

Supmea



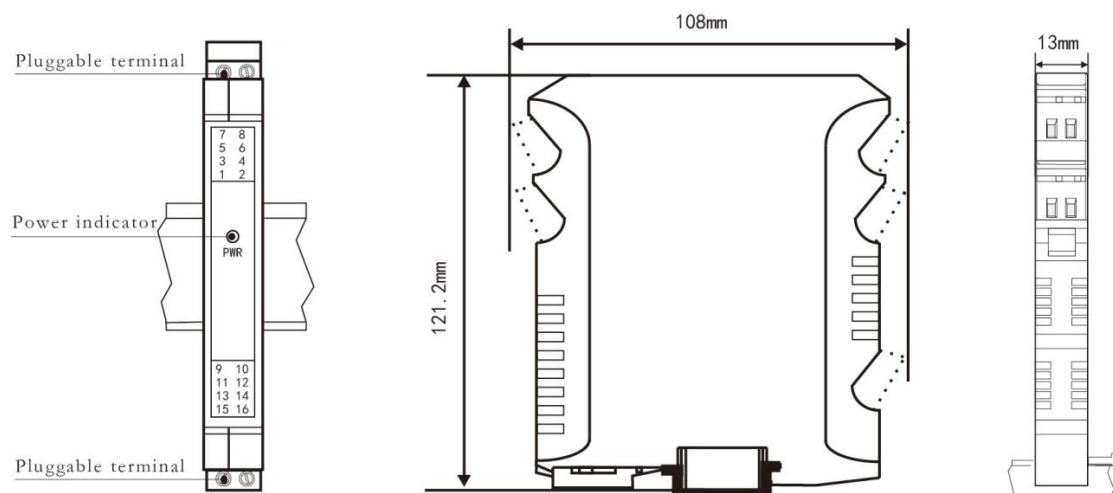
Data Sheet

Signal isolator SPE-500series

Brief description

Voltage/Current/Temperature Isolator will isolate DC voltage , current signals and the resistance temperature detector (RTD) or thermocouple (TC) signals on-site, amplify them,convert them into required signals and transmit to other instrument,and when used as a TC temperature transmitter, it has automatic cold junction temperature compensation function.It can be used together with modular instrumentation and DCS, PLC and other systems, to offer signal isolation, signal conversion, signal distribution, signal processing and other functions to field instrument, thereby enhancing the immunity of automatic control system in the industrial production process, and ensuring system stability and reliability. This product has many varieties, such as 1 in/1 out, 1 in/2 out, 2 in/2 out, with input/output magnetic isolation.

Terminal Assignments and Dimensions



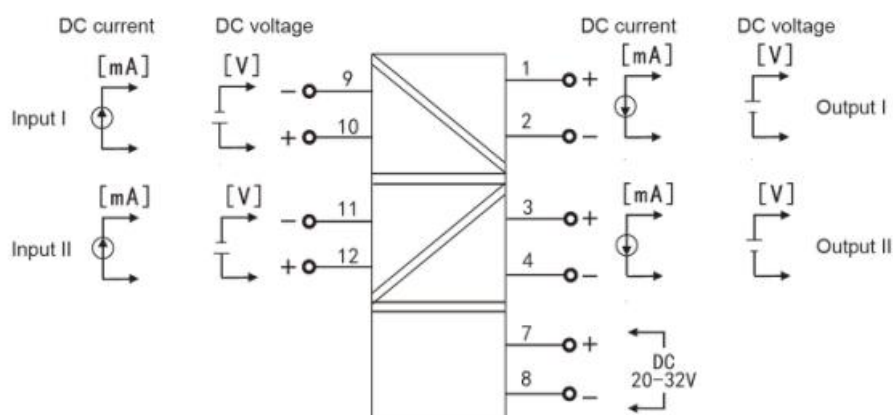
EVT: Disconnection indicator- the light will be red when the signal is disconnected, over the upper limit or lower limit; the light will be off when the signal is normal. PWR: Power indicator - the light will be green when the power is on.

It adopts 35 mm din rail mounting. During mounting, attention should be paid to stability and solidity of slots to make it possible to be vertical for the convenience of inner heat dissipation.

Technical specifications of Current/Voltage signal isolator

Input signal	4-20mA、 0-20mA、 0-5V、 1-5V、 0-10V
Input resistance	Impedance $\leq 50\Omega$, voltage Impedance $\geq 250 K\Omega$
Maximum input current / voltage	$\leq 30mA/\leq 10.5V$
Current isolator output	
Output signal	0-20mA、 0-20mA、 0-5V、 1-5V、 0-10V
Output load	4-20mA, 0-20mA load resistance $RL \leq 400\Omega$; 0-5V, 1-5V load resistance $RL \geq 250K\Omega$, 0-10V load resistance $RL \geq 500K\Omega$
Voltage isolator output	
Output signal	0-20mA、 0-20mA、 0-5V、 1-5V、 0-10V
Output load	4-20mA, 0-20mA load resistance $RL \leq 400\Omega$; 0-5V, 1-5V, 0-10V load resistance $RL \geq 20K\Omega$
Power supply	
Power supply	DC20-32V
Power consumption	Single Output Power: $\leq 0.8W$; Dual Output Power: $\leq 1.0W$
Other parameters	
Insulation resistance (between input / output / power supply)	$\geq 100M\Omega$ (500VDC)
Dielectric strength (between input / output / power supply)	2000Vrms (1 min, no spark)
Operating temperature	-10 ~ 50 °C (no condensation, no freezing)
Relative humidity	25%~85%RH
Storage temperature	-10 ~ 60 °C (no condensation, no freezing)
Temperature drift	0.0075%FS/°C
Mounting style	35mmDIN rail mounting
Dimensions	13 * 108 * 121.2mm (W * H * D)
Transmission accuracy (20 °C)	0.15%FS
Response time	$\leq 2ms$
Weight	Approximately 130 g
Electromagnetic compatibility	In line with GB/T18268 industrial equipment application requirements (IEC 61326-1)
Field devices applicable	DC voltage / current source

Wiring diagram of Current/Voltage signal isolator

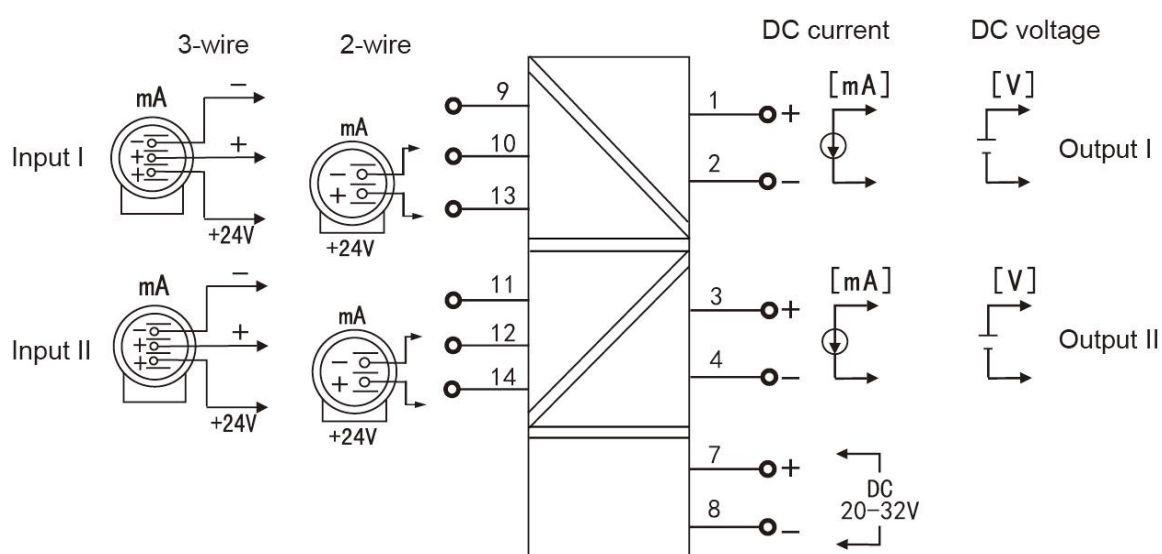


Technical specifications of Power distribution signal isolator

Input	
Input signal	4-20mA、0-20mA
Input resistance	Impedance $\leq 50\Omega$
Maximum input current	$\leq 30\text{mA}$
Distribution voltage/ maximum current	19~25 V/ $\leq 30\text{mA}$
Output	
Output signal	0-20mA、0-20mA、0-5V、1-5V、0-10V
Output load	4-20mA, 0-20mA load resistance $R_L \leq 400\Omega$; 0-5V, 1-5V load resistance $R_L \geq 250\text{K}\Omega$, 0-10V load resistance $R_L \geq 500\text{K}\Omega$
Power supply	
Power supply	DC20-32V
Power consumption	Single Output Power: $\leq 1.5\text{W}$; Dual Output Power: $\leq 2.6\text{W}$
Other parameters	
Insulation resistance (between input / output / power supply)	$\geq 100\text{M}\Omega$ (500VDC)
Dielectric strength (between input / output / power supply)	2000Vrms (1 min, no spark)
Operating temperature	-10~50°C (no condensation, no freezing)
Relative humidity	25%~85%RH
Storage temperature	-10~60°C (no condensation, no freezing)
Temperature drift	0.0075%FS/°C
Mounting style	35mmDIN rail mounting
Dimensions	13*108*121.2mm (W * H * D)
Transmission accuracy (20 °C)	0.15%FS

Response time	≤2ms
Weight	Approximately 130 g
Electromagnetic compatibility	In line with GB / T18268 industrial equipment application requirements (IEC 61326-1)
Field devices applicable	2-wire/3-wire transmitter, DC current source

Wiring diagram of Power distribution signal isolator

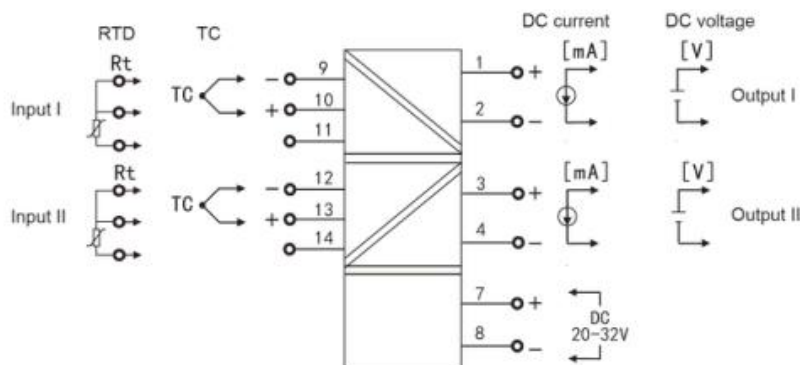


Technical specifications of RTD/TC signal isolator

Input signal	2-wire/3-wire RTD, TC (Signal type and measuring range can be programmed via supporting PC software)
Output	
Output signal	4-20mA、0-10mA、0-20mA、0-5V、1-5V
Output load	4-20mA, 0-0mA, 0-20mA load resistance $R_L \leq 400\Omega$; 0-5V, 1-5V load resistance $R_L \geq 250K\Omega$
Power supply	
Power supply	DC20-32V
Power consumption	1 in/1 out: $\leq 1W$; 1 in/2 out, 2 in/2 out: $\leq 1.4W$
Other parameters	
Insulation resistance (between input / output /	$\geq 100M\Omega$ (500VDC)

power supply)	
Dielectric strength (between input / output / power supply)	1500Vrms (1 min, no spark)
Operating temperature	-10~50 °C (no condensation, no freezing)
Relative humidity	25%~85%RH
Storage temperature	-10~60 °C (no condensation, no freezing)
Temperature drift	0.0075%FS/°C
Mounting style	35mmDIN rail mounting
Dimensions	13*108*121.2mm (W * H * D)
Transmission accuracy (20 °C)	0.2%FS±1
Minimum resolution	0.1°C
Internal cold junction compensation temperature range	-10~50°C
Cold junction compensation accuracy	±1°C
Response time	50ms to reach 90% of the final value
Disconnection output	The user can configure through the PC software, and the disconnection output is optional between hold, maximum, and minimum Hold: When the signal is disconnected or over range, the output will hold on as the output before the disconnection Maximum: When the signal is disconnected or over range, the output will be default 20.80mA Minimum: When the signal is disconnected or over range, the output will be default 3.00mA
Weight	Approximately 130 g
Electromagnetic compatibility	In line with GB / T18268 industrial equipment application requirements (IEC 61326-1)
Field devices applicable	2-wire/3-wire RTD , TC sensor

Wiring diagram of RTD/TC signal isolator



Ordering code of Current/Voltage signal isolator

MODEL NUMBER: SPE-500- A/B-C/D			
How to choose parameters			
Specification		number	
Input		A	B
ChannelA/channelB(choose code)			
code	type		
01	0-20mA		
02	4-20mA		
03	0-5V		
04	1-5V		
05	0-10V		
X	No Output		
Output		C	D
ChannelC/channelD(choose code)			
code	type		
01	4-20mA		
02	1-5V		
03	0-5V		
04	0-20mA		
05	0-10V		
X	No Output		
POWER	DC20-32V		

Note:1.Output need to be in the same proportion with the input signal.For example,4-20mA input correspond to 4-20mA or 1-5V output .

2.Current output and voltage output is not switchable .please note when ordering.

Ordering code of Power distribution signal isolator

MODEL NUMBER: SPE-510- E/F-G/H		
How to choose parameters		
Specification	number	
Input	E	F
ChannelE/channelF (choose code)		
code	type	
01	0-20mA	
02	4-20mA	
X	No Output	
Output	G	H
ChannelG/channelH(choose code)		
code	type	
01	4-20mA	
02	1-5V	
03	0-5V	
04	0-20mA	
05	0-10V	
X	No Output	
POWER	DC20-32V	

Note:1.Output need to be in the same proportion with the input signal.For example,4-20mA input correspond to 4-20mA or 1-5V output .

2.Current output and voltage output is not switchable .please note when ordering.

Ordering code of RTD/TC signal isolator

MODEL NUMBER: SPE-520- I/J-K/L			
Specification		number	
Input		I	J
code	ChannelI/ChannelJ(choose code)		
00	Thermocouple B(400-1800°C)		
01	Thermocouple S(0-1600°C)		
02	Thermocouple K(0-1300°C)		
03	Thermocouple E(0-1000°C)		
04	Thermocouple T(-200-400°C)		
05	Thermocouple J(0-1200°C)		
06	Thermocouple R(0-1600°C)		
07	Thermocouple N(0-1300°C)		
08	F2(700-2000°C)		
09	Thermocouple Wre3-25(0-2300°C)		
10	Thermocouple Wre5-26(0-2300°C)		
11	Thermal resistance Cu50(-50-150°C)		
12	Thermal resistance Cu53(-50-150°C)		
13	Thermal resistance Cu100(-50-150°C)		
14	Thermal resistance Pt100(-200-650°C)		
15	Thermal resistance BA1(-200-600°C)		
16	Thermal resistance BA2(-200-600°C)		
X	No input in channel2		
Output		K	L
code	ChannelK/ChannelL(choose code)		
X	NO output		
0	4-20mA		
1	1-5V		
2	0-10mA		
3	0-5V		
4	0-20mA		
POWER	DC20-32V		

Note:1.Output need to be in the same proportion with the input signal.For example,4-20mA input correspond to 4-20mA or 1-5V output .

2.Current output and voltage output is not switchable .please note when ordering.



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