

POTENTIOMETER SIGNAL TRANSMITTER

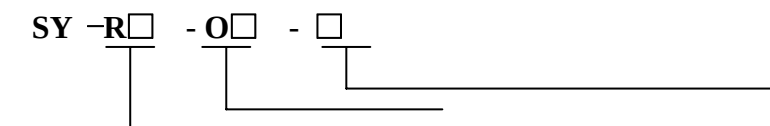
(SPECIALLY FOR LINEARITY POSITION SENSOR)

Feature and Application:

- Accuracy Grade: (Non-isolation)0.02~0.05, (Isolation)0.05/0.1/0.2
- Extremely high linearity in whole process(nonlinearity<0.05%)
- Need not calibrate, modular Design, easy Maintain.
- Input potentiometer signal: 0-50Ω/0-100Ω/0-200Ω/0-500Ω /0-1KΩ/0-2KΩ/0-5KΩ /0-10KΩ
Output standard voltage signal: 0-5V/0-10V/1-5V/0-±5V/0-±10V
Output standard current signal: 0-10mA/0-20mA/4-20mA,with high load capability.
- Non-Isolation type:High linearity,high accuracy.
Isolation type:Electromagnet Isolation and Photoelectrical Isolation.
- Three-port isolation:input/power supply/output,it can improve anti-jamming capability.
- Power supply:220VAC/24VDC/12VDC/5VDC
- Two wires signal transfer,supply voltage: 9~36VDC.
- Install styles: (1)Internal insert (2)weldable to PCB directly (3)waterproof case mounting (4)DIN Rail-mounted
- Position transmitter signal amplify/converter/isolation/transfer
- CE Approved

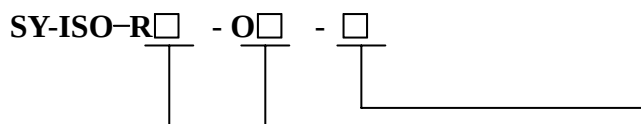
two-wire output(non-isolated)

Code Type:

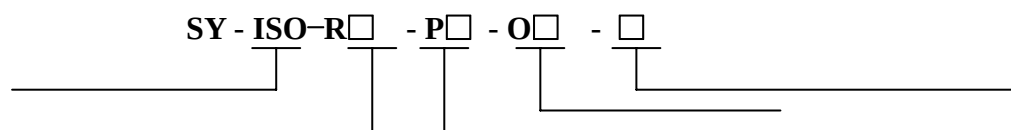


Input: R	Output:O	Install
R6: 0-2KΩ	O1:4-20mA	C: Internal insert
R7: 0-5KΩ		B: DIN Rail-mounted
R8: 0-10KΩ		D: waterproof case mounting
R9:user-defined		
(must>=2KΩ)		

two-wire output(isolated)



Input: R	Output:O	Install
R6: 0-2KΩ	O1:4-20mA	A: weldable to PCB
R7: 0-5KΩ		B: DIN Rail-mounted
R8: 0-10KΩ		D: waterproof case mounting
R9:user-defined		
(must>=2KΩ)		

Four-wire output:

non-isolation product,no "ISO" sign	Input: R	Aux. Power :P	Output:O	Install
	R1: 0-50Ω	P1:DC24V	O1:4-20mA	B: DIN Rail-mounted
	R2: 0-100Ω	P2:DC12V	O2:0-20mA	D: waterproof case mounting
	R3: 0-200Ω	P3:DC5V	O4:0-5V	
	R4: 0-500Ω	P4:DC15V	O5:0-10V	
	R5: 0-1KΩ	P5:AC220V	O6:1-5V	
	R6: 0-2KΩ	P6:user-defined	O7:0-±5V	
	R7: 0-5KΩ		O8:0-±10V	
	R8: 0-10KΩ		O9:-20~+20mA	
	R9:user-defined		O10:user-defined	

Model :

1. Non-isolation Input: 0-1KΩ Power Supply:AC220V Output:4-20mA Install: waterproof box install
TYPE:SY-R5-P5-O1 -D
2. Isolation Input: 0-5KΩ Power Supply:DC24V Output: 0-±5V Install: DIN Rail-mounted
TYPE:SY-ISO-R7-P1-O1 -B

General Parameter:

Operation Temperature: -25 ~ +70℃

Operation Humidity: 10 ~ 90%

Storage Temperature: -45 ~ +80℃

Storage Humidity: 10 ~ 95%

Isolation Parameter:

Isolation:Signal Input/output/power supply

Insulation Resistance: $\geq 20M \Omega$

Endure Voltage: 1500VAC,50Hz,one minute,leak current: 1mA

Endure impact voltage:3KV,1.2/50us(peak value)

Input Parameter:

Three-port adjustments: 0-50Ω/0-100Ω/0-200Ω/0-500Ω /0-1KΩ/0-2KΩ/0-5KΩ /0-10KΩ

Output Parmeter

Output Signal

Current Signal: 0-10mA/0-20mA/4-20mA

Current Signal:4-20mA

Voltage Signal: 0-5V/0-10V/1-5V/0-±5V/0-±10V

Output over load capability

Load resistance $\leq 350 \Omega$,if need 650 Ω ,please explainload resistance is 750 Ω (max) with 24V $\geq 5 K \Omega$ **Application:**

Sunyuan Potentiometer transmitter adopts input filter,input protection circuit,high accuracy base IC power supply circuit/coverter/Zero(Span)adjustment circuit,it can connect AC or DC powered.

Install Style:**I .Internal Insert(C): special for linearity position transmit**

Non-isolation type,small size,it is easy to use.It can converter position,angle signal to standard 4-20mA signal.High linearity,outgo

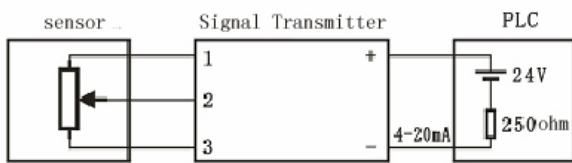


0.05F.S. There are total five points, connect to position transmitter and power supply. (size: PCB22x45mm)

Adjustment method:

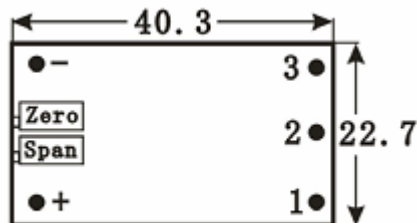
It is better to use high accuracy amperemeter, after operating ten minutes, adjust ZERO, make $I_{out}=4mA$, Then make sensor to rated value, adjust Span, make $I_{out}=20mA$. So that it can improve accuracy.

SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM:



1	position sensor Power +
2	position sensor center
3	position sensor Power -
+	Signal transmitter Power+
-	Signal transmitter Power-

DIMENSIONS(may option):



(Span:20mA Zero:4mA)

II. waterproof case mounting(Four-wire Terminal Block Signal Conditioners) D size:

Housing material adopts 100*68*50 waterproof resin (Grade:IP65),

There are three terminals inside.

AC input, sign :220VAC,

DC input, sign: "+" and "-"

Input port :

,B,C,D

A:connect position sensor Power"+"

B: position sensor Power" -"

C: position sensor center

Adjustment method:

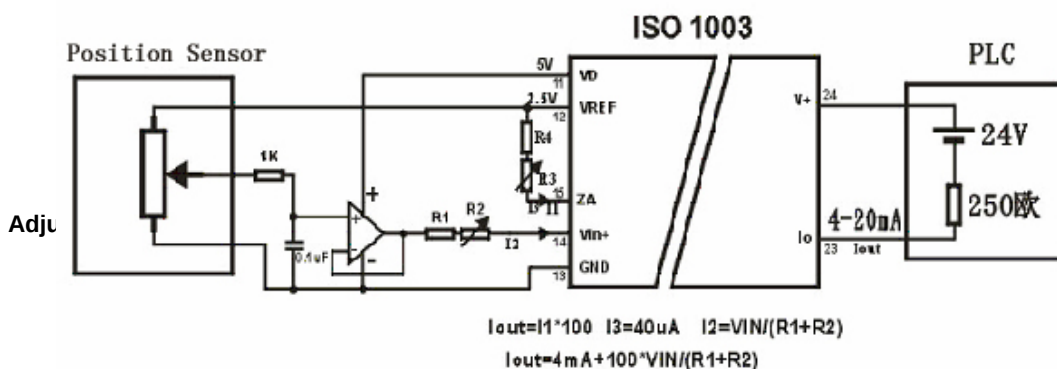
After operating ten minutes, when sensor is at 0, adjust ZA for ZERO..

then at max, adjust FB for Span.



III. weldable to PCB directly(two-wire isolation Type) A

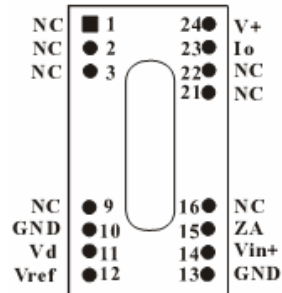
ISO 1003 two wires voltage isolated transmitter is 4-20mA current loop isolated interface module, standard DIP24 Pin. its internal contains current signal modulation circuit, electromagnetism isolation converter circuit and demodulation circuit. Supply voltage range: 12~32VDC. Low input equivalent resistance, high linearity. Supply 5V/3mA isolated voltage root and 2.5V base voltage root. 2500VAC isolation between input and output. More details, reference to the link:



After operating ten minutes, when position sensor is at point 0, adjust R3, make $I_{out}=4mA$, then make position sensor to rated value, adjust R2, make $I_{out}=20mA$.

ISO 1003 PIN foot function: (size:32.0x20.2x10.2mm)

1-3	9	10	11	12	13	14	15	16,21,22	23	24
NC	NC	GND	VD	VREF	GND	VIN+	ZA	NC	IO	V+



IV. DIN 35 Rail-mounted(signal 4-20mA DIN1x2 and DIN2x2) B

Isolation and Non-isolation type, housing material adopts DIN 35(85*37*51) flame-resistant resin.If non-isolation type,there is no sign "ISO".(size:62x51x37mm)

Adjustment method:

After operating ten minutes,when position sensor is at point"0",adjust Zero,make $I_{out}=4mA$. Then make position sensor to rated value,adjust Span,make $I_{out}= 20mA$

CONNECTION DIAGRAM:

