# AC Current Sensor CYCS11-xnS3

The **CYCS11-xnS3** AC current Sensor/Transducer works according electro-magnetic induction and is designed for applications to measurement and monitoring of single phase AC current. The output signal (DC voltage or current) of this transducer is proportional to the average effective value (RMS) of input AC current. They are suitable for general applications such as fixed frequency voltage supplies etc.

## Specifications

| | |
|---|---|
| Rated input current range | 30A,50A,75A,100A,120A,150A,200A,250A,300A |
| Output signal | 5V (tracing), 0-5VDC, 0-20 mA, 4-20 mA, 0-10V DC |
| Power supply | +12V, +15V, +24V DC |
| Measuring accuracy | 0.5% |
| Isolation | between input, output and power supply |
| Load resistance | ≥2kΩ for voltage output, ≤250Ω for current output |
| Isolation withstanding voltage | 2.5 kV DC, 1min, leakage current 1mA |
| Operating temperature | -10°C ~ +60°C |
| Storage temperature | -25°C ~ + 70°C |
| Relative humidity | 10% ~ 90% |
| Response time | ≤400ms |
| Overload capacity | 20 times |
| Quiescent power consumption | 360mW – 450mW |
| Mounting | Din rail |
| Case style and Window size | S3 with aperture Ø20mm |

## Definition of Part number:

| CYCS11 | - | x | n | S3 | - | 0.5 | - | 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 | **x=1:** 5V (Vp, tracing)<br>**x=3:** 0-5V DC<br>**x=4:** 0-20mA DC<br>**x=5:** 4-20mA DC<br>**x=8:** 0-10V DC | n**=2:** +12V DC<br>n**=3:** +15V DC<br>n**=4:** +24V DC | S3 | 0.5% | 30A,50A,75A,<br>100A,120A,150A,<br>200A,250A,300A |

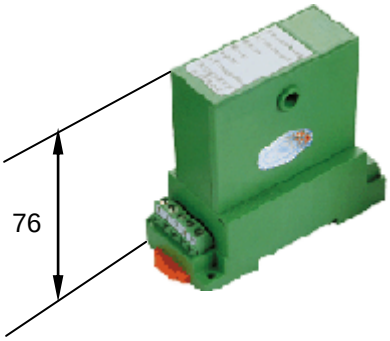
**Example 1:** CYCS11-32S3-0.5-100A, Single Phase AC Current sensor with
Output signal: 0-5V DC
Power supply: +12V DC
Rated input current: 100A AC/RMS

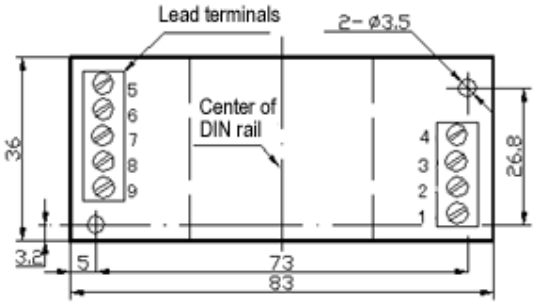
Markt Schwabener Str. 8
D-85464 Finsing
Germany

Tel: +49 (0)8121-2574100
Fax: +49 (0)8121-2574101
Email: info@chenyang-gmbh.com
http://www.chenyang-gmbh.com

**Example 2:** CYCS11-54S3-0.5-100A, Single Phase AC Current sensor with
Output signal: 4-20mA DC
Power supply: +24V DC
Rated input current: 100A AC/RMS

## DIMENSIONS (mm)

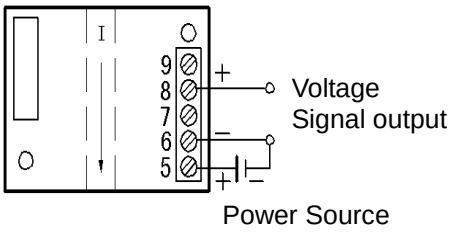


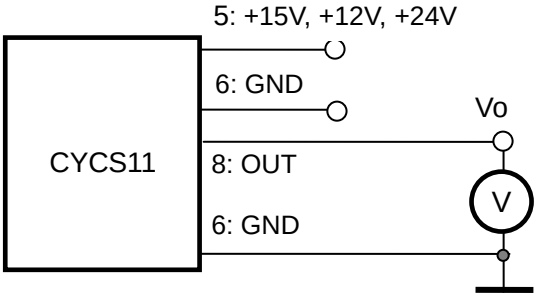




Dimensions: 76mm x 83mm x 36mm
Aperture: Ø20mm

## CONEECTIONS

### Wiring of Terminals for voltage output:




5: +15V, +12V, +24V Power Supply  6: GND  8: Voltage output

Relation between Input and Output:

| Sensor CYCS11-32S3-0.5-100A | |
|---|---|
| Input current (A) | Output voltage (V) |
| 0 | 0 |
| 25 | 1.25 |
| 50 | 2.5 |
| 75 | 3.75 |
| 100 | 5 |

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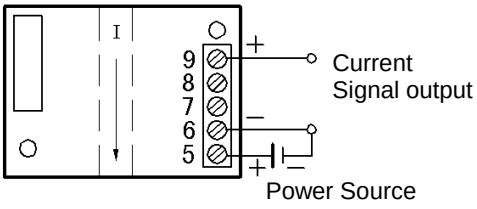
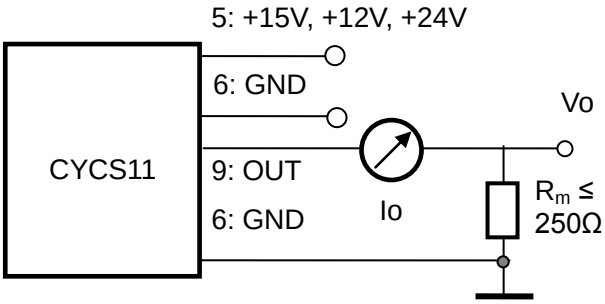
## Wiring of Terminals for Current Output:




5: +15V, +12V, +24V Power Supply  6: GND  9: Current output

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

| Sensor CYCS11-54S3-0.5-100A | | |
|---|---|---|
| Input current (A) | Output current Io(mA) | Output voltage Vo (V) |
| 0 | 4 | 1 |
| 25 | 8 | 2 |
| 50 | 12 | 3 |
| 75 | 16 | 4 |
| 100 | 20 | 5 |

## Application:

- Multi-point current sensing and control panels
- Monitor lighting elements
- Monitor heating elements
- Remote current sensing
- Monitor motor faults

## Notice:

1. The conductor carrying the input current should pass through the center of the aperture as perpendicularly as possible.

2. Make sure that the polarities are in right connection. The output and the power supply must be common grounded at terminal 6.

3. If a meter is used to calibrate the output of the transducer, please make sure that the accuracy of the meter is higher than the transducer.

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