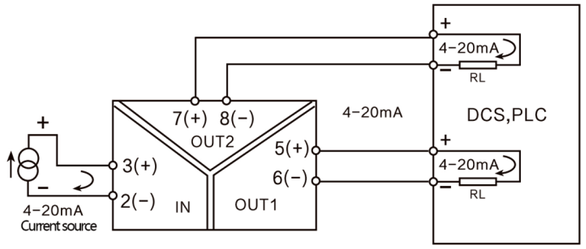
Basic Parameter

Power supply: None
Basic accuracy: 0.2%F.S
Temperature drift:0.005%F.S/℃ (-20℃~+55℃)
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℃
Electromagnetic Compatibility: According to GB/T 18268.1(IEC61326-1)
Applicable Field Equipment: Current source.

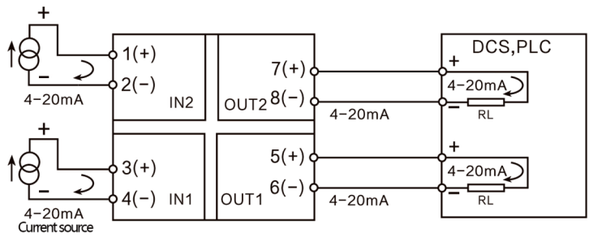
WIRING DIAGRAM



THT-I101,1 IN 1 OUT

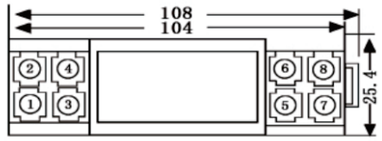


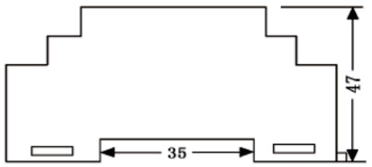
THT-I201,1 IN 2 OUT



THT-I501,2 IN 2 OUT

OVERALL DIMENSION





THT-RP Series Potentiometer Signal Isolator

- Receive the sliding resistance signal on site, transform it into standard signals such as 4-20mA, 0-5V with linear resistance values, and output it to DCS or other secondary instruments. Contains a sensor constant voltage source.

- DIN rail independent installation method.

SELECTION TABLE				
THT-RP	X	X	X	Instructions
Channel	1			1 IN 1 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
			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

THT-RP1XX

Eg: THT-RP1D1,1 IN 1 OUT,Input:0-10KΩ, output：4-20mA.

MAIN TECHNICAL PARAMETERS

Input

Potentiometer signal, input total resistance value: 500 Ω -10K Ω

Excitation voltage: 2.5V or 5V

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±10%

Consumption current: ≤50mA (1 IN 1 OUT,DC24V,when 20mA output)

Basic accuracy: 0.1%F.S

Temperature drift:0.005%F.S/℃ (-20℃~+55℃)

Response time:≤10mS(0-90%)(TYP)

Insulation strength:1500VAC/1min(Between input,output and power)

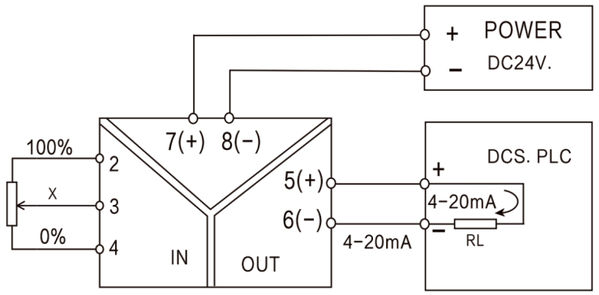
Insulation resistance:≥100MΩ(Between input,output and power)

Working temperature range:-20~+55℃

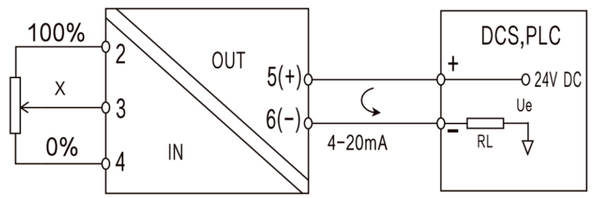
Electromagnetic Compatibility: According to GB/T 18268.1(IEC61326-1)

Applicable Field Equipment: Potentiometer

WIRING DIAGRAM

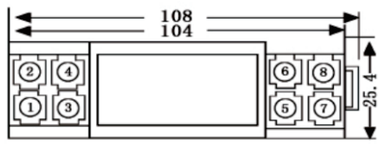


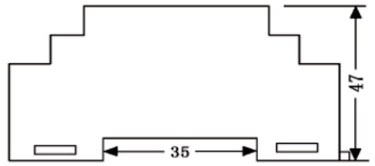
THT-RP1X1,1 IN 1 OUT



THT-RP1X0,1 IN 1 OUT
(Loop power supply)

OVERALL DIMENSION





THT-R Series Resistance Signal Isolator

- Isolate the resistance signal and convert it into standard signals such as 4-20mA and 0-5V. Contains precise constant current source excitation.

- DIN rail independent installation method.

SELECTION TABLE				
THT-R	X	X	X	Instructions
Channel	1			1 IN 1 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
			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

THT-R1XX
Eg: THT-R1D1,1 IN 1 OUT,Input:0-10KΩ, output：4-20mA.

MAIN TECHNICAL PARAMETERS

Input

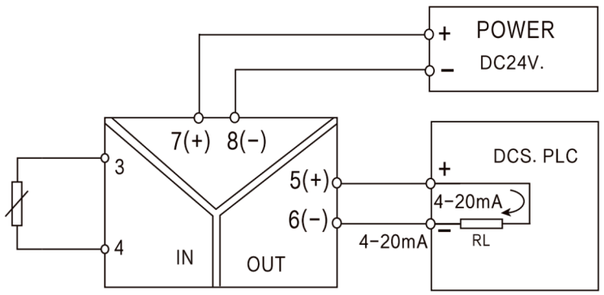
Input signal: Resistance signal,range:0 -100K Ω
Excitation method: Built-in precision constant source current excitation

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)

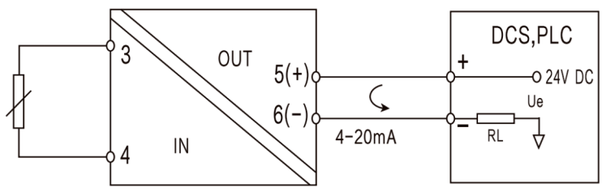
Basic Parameter

Power supply: DC24V±10%
Consumption current: ≤50mA (1 IN 1 OUT,DC24V,when 20mA output)
Basic accuracy: 0.1%F.S
Temperature drift:0.005%F.S/℃ (-20℃~+55℃)
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℃
Electromagnetic Compatibility: According to GB/T 18268.1(IEC61326-1)

WIRING DIAGRAM

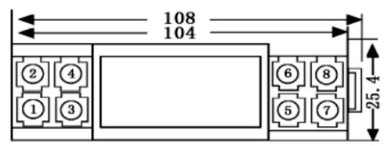


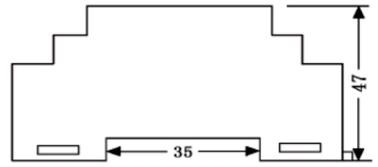
THT-R1X1,1 IN 1 OUT



THT-R1X0,1 IN 1 OUT
(Loop power supply)

OVERALL DIMENSION





TST-F Series Frequency Signal Isolator

- Isolate and convert industrial site frequency signals into standard signals such as 4-20mA and 0-5V.
- DIN rail independent installation method.

SELECTION TABLE

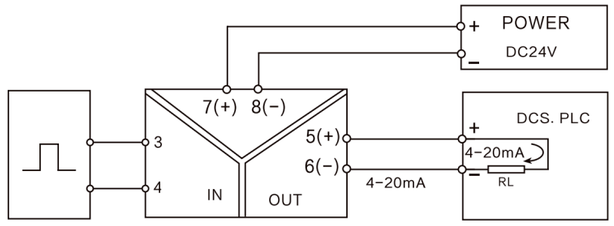
TST-F	X	X	X	Instructions
Channel	1			1 IN 1 OUT
Input Signal		A		0-60Hz
		B		45-55Hz
		C		0-1Kz
		D		0-10KΩ
		E		Customized
Output Signal			1	4-20mA
			2	0-20mA
			5	0-5V
			7	0-10V

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

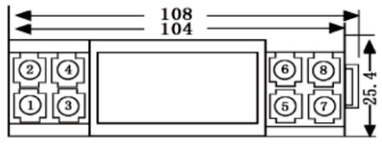
TST-F1XX
Eg: TST-F1D1,1 IN 1 OUT,Input:0-10KHz，output：4-20mA.

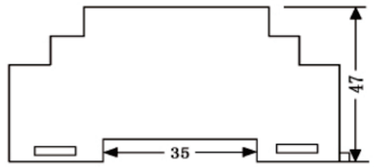
WIRING DIAGRAM



TST-F1X1,1 IN 1 OUT

OVERALL DIMENSION





MAIN TECHNICAL PARAMETERS

Input

Signal type:Pulse square wave or sine wave
Frequency range:1Hz-100KHz(Signals below 1Hz are cut off as 0Hz)
Customizable 0.1Hz-100KHz
Level:VL≤1V;4V≤VH≤12V

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±10%
Consumption current: ≤50mA (1 IN 1 OUT,DC24V,when 20mA output)
Basic accuracy: 0.1%F.S
Temperature drift:0.005%F.S/℃ (-20℃~+55℃)
Response time:≤0.5S(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℃
Electromagnetic Compatibility: According to GB/T 18268.1(IEC61326-1)
Applicable Field Equipment: Frequency signal source

TST-TC Series Thermocouple Temperature Isolation Transmitter

- Receive thermocouple signals from the site, isolate and loosen them to output standard current /voltage signals to the control room, PLC, DCS, and display instruments.

- The signal type, measurement range, alarm parameters, etc. can be programmed through PC software.
- High reliable isolation of input, output, and power supply three ports; DIN rail independent installation method.

SELECTION TABLE

TST-TC	X	X	X	Instructions
Channel	1			1 IN 1 OUT
Input Signal		B		400~+1820℃
		E		-100~+1000℃
		J		-100~+1200℃
		K		-180~+1372℃
		N		-180~+1372℃
		R		-50~+1768℃
		S		-50~+1768℃
		T		-200~+400℃
Output Signal			1	0-40mA
			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

TST-TCXX
Eg: TST-TC1K1/0-500,Input:K model thermocouple(0-500℃), output：DC 4-20mA.

MAIN TECHNICAL PARAMETERS

Input

Signal type:B,E,J,K,N,R,S,T etc. thermocouple signal
Cold Junction Compensation:Compensation range:-20℃~+60℃
Compensation method:Internal compensation
Cold end compensation accuracy:±1℃

Output

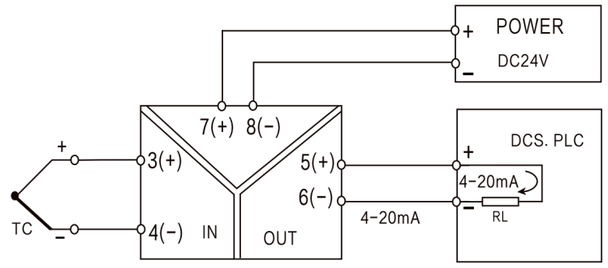
Output signal:4-20mA;0-20mA;0-5v;0-10v
Output load resistance:RL≤500Ω (Output is current signal)
RL≥10KΩ (Output is voltage signal)

Basic Parameter

Power supply: DC24V,voltage range:DC18-36V
Consumption current: ≤50mA (1 IN 1 OUT,DC24V,when 20mA output)
Over limit alarm: Below the lower temperature limit, output 3.8mA (at 4-20mA)
Above the upper temperature limit, output 20.5mA
Break even alarm: Output 22mA
(users can set specific values as alarm values within the range of 0-22mA)
Basic accuracy: 0.2%F.S
Temperature drift:0.005%F.S/℃ (-20℃~+55℃)
Insulation strength:1500VAC/1min(Between input,output and power)
Insulation resistance:≥100MΩ(Between input,output and power)

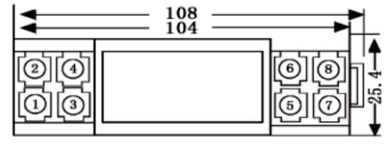
Working temperature range:-20~+55℃
Electromagnetic Compatibility: According to GB/T 18268.1(IEC61326-1)
Applicable Field Equipment: Thermocouple

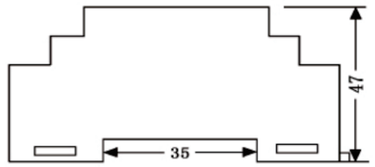
WIRING DIAGRAM



TST-TC1X1,1 IN 1 OUT

OVERALL DIMENSION





TST-TC Series Thermocouple Temperature Isolation Transmitter (Loop power supply)

- Receive thermocouple signals from the site, isolate and transmit standard 4-20mA current signals to the control room, PLC, DCS, and display instruments. Adopting a two wire circuit power supply, there is no need for external energy sources.
- The signal type, measurement range, etc. can be programmed through PC software.
- High reliable isolation of input and output; DIN rail independent installation method.

SELECTION TABLE

TST-TC	X	X	X	Instructions
Channel	1			1 IN 1 OUT
Input Signal		B		400~+1820℃
		E		-100~+1000℃
		J		-100~+1200℃
		K		-180~+1372℃
		N		-180~+1372℃
		R		-50~+1768℃
		S		-50~+1768℃
		T		-200~+400℃
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

When inputting thermocouples, the conversion accuracy does not include cold junction compensation error. For every 100 Ω increase in the compensation wire, the cold end error increases by 0.2 ℃.
When inputting B-type thermocouples, the lower limit of the temperature range must be greater than 680 ℃ to ensure that the accuracy indicators are met.

Product Selection

TST-TCXX
Eg: TST-TC1K0/0-500,Input:K model thermocouple(0-500℃), output：DC 4-20mA.

MAIN TECHNICAL PARAMETERS

Input

Signal type:B,E,J,K,N,R,S,T etc. thermocouple signal

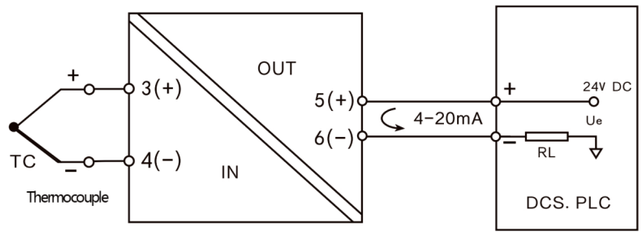
Output

Output signal:4-20mA
Output load resistance:RL≤ (Ue-12) /0.022

Basic Parameter

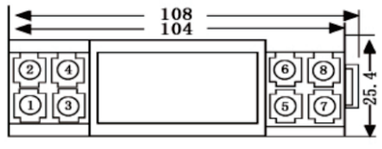
Supply voltage: 12~30VDC
Alarm indication: Low limit overflow alarm, output current approximately 3.9mA
Upper limit overflow alarm, output current approximately 21mA
Wire breakage alarm, output current approximately 22mA
Basic accuracy: 0.2%F.S
Temperature drift:0.01%F.S/℃ (-20℃~+55℃)
Cold Junction Compensation:±1℃；Cold Junction Compensation:±3℃ (Compensation range:-20℃~+60℃)
Response time:90% of final value reached in 1 second
Power protection: Power reverse protection
Insulation strength:1500VAC/1min(Between input,output and power)
Insulation resistance:≥100MΩ(Between input,output,power and shell)
Working temperature range:-20~+55℃
Electromagnetic Compatibility: According to GB/T 18268.1(IEC61326-1)
Applicable Field Equipment: Thermocouple

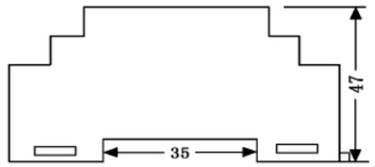
WIRING DIAGRAM



TST-TC1X0,1 IN 1 OUT

OVERALL DIMENSION





TST-TR Series Thermal Resistance Temperature Isolation Transmitter

● Receive the thermal resistance signal from the site, isolate and transmit the output standard current/voltage signal to the control room, PLC, DCS, and display instruments.

● The signal type, measurement range, alarm parameters, etc. can be programmed through PC software.

● High reliable isolation of input, output, and power supply three ports; DIN rail independent installation method.

SELECTION TABLE				
TST-TR	X	X	X	Instructions
Channel	1			1 IN 1 OUT
Input Signal		C5		Cu50(-50~+150℃)
		C1		Cu100(-50~+150℃)
		P1		Pt100(-200~+850℃)
		P2		Pt1000(-200~+250℃)
		N1		Ni100(-60~+180℃)
		N2		Ni1000(-60~+150℃)
Output Signal			0	4-20mA (Output side power supply)
			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

TST-TRXX
Eg: TST-TR1P11/0-100,Input:PT100(0-100℃), output：DC 4-20mA.

MAIN TECHNICAL PARAMETERS

Input

Input signal:Pt100,Cu50,Ni1000 etc. thermal resistance signal
Permissible line resistance:⩽22Ω

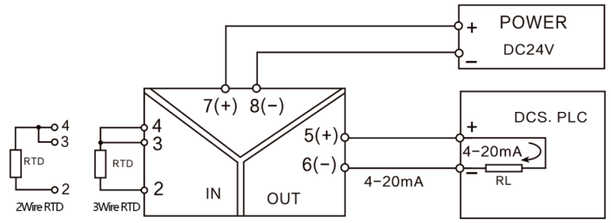
Output

Output signal:4-20mA；0-20mA;0-5V;0-10V
Output load resistance:RL⩽500Ω (When output is current signal)
RL⩾10KΩ (When output is voltage signal)

Basic Parameter

Supply voltage: DC24V,voltage range:DC18~36VDC
Consumption current：⩽50mA(1 IN 1 OUT,DC24V,When 20mA output)
Over limit alarm: Below the lower temperature limit, output 3.8mA (at 4-20mA)
Above the upper temperature limit, output 20.5mA
Break even alarm: Output 22mA
(users can set specific values as alarm values within the range of 0-22mA)
Basic accuracy: 0.1%F.S
Temperature drift:0.005%F.S/℃ (-20℃~+55℃)
Insulation strength:1500VAC/1min(Between input,output and power)
Insulation resistance:⩾100MΩ(Between input,output,power and shell)
Working temperature range:-20~+55℃
Electromagnetic Compatibility: According to GB/T 18268.1(IEC61326-1)
Applicable Field Equipment: Two wire,three wire thermal resistance

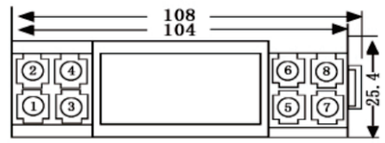
WIRING DIAGRAM

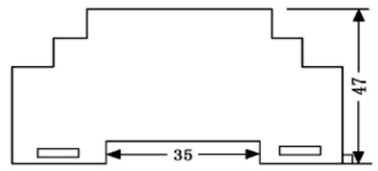


TST-TR1XX,1 IN 1 OUT

Note: When inputting the signal of a two wire heating resistor, terminals 3 and 4 must be short circuited.When inputting the signal of the three wire heating resistor, it is necessary to ensure that the resistance values of the three wires are equal as much as possible.

OVERALL DIMENSION





TST-TR Series Thermal Resistance Temperature Isolation Transmitter (Loop power supply)

- Receive the thermal resistance signal from the site, isolate and transmit the output standard 4-20mA current signal to the control room, PLC, DCS, and display instruments. Adopting a two wire circuit for power supply, there is no need for external power supply.

- The signal type, measurement range, etc. can be programmed through PC software.High reliable isolation of input and output; DIN rail independent installation method.

SELECTION TABLE

TST-TR	X	X	X	Instructions
Channel	1			1 IN 1 OUT
Input Signal		C5		Cu50(-50~+150℃)
		P1		Pt100(-200~+850℃)
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

TST-TRXX
Eg: TST-TR1P10/0-100,Input:PT100(0-100℃), output：DC 4-20mA.

MAIN TECHNICAL PARAMETERS

Input

Input signal:Pt100,Cu50 etc. thermal resistance signal

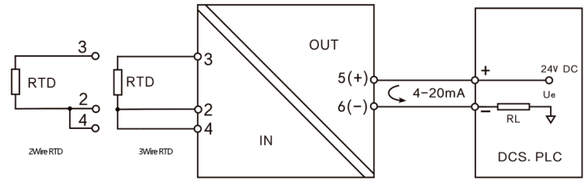
Output

Output signal:4-20mA
Output load resistance:RL≤(Ue-12)/0.022

Basic Parameter

Supply voltage: 12~30V DC
Alarm indication: Low limit overflow alarm, output current approximately 3.9mA
Upper limit overflow alarm, output current approximately 21mA
Wire breakage alarm, output current approximately 22mA
Basic accuracy: 0.2%F.S
Temperature drift:0.01%F.S/℃
Insulation strength:1500VAC/1min(Between input,output and power)
Response time:90% of final value reached in 1 second
Power protection: Power reverse protection
Insulation resistance:≥100MΩ(Between input,output,power and shell)
Working temperature range:-20~+55℃
Electromagnetic Compatibility: According to GB/T 18268.1(IEC61326-1)
Applicable Field Equipment: Two wire,three wire thermal resistance

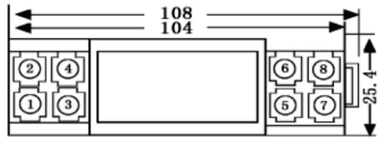
WIRING DIAGRAM

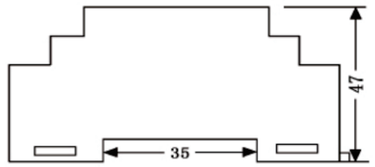


TST-TR1XX0,1 IN 1 OUT

Note: When inputting the signal of a two wire heating resistor, terminals 2 and 4 must be short circuited.When inputting the signal of the three wire heating resistor, it is necessary to ensure that the resistance values of the three wires are equal as much as possible.

OVERALL DIMENSION





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

- The TET-AI/AU1X0 series AC current/voltage transmitter converts AC signals from transformers into standard process signals, used by DCS for central monitoring of motors, pumps, or heating networks, monitoring power supply lines and their current/voltage.

- Adopting a two wire loop power supply method, without the need for power supply; High reliable isolation of input and output.

SELECTION TABLE

TET-AI/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 (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

TET-AIXX0
Eg: TET-AI1B0,1 IN 1 OUT,AC current input:0-5A, output:DC 4-20mA.
TET-AUXX0
Eg: TET-AU1E0,1 IN 1 OUT,AC voltage input:0-300V, output:DC 4-20mA.

MAIN TECHNICAL PARAMETERS

Input

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

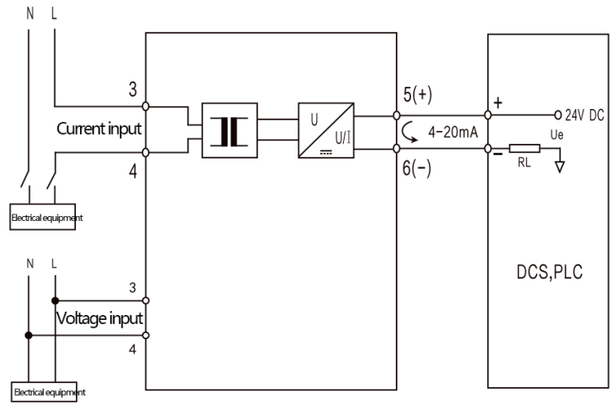
Output

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

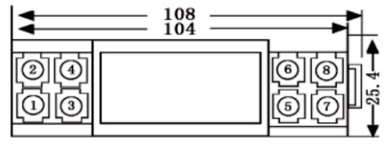
Basic Parameter

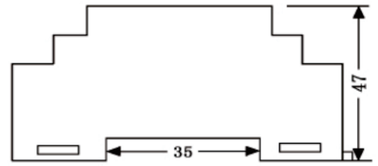
Basic accuracy: ≤0.5%F.S
Temperature drift:0.02%F.S/℃
Response time:≤400mS(0-9%)(TYP)
Insulation strength:2000V AC/1min(Between input,output and power)
Insulation resistance:≥100MΩ(Between input,output and power)
Working temperature range:-20~+55℃

WIRING DIAGRAM



OVERALL DIMENSION





TET-AI/AU Series AC Current/Voltage Transmitter

- The TET-AI/AU series AC current and voltage transmitter converts AC signals from AC transformers or transformers into standard process signals, used by DCS for central monitoring of motors, pumps, or heating networks, monitoring the voltage and current of power supply lines.

- High reliable isolation of input, output, and power ports.

SELECTION TABLE

TET-AI/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			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

TET-AIXXX
Eg: TET-AI1B1,1 IN 1 OUT,AC current input:0-5A，output：DC 4-20mA.
TET-AUXXX
Eg: TET-AU1E1,1 IN 1 OUT,AC voltage input:0-300V，output：DC 4-20mA.

MAIN TECHNICAL PARAMETERS

Input

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

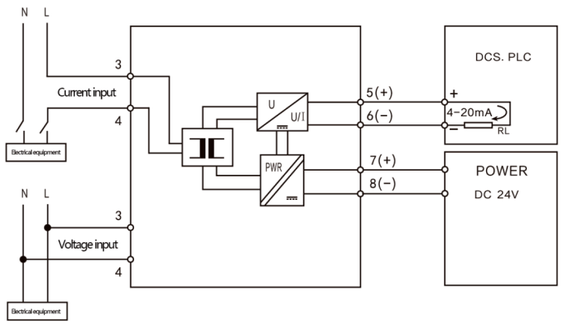
Output

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）

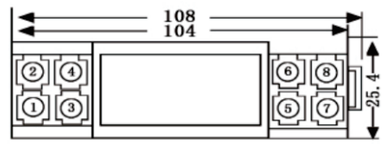
Basic Parameter

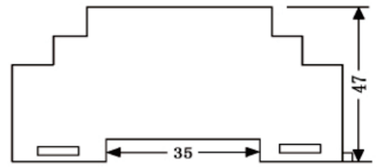
Supply voltage: DC24V±10%
Rated power:≤1W(1 IN 1 OUT,DC24V,when 20mA output)
Basic accuracy: ≤0.5%F.S
Temperature drift:0.02%F.S/℃
Response time:≤400mS(0-9%)(TYP)
Insulation strength:2000V AC/1min(Between input,output and power)
Insulation resistance:≥100MΩ(Between input,output and power)
Working temperature range:-20~+55℃
Electromagnetic Compatibility: According to GB/T 18268.1(IEC61326-1)

WIRING DIAGRAM



OVERALL DIMENSION





TET-I/U Series DC Current/Voltage Transmitter

- TET-I/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

TET-AI/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			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

TET-IXXX
Eg: TET-I1B1,1 IN 1 OUT,AC current input:0-5A，output：DC 4-20mA.
TET-UXXX
Eg: TET-U1E1,1 IN 1 OUT,AC voltage input:0-300V，output：DC 4-20mA.

MAIN TECHNICAL PARAMETERS

Input

Input current range:DC 0-10A

Input voltage range:DC 0-500V

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±10%

Rated power:≤1W（1 IN 1 OUT,DC24V,When 20mA output）

Basic accuracy: ≤0.2%F.S

Temperature drift:0.02%F.S/℃

Response time:≤10mS(0-9%)(TYP)

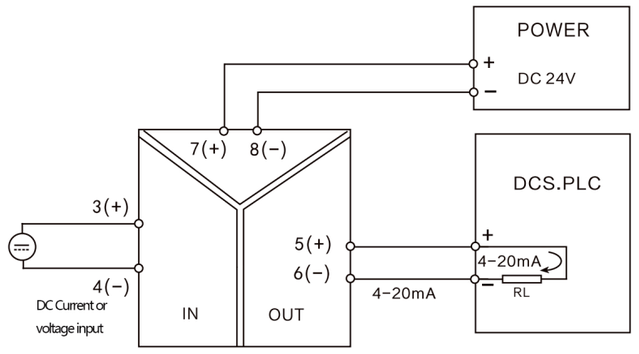
Insulation strength:2000V AC/1min(Between input,output and power)

Insulation resistance:≥100MΩ(Between input,output and power)

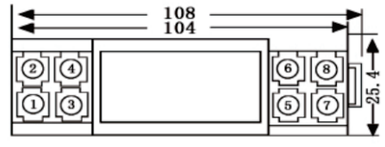
Working temperature range:-20~+55℃

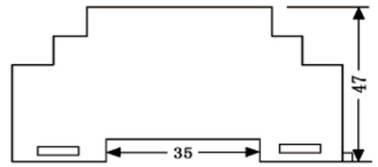
Electromagnetic Compatibility: According to GB/T 18268.1(IEC61326-1)

WIRING DIAGRAM



OVERALL DIMENSION





TS-IPXX-EX Series Analog Input Safety Barrier

● The TS-IPXXX-EX series two wire transmitters, three wire transmitters, and current source input isolation safety barriers provide isolation power for transmitters in hazardous areas. At the same time, the 4-20mA signal generated by the transmitter or current source is isolated and transmitted from the hazardous side to the safe side for current or voltage output.

● This product uses DC24V power supply, and the power supply, input, and output are isolated from each other.

● Adopting a 12.5mm ultra-thin shell and DIN35mm standard guide rail independent installation method (optional bus power supply function).

SELECTION TABLE

TS-IP111-EX:1 IN 1 OUT;Dangerous side input signal 0 (4) -20mA; Safety side output signal 0 (4) -20mA.
TS-IP110-EX:1 IN 1 OUT;Dangerous side input signal 4 -20mA; Safety side output signal 4 -20mA,loop power supply.
TS-IP211-EX:1 IN 2 OUT;Dangerous side input signal 0 (4) -20mA; Safety side output signal 0 (4) -20mA.
TS-IP210-EX:1 IN 2 OUT;Dangerous side input signal 0 4 -20mA; Safety side output signal 4 -20mA.loop power supply.

MAIN TECHNICAL PARAMETERS

Danger Side Input

Input signal: 0(4)-20mA
Distributing:Distribution voltage≤28V DC
When 20mA voltage:≥15V
Normal working current:≤25mA

Safety Side Output

Active current output (TS-IP1 (2) 11-EX):0(4)-20mALoad resistance:RL≤300Ω
Passive current output(TS-IP1 (2) 11-EX):4-20mA
Load resistance:RL≤[(Ue-5)/0.02]Ω
External power supply Ue:12-30V DC
Voltage output(TS-IP1 (2) 11-EX):0(1)-5V;Load resistance:RL≥330KΩ
0(2)-10V;Load resistance:RL≥660KΩ
Note:Users need to specify output specifications when placing an order.

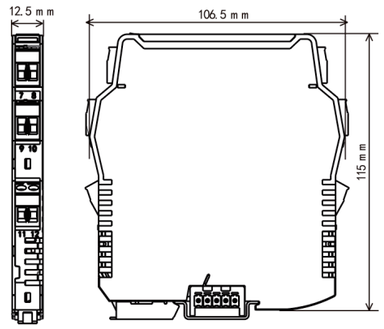
Basic Parameter

Channel: 1 IN 1 OUT,1 IN 2 OUT
Power supply:DC24V,voltage range:DC18~36V
Consumption current: ≤70mA (1 IN 2 OUT,DC24V,when 20mA output)
Basic accuracy: ±0.1%F.S (20℃)
Temperature drift:0.005%F.S/℃ (-20℃~+55℃)
Response time:≤2mS(0-90%)(TYP)
Insulation strength:≥2500VAC/1min(Between local and non local security terminals)
≥500VAC/1min(Between power supply and non intrinsically safe end)
Insulation resistance:≥100MΩ(Local safety end, non local safety end, between power sources)
Working temperature range:-20~+60℃
Electromagnetic Compatibility: According to GB/T 18268.1(IEC61326-1)
Applicable location: Installed in a safe location and can be connected to intrinsically safe instruments located in hazardous areas such as Zone 0, Zone 1, Zone 2, IIC, IIB, IIA, T4-T6.
Applicable Field Equipment: 2Wire,3wire transmitter,current source

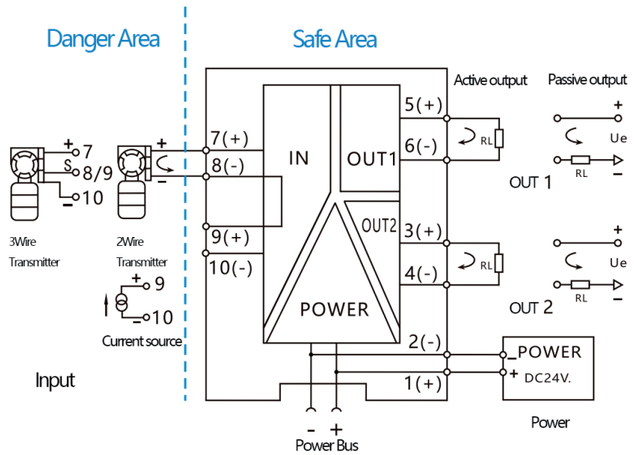
ATEX

Certification of National Instrument Explosion Prevention Safety Supervision and Inspection Station
Explosion proof certificate number: CNEx21.2933
Certification standards: GB3836.1, GB3836.4
Explosion proof sign: [ExiaGa] IIC
Maximum voltage: Um=250V
Authentication parameters (between terminals 7,8,9,10):
Uo=28V, Io=93mA, Po=651mW
IIC: Co=0.083 μ F. Lo=4.0mH
(Between terminals 9 and 10):
Uo=3.5V, Co=100 μ F
Ui=20V, Ii=110mA

OVERALL DIMENSION



WIRING DIAGRAM



TS-IP111-EX,1 IN 1 OUT
TS-IP211-EX,1 IN 2 OUT
Note:TS-IP111-EX,only include input and output 1 part.

Note: The bus power supply function is an optional function.
If the customer needs it, they need to specify it during the order and purchase a bus power supply module separately.