

1-Input&4-Output(one input and four output) analog signal isolation transmitter
Analog signal input and four output isolation amplifier converter: DIN 1X4 series

Features

- Accuracy level: 0.1, 0.2, 0.5
- The product has been inspected and corrected before leaving the factory, and the user can use it directly
- Non-linearity in full range <0.2%, free of zero point and gain adjustment
- Six isolation between signal input/output 1/output 2/output 3/output 4/power supply
- Auxiliary power supply: 5VDC, 12VDC, 24VDC single power supply
- The four outputs can be the same or different DC voltage and current signals
- 0-75mV//0-5V/0-±100mV/0-±10V and other voltage signals
- 0-10mA/0-±20mA/4-20mA and other current signal isolation, amplification and conversion
- Industrial temperature range:-25℃ ~ + 70℃

Typical application

- One-way four-way display and monitoring of sensor signal
- Industrial field signal isolation, conversion and amplification, and long-term transmission
- 4-20mA signal input and four output ground interference suppression
- Analog signal ground wire interference suppression and data isolation and acquisition
- Power monitoring, medical equipment isolation monitoring safety barrier
- Instrument and sensor signal receiving and sending detection
- 4-20mA/0-5V signal isolation, distribution and transformation
- Industrial field simulation and digital signal coexistence monitoring and transmission

Summarize

SunYuan DIN 1X4 ISO EM series analog signal one-in-four-out isolation amplifier transmitter is a standard that isolates, distributes, and converts (sensor output) single-channel analog voltage or current signals into four-channel accuracy and linearity matching standards Hybrid integrated module for analog signals. The module integrates four ISO EM series of high isolation analog signal isolation amplifier ICs, using a low-cost solution of magnetic and electrical coupling, and is mainly used in occasions where there is no special requirement for EMC (electromagnetic interference). The wide creepage distance on the input and output sides and internal isolation measures make the integrated module's signal input/signal output 1/signal output 2/signal output 3/signal output 4/auxiliary power supply six isolations.

DIN 1X4 ISO EM series analog signal one-in-four-out isolation amplifier transmitter adopts ISO EM-U-P-O series or ISO EM-A-P-O series integrated circuit combination, which can obtain four channels of output as the same or different DC voltage and current signals. The product is very convenient to use. It is directly installed on a standard DIN 35 rail without adjusting and correcting the zero point and gain accuracy. It can realize the isolation, distribution, and conversion functions of various sensor signals in the industrial field, and can meet the industrial wide temperature, humidity, Vibration and other harsh working environment requirements.

Model and definition

DIN 1X4 ISOEM - U(A)□ - P□ - O□

the input value of rated voltage U (or current A)

Auxiliary power P

Output signal O

U1: 0-5V	A1: 0-1mA	P1: DC24V	O1: 4-20mA
U2: 0-10V	A2: 0-10mA	P2: DC12V	O2: 0-20mA
U3: 0-75mV	A3: 0-20mA	P3: DC5V	O4: 0-5V
U4: 0-2.5V	A4: 4-20mA	P4: DC15V	O5: 0-10V
U5: 0-±5V	A5: 0- ±1mA	P5: AC220V	O6: 1-5V
U6: 0-±10V	A6: 0- ±10mA	P8: User customized	O7: 0-±5V
U7: 0-±100mV	A7: 0- ±20mA		O8: User customized
U8: User customized	A8: User customized		O9: -20+20mA
			O10: 0-±10V

Product selection example

Example1:	Input: 0-5V	Auxiliary power: 12V	output 1: 0-5V	output 2: 0-5V	output 3: 0-5V	output 4: 0-5V	Model number: DIN1X4 ISOEM U1-P2-O4
Example2:	Input: 4-20mA	Auxiliary power: 24V	output 1: 4-20mA	output 2: 4-20mA	output 3: 4-20mA	output 4: 4-20mA	Model number: DIN1X4 ISOEM A4-P1-O1

General parameters

Precision ----- 0.1% , 0.2% , 0.5%	Isolation.....Signal input/output/auxiliary power supply
Auxiliary power---DC5V、12V、15V、24V, ±10%	Insulation resistance-----≥20MΩ
Operating temperature----- -20 ~ +70℃	Withstand voltage.....Signal input/output/auxiliary power supply 3000VDC, 1 minute, leakage current
Working humidity--- 10 ~ 90% (No condensation)	Impulse withstand voltage----- 3KV, 1.2/50us(Peak)
1mA storage temperature----- -55 ~ +105℃	Temperature Coefficient-----≤50PPM/℃
Storage humidity----- 10 ~ 95% (No condensation)	

Input parameters

Input item	input resistance	Power loss	Input overload capacity
0-5V	≥100KΩ	Voltage output < 1.5W	2.0 times rated: continuous
0-10V			
0-1mA	TYP: 250Ω Can be customized	Current output<3W	1.5 times rated: continuous 3.0 times rated: 1S
0-10mA			
0-20mA			
4-20mA			

Output parameters

Output item	Output overload capacity	Response time
4-20mA	Load Resistance No more than 350Ω	≤1mS
0-20mA		
0-5V	≥2KΩ	
0-10V 1-5V		

Remarks: If the current output product requires a load resistance higher than 350Ω, please specify it when ordering.

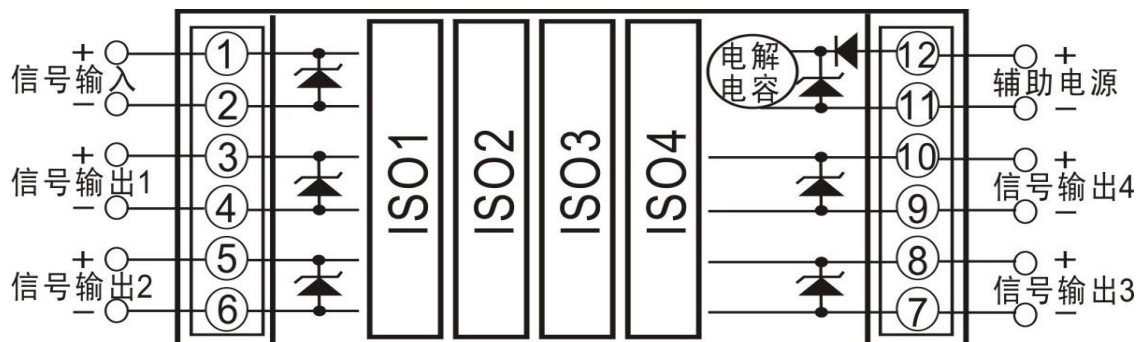
DIN 1X4 Internal structure

SunYuan signal magnetic isolation transmitter adopts ISO EM-U□-P□-O□ series or ISO EM-A□-P□-O□ series integrated module, which is directly installed in a standard DIN 35 housing without adjustable resistance Used to adjust or correct the zero point accuracy and output accuracy.

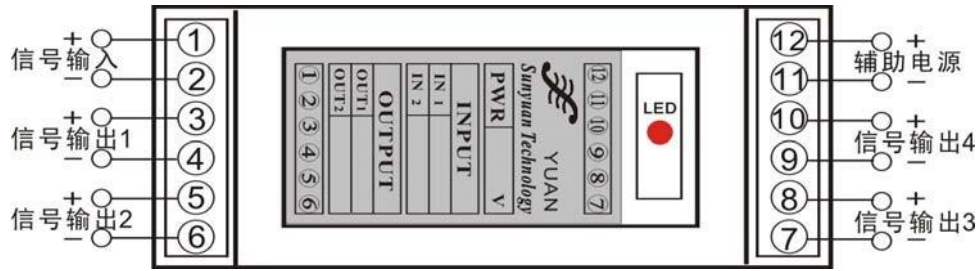
PCB board size: length * width 79.5 * 32.5 (mm).

The installation parts and function diagrams on the PCB board are as follows: **(The product has been inspected and corrected before leaving the factory, and the user can use it directly)**

Products that do not need to adjust the zero point and gain For example:
DIN 1X4 ISO EM-A4-P1-O1



DIN 1X4 series product outline size and pin function description (*product model and wiring diagram are printed on the shell)



Pin	Pin function	
1	Signal In	Input signal positive terminal
2	Signal GND	Input signal negative terminal
3	Out1+	Output signal 1 positive terminal
4	Out1-	Output signal 1 negative terminal
5	Out2+	Output signal 2 positive terminal
6	Out2-	Output signal 2 negative terminal
7	Out3-	Output signal 3 negative terminal
8	Out3+	Output signal 3 positive terminal
9	Out4-	Output signal 4 negative terminal
10	Out4+	Output signal 4 positive terminal
11	Power GND	Auxiliary power negative terminal
12	Power In	Auxiliary power positive terminal

