

## Passive 2-wire AC Signal Isolation Transducer

0~0.5-30AAC / 0~1-500VAC to 4-20mA 2-wire Analog Signal

### DIN ISO AC Series

Features:	Applications:
<ul style="list-style-type: none"> <li>• Accuracy, linearity error grade: 0.5</li> <li>• External power supply is not required, 2-wire signal loop powered output.</li> <li>• Signal input 0 ~ 1-500VAC voltage signal. 0 ~ 0.5-30AAC current signal (40 ~ 60HZ).</li> <li>• Output signal: 4~20mA(2-wire dc analog signal transmission)</li> <li>• Input and output are isolated, isolation voltage 3KVDC.</li> <li>• Standard DIN35 rail-mounting package.</li> <li>• Industrial temp. Range: - 20 ~ + 70 °C</li> </ul>	<ul style="list-style-type: none"> <li>• AC signal, sine wave signal acquisition, isolation and conversion.</li> <li>• Power monitoring device, medical equipment used isolation safety barrier.</li> <li>• Sensor AC signal conversion into standard dc current signal.</li> <li>• Signal long-distance transmission without distortion.</li> <li>• Power controlling system signal isolation, monitoring.</li> <li>• AC signal isolation and transmission in industrial site.</li> <li>• Meter's signal isolation, receiving and transmission.</li> <li>• GND wire interference suppression.</li> </ul>

SunYuan DIN ISO AC Series Passive 2-wire AC to DC Signal Isolation Transducer is a kind of new isolated conversion devices which can convert ac current or voltage signal into proportional standard analog current signal. The signal transducer can be used with display panel meter or directly connected to the PLC/DCS system to measure or monitor ac current or voltage signal. It is design for the 24VDC and sampling resistance (2-wire meter) 2-wire loop powered circuit, and can be well matched with analog input ports from PCC, DCS, host machine, meters, etc.

DIN ISO AC Series Passive 2-wire AC to DC Signal Isolation Transducer is designed on the high efficient loop powered technique, it operates without power supply, 3KVDC dual-isolation between input and output. The loop powered output technique used can simplify the user circuit layout and reduce the cost. It can be directly powered by the signal loop from controlling device, DCS or PLC. The AC to DC Signal Isolation Transducer is widely used in power remote control, automatic equipment, meters, instruments, rail-transit, intelligent equipment,etc.

#### Model No Selection

**DIN 1X1 ISO NN AC – O1**

**DIN:**35mm rail-mounting

**AC:** input ac signal

**O:** output analog signal

**1X1:** 1-input 1-output

**NN:** current value 0~0.5-30AAC

**O1:**4-20mA (2-wire loop output)

**ISO:** isolation between IN/OUT

Voltage value 0~1-500VAC

#### Model selection examples:

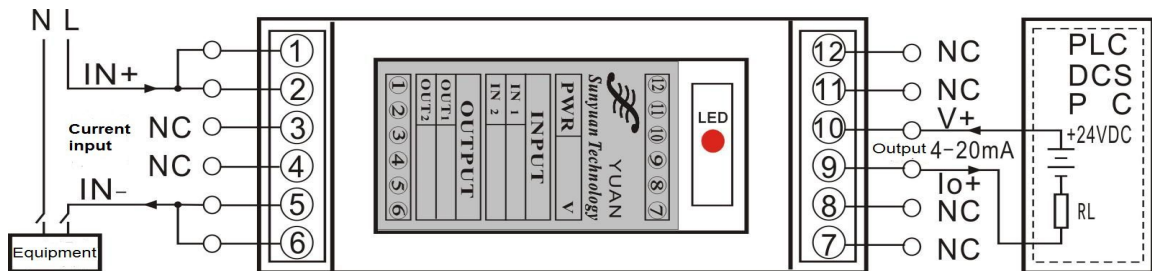
E.g.1: Input 0-5AAC	Output 4-20mA	Model No: DIN 1X1 ISO 0-5AAC-O1
E.g.1: Input 0-500VAC	Output 4-20mA	Model No: DIN 1X1 ISO 0-500VAC-O1

**General Parameters**

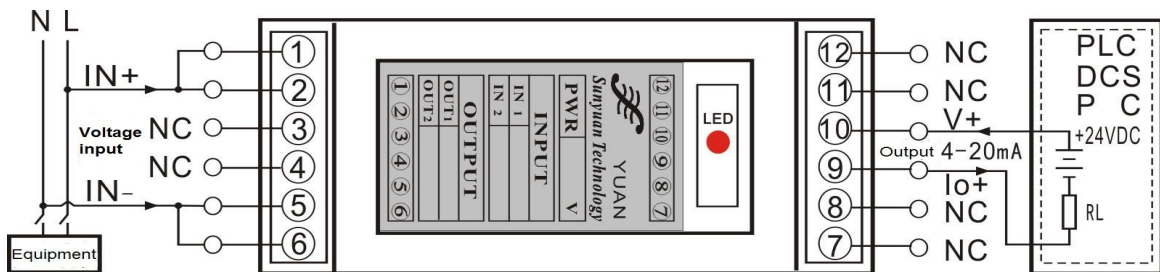
Accuracy ----- 0.2%, 0.5%	Isolation -----between signal input and output
Auxiliary power supply----- None	Insulation resistance ----- $\geq 200M\Omega$
Operating temperature ----- -20 ~ +70℃	Isolation voltage ----- signal input and output 3KVDC, 50Hz, 1minute, leakage current 1mA
Operating humidity-----10~90%(no condensation)	
Storage temperature ----- -45 ~ +85℃	Input wave withstand voltage----- 3KV, 1.2/50us (peak value)
Storage humidity----- 10 ~ 95% (no condensation)	Output load resistance----- 24VDC/500Ω nominal
Temperature drift ----- $\leq 150PPM/℃$	Response time----- $\leq 400mS(0-90\%)$ (TYP)
Loop powered power supply voltage----- 15-30VDC	Frequency range ----- 40-60HZ

**Typical applications**

The zero or span accuracy can be calibrated through the internal adjustable resistance,  
All the isolation transmitters have been calibrated well before ex-factory, user can use it directly. Accuracy calibration operation can be done by adjusting the zero/span multi-turn potentiometer on the side view.



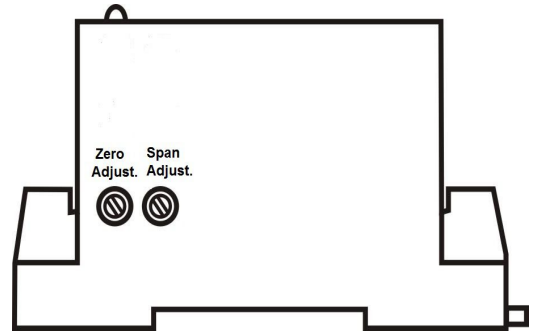
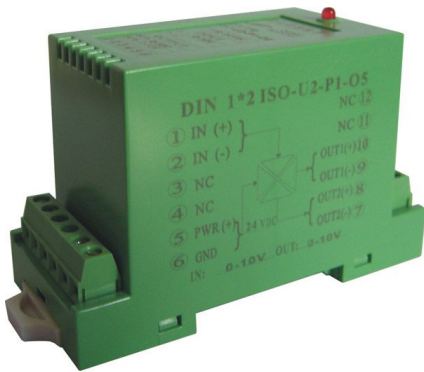
**Fig. 1 AC Current signal input, 2-wire 4-20mA loop powered output mode**



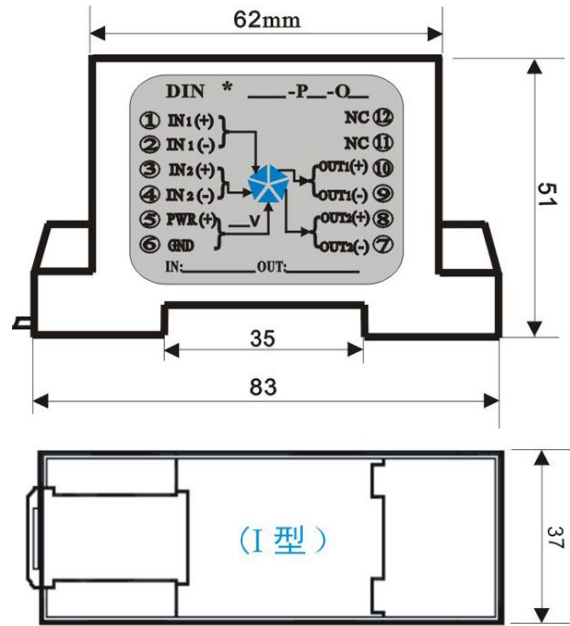
**Fig. 2 AC Voltage signal input, 2-wire 4-20mA loop powered output mode**

**Dimension& Pin Definition:**

Pin	Pin Description	
1	Signal in +	Input signal +
2	Signal in +	Input signal +
3	NC	NC
4	NC	NC
5	Signal in -	Input signal -
6	Signal in -	Input signal -
7	NC	NC
8	NC	NC
9	lout +	Current output+
10	V+	Loop voltage input+
11	NC	NC
12	NC	NC



\* Model No is printed on the external shell



\* The specification is subject to change without notice.