

## AC Current Sensor CYCS11-xnWS4

The **CYCS11-xnWS4** AC current Sensor/Transducer works according electromagnetic induction and is designed for applications to measurement and monitoring of single phase AC current. The output signal (voltage or current) of this transducer is proportional to the rectified average value of input AC current or reflects the input current wave. They are suitable for general applications such as fixed frequency voltage supplies etc.

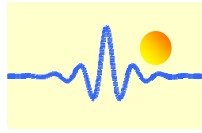
### Specifications

|                        |  |
|------------------------|--|
| Rated input current AC | 0.5A, 1A, 2A, 3A, 4A, 5A, 6A, 7A, 8A AC  |
| Linear measuring range | 0 - 1.2 times of rated input current   |
| Overload capacity      | 20 times of rated input current, 5s  |
| Input frequency        | 25Hz ~ 5kHz  |
| Output signals         | Tracing voltage 5VAC, 0-5VDC, 0-10VDC, 0-20mADC, 4-20mADC  |
| Measuring accuracy     | Tracing voltage: 0.1%; DC voltage output: 0.2%; DC current output: 0.5%  |
| Load capacity          | voltage output: 5mA; current output: 6V  |
| Response time          | Tracing output:15 $\mu$ s ; DC voltage and current output : 300ms  |
| Thermal drift          | Tracing voltage: 50ppm/ $^{\circ}$ C; DC voltage output: 150ppm/ $^{\circ}$ C<br>DC current output: 300-350ppm/ $^{\circ}$ C |
| Power supply           | $\pm$ 12VDC, $\pm$ 15VDC, +12VDC, +24VDC   |
| Static current         | Voltage output: 3-5mA; Current output: 3-7mA   |
| Isolation              | Isolation between input and output, power supply at the output   |
| Isolation voltage      | 2.5 kV DC, 1min  |
| Operating temperature  | -10 $^{\circ}$ C ~ +60 $^{\circ}$ C  |
| Storage temperature    | -25 $^{\circ}$ C ~ + 70 $^{\circ}$ C   |
| Relative humidity      | 10% ~ 90%  |
| Protection of Case     | IP20   |
| Material of Case       | ABS (According to UL94V-0)   |
| Mounting               | DIN Rail   |
| Case Style             | WS4 with aperture $\Phi$ 4mm   |
| MTBF                   | 50000h   |
| Unit weight            | 90g  |

### Definition of Part number:

|        |   |     |     |     |   |     |   |     |
|--------|---|-----|-----|-----|---|-----|---|-----|
| CYCS11 | - | x   | n   | WS4 | - | 0.2 | - | m   |
| (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)                 |
| CYCS11      | <b>x=1:</b> 5VAC tracing | <b>n=5:</b> $\pm$ 12V DC<br><b>n=6:</b> $\pm$ 15V DC | WS4        | 0.1%<br>0.2%<br>0.5% | 0.5A, 1A, 2A, 3A, 4A,<br>5A, 6A, 7A, 8A |
|             | <b>x=3:</b> 0-5V DC      | <b>n=2:</b> +12V DC                                  |            |                      |   |
|             | <b>x=4:</b> 0-20mA DC    | <b>n=4:</b> +24V DC                                  |            |                      |   |
|             | <b>x=5:</b> 4-20mA DC    |  |            |                      |   |
|             | <b>x=8:</b> 0-10V DC     | <b>n=4:</b> +24V DC                                  |            |                      |   |

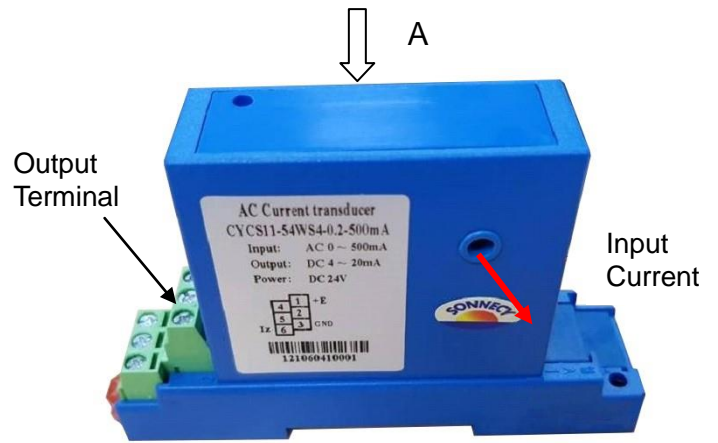
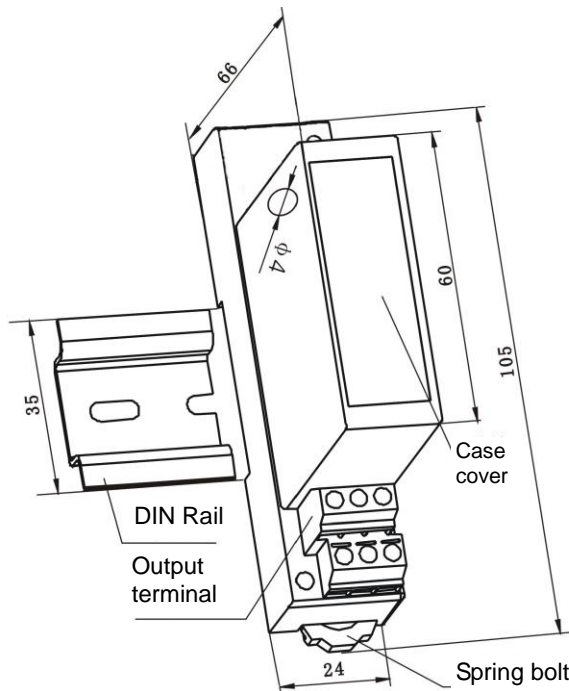


**Example 1:** CYCS11-15WS4-0.1-1A, AC Current sensor with  
Tracing output voltage: 5V AC  
Power supply:  $\pm 12V$  DC  
Rated input current: 0 -1A AC

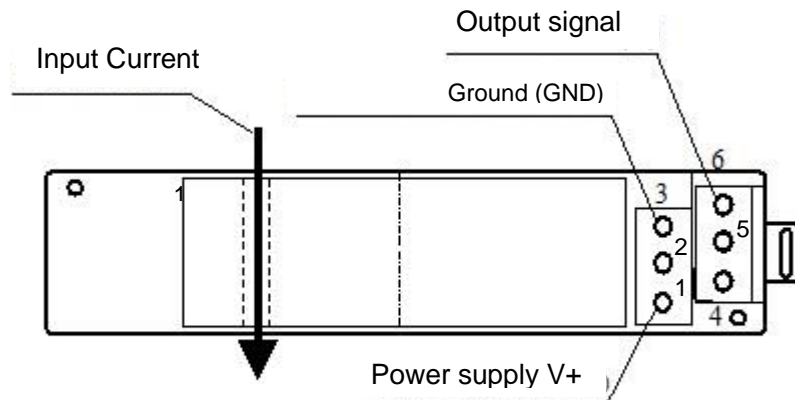
**Example 2:** CYCS11-32WS4-0.2-1A, AC Current sensor with  
Output signal: 0-5V DC  
Power supply: +12V DC  
Rated input current: 0-1A AC

**Example 3:** CYCS11-54WS4-0.5-1A, AC Current sensor with  
Output signal: 4-20mA DC  
Power supply: +24V DC  
Rated input current: 0 -1A AC

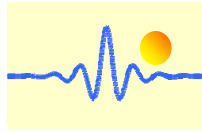
### DIMENSIONS (mm)



Dimensions: 105mm x 24mm x 66mm

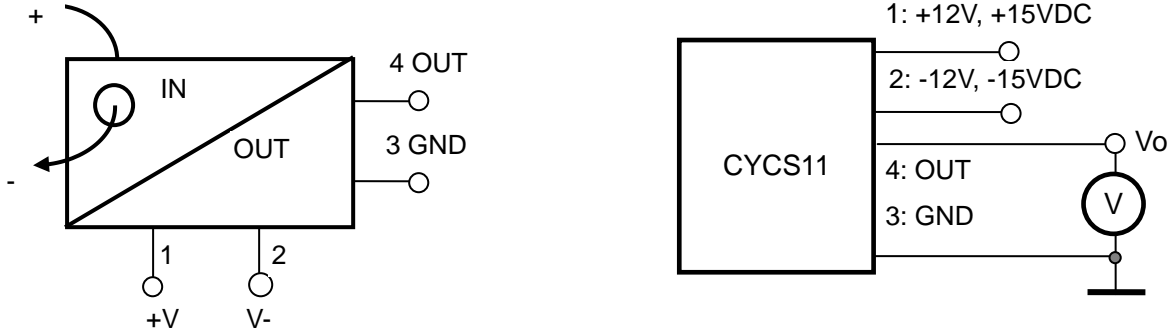


View of A Direction



## CONNECTIONS

### Wiring of Terminals for tracing voltage output:

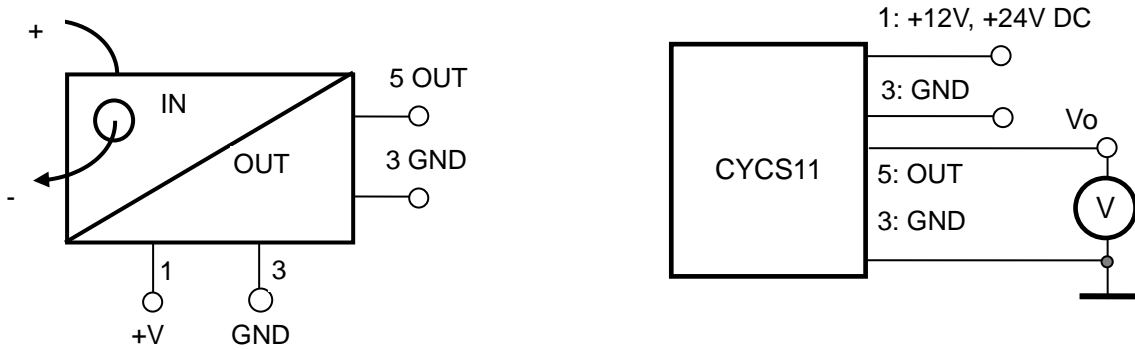


1, 2:  $\pm 12V, \pm 15V$  power supply; 3: GND; 4: tracing voltage output; 5,6: NC

### Relation between Input and Output:

| Sensor CYCS11-15WS4-0.1-1A |                    |
|----------------------------|--------------------|
| Input current (A)          | Output voltage (V) |
| -1                         | -5                 |
| -0.5                       | -2.5               |
| 0                          | 0                  |
| 0.5                        | 2.5                |
| 1                          | 5                  |

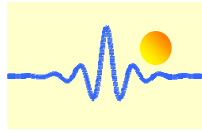
### Wiring of Terminals for DC Voltage Output:



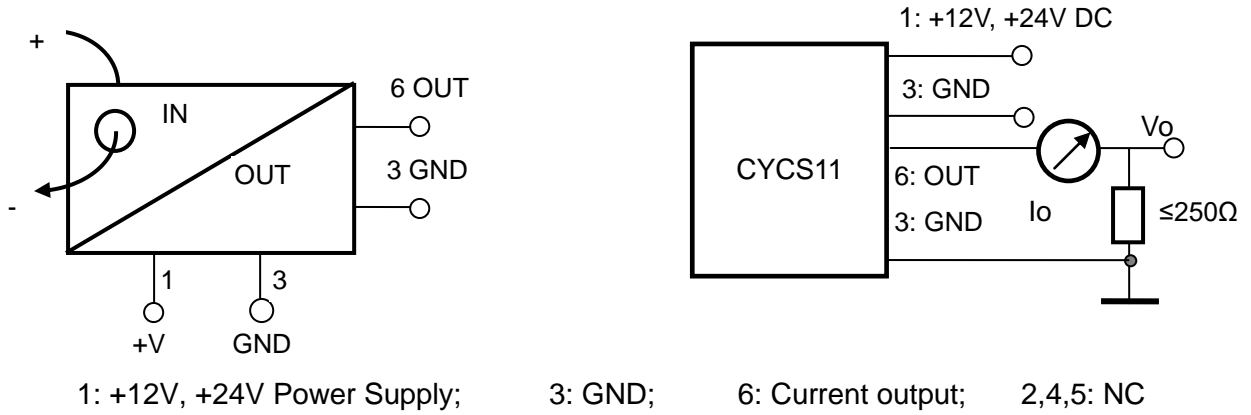
1: +12V, +24V Power Supply; 3: GND; 5: Voltage Output; 2,4,6: NC

### Relation between Input and Output:

| Sensor CYCS11-32WS4-0.2-1A |                    |
|----------------------------|--------------------|
| Input current (A)          | Output voltage (V) |
| 0                          | 0                  |
| 0.25                       | 1.25               |
| 0.5                        | 2.5                |
| 0.75                       | 3.75               |
| 1                          | 5                  |



**Wiring of Terminals for DC Current Output:**



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

| Sensor CYCS11-54WS4-0.5-1A |                           |                          |
|----------------------------|---------------------------|--------------------------|
| Input current (A)          | Output current $I_o$ (mA) | Output voltage $V_o$ (V) |
| 0                          | 4                         | 1                        |
| 0.25                       | 8                         | 2                        |
| 0.5                        | 12                        | 3                        |
| 0.75                       | 16                        | 4                        |
| 1                          | 20                        | 5                        |