

## Three Phase AC Current Sensor CYCS13-xnS3

The **CYCS13-xnS3** AC current Sensor/Transducer works according electro-magnetic induction and is designed for applications to measurement and monitoring of three phase AC current. The output signals (DC voltage or current) of this transducer are proportional to the rectified average values of input AC currents. They are suitable for general applications such as fixed frequency voltage supplies and sinusoid currents etc.

### Specifications

Rated input current range	1A,2A,5A,10A,15A,25A
Frequency of Input current	Typ. 50-60Hz, max. 5kHz
Output signal	5V (tracing), 0-5VDC, 0-20mA, 4-20mA, 0-10VDC
Output load	≥2kΩ for voltage output, ≤250Ω for current output
Power supply	+12V, +15V, +24V DC
Measuring accuracy	0.5%
Isolation	between input, output and power supply
Isolation withstanding voltage	2.5 kV DC, 1min, leakage current 1mA
Operating temperature	-10°C ~ +60°C
Storage temperature	-25°C ~ + 70°C
Thermal drift	<500ppm/°C
Relative humidity	10% ~ 90%
Response time	≤300ms
Overload capacity	20 times
Quiescent power consumption	350mW – 480mW
Mounting	Din rail
Case style and Window size	S3 with aperture Ø6.5mm

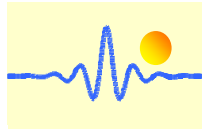
### Definition of Part Number:

CYCS13	-	x	n	S3	-	0.5	-	m
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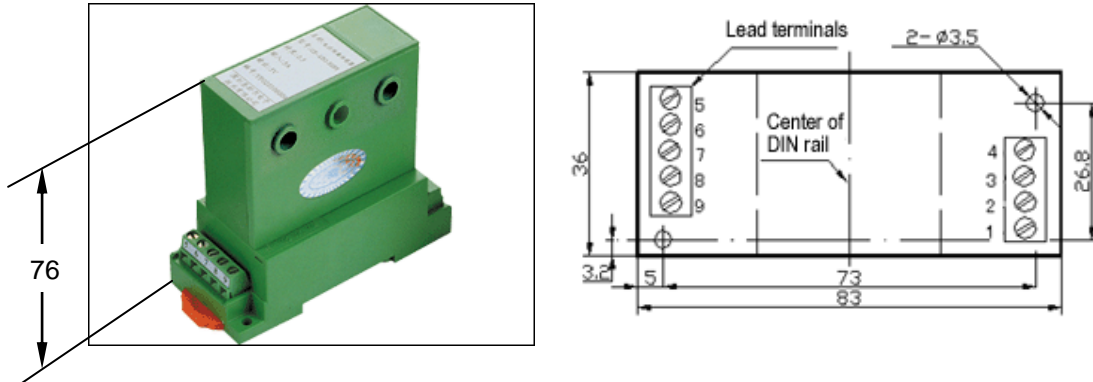
(1)                      (2)    (3)    (4)                      (5)                      (6)

(1)	(2)	(3)	(4)	(5)	(6)
Series name	Output signal	Power supply	Case style	Accuracy class	Input current range (m)
CYCS13	<b>x=1:</b> 5V (Vp, tracing) <b>x=3:</b> 0-5V DC <b>x=4:</b> 0-20mA DC <b>x=5:</b> 4-20mA DC <b>x=8:</b> 0-10V DC	<b>n=2:</b> +12V DC <b>n=3:</b> +15V DC <b>n=4:</b> +24V DC	S3	0.5%	1A,2A,5A,10A,15A,25A

**Typical Example:** CYCS13-52S3-0.5-10A, three phase AC current sensor with  
 Output signal: 4-20mA DC  
 Power supply: +12V DC  
 Rated input current: 10A AC/RMS

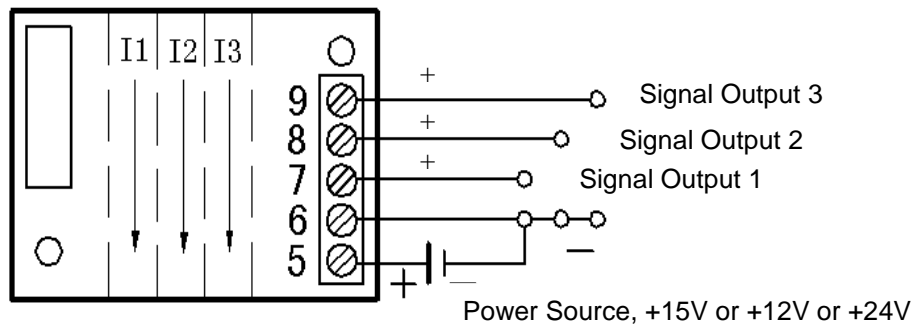


### DIMENSIONS (mm)

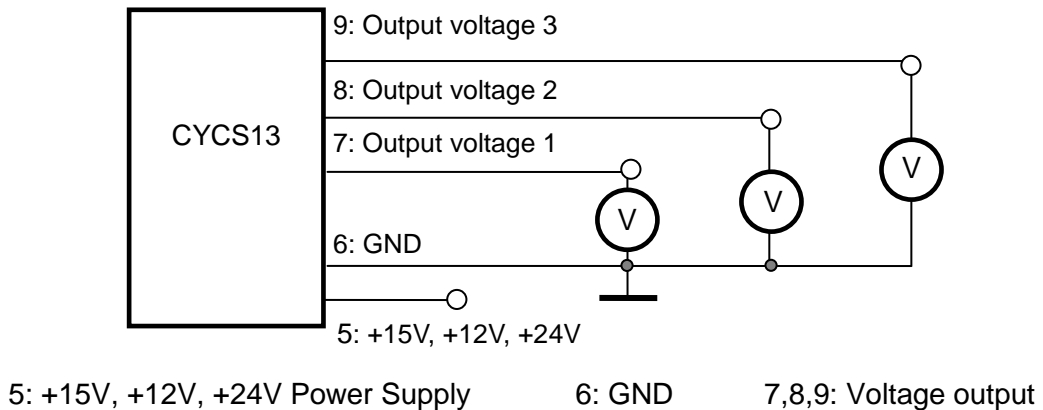


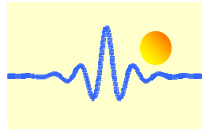
Dimensions: 76mm x 83mm x 36mm  
Aperture: Ø6.5mm

### CONNECTIONS

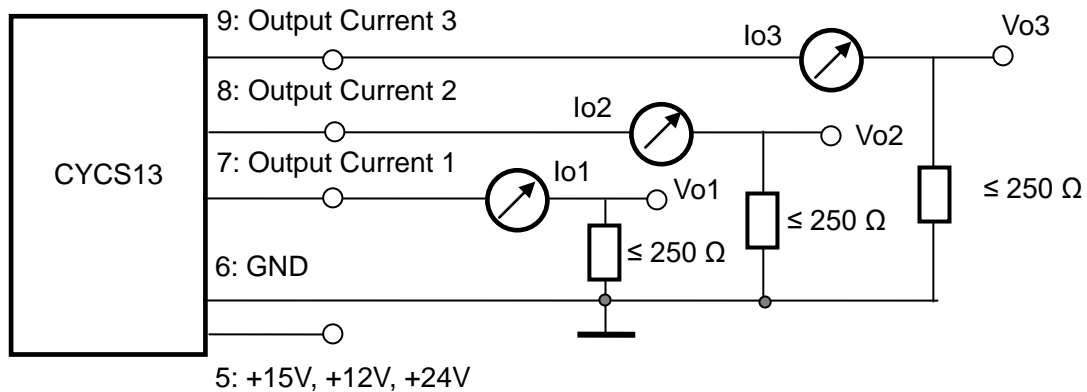


### Wiring of Terminals for voltage output:





## Wiring of Terminals for Current Output:



5: +15V, +12V, +24V Power Supply

6: GND

7,8,9: Current output

Relation between Input and Output (for  $R_m=250\ \Omega$ ):

Sensor CYCS13-52S3-0.5-10A		
Input current (A)	Output current $I_o$ (mA)	Output voltage $V_o$ (V)
0	4	1
2.5	8	2
5	12	3
7.5	16	4
10	20	5

## Application:

- Phase fired controlled heaters
- Quickly varying motor loads
- Chopped wave form drivers
- Harmonic currents

## Notice:

1. There is no polarity requirement for the input current connection.
2. Use an external current transformer for applications with current higher than 25A. Connect the secondary leads of the current transformer to the inputs of the transducer.
3. The output signal and the power source are common grounded at terminal 6.