

AC Current Sensor CYCS11-xnWF2

The **CYCS11-xnWF2** 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 (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	30A, 50A, 100A, 150A, 200A, 250A, 300A, 350A, 400A 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 μ s ; DC voltage and current output : 300ms
Thermal drift	Tracing voltage: 150ppm/ $^{\circ}$ C; DC voltage output: 200ppm/ $^{\circ}$ C DC current output: 300-350ppm/ $^{\circ}$ C
Power supply	\pm 12VDC, \pm 15VDC, +12VDC, +24VDC
Static current	Voltage output: 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	WF2 with aperture Φ 20mm
MTBF	50000h
Unit weight	90g

Definition of Part number:

CYCS11	-	x	n	WF2	-	0.2	-	m
(1)		(2)	(3)	(4)		(5)		(6)

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Series name	Output signal	Power supply	Case style	Accuracy class	Input current range (m)
CYCS11	x=1: 5VAC Analog	n=5: \pm 12V DC n=6: \pm 15V DC	WF2	0.1% 0.2% 0.5%	30A, 50A, 100A, 150A, 200A, 250A, 300A, 350A, 400A AC
	x=3: 0-5V DC	n=2: +12V DC			
	x=4: 0-20mA DC	n=4: +24V DC			
	x=5: 4-20mA DC				
	x=8: 0-10V DC	n=4: +24V DC			

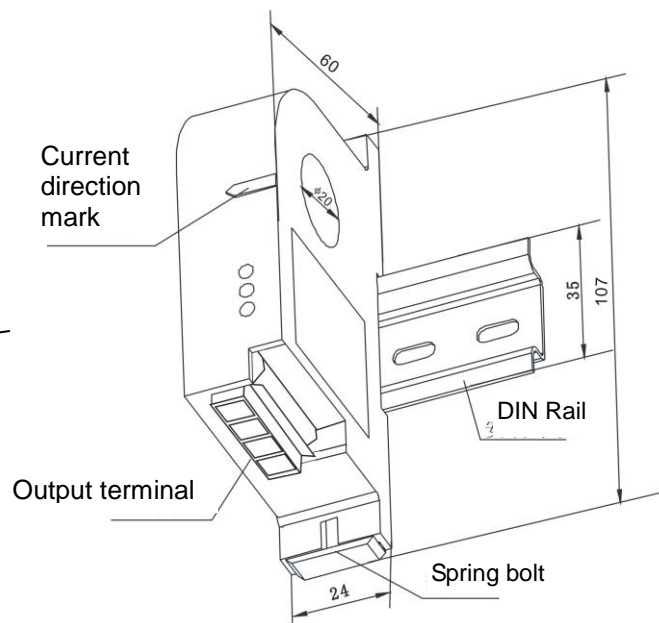
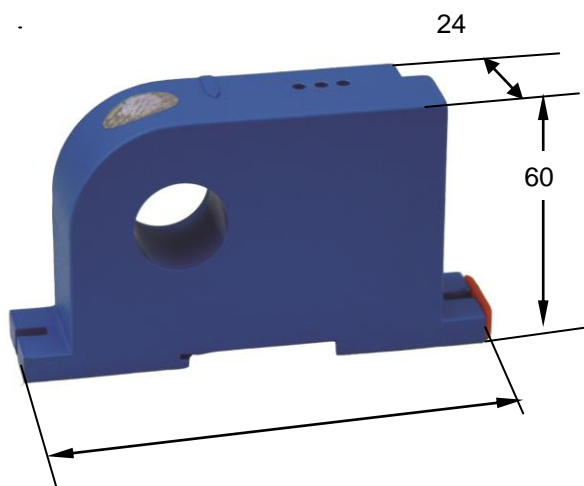


Example 1: CYCS11-15WF2-0.1-100A, AC Current sensor with
Tracing output voltage: 5V AC
Power supply: $\pm 12V$ DC
Rated input current: 0 -100A AC

Example 2: CYCS11-32WF2-0.2-100A, AC Current sensor with
Output signal: 0-5V DC
Power supply: +12V DC
Rated input current: 0-100A AC

Example 3: CYCS11-54WF2-0.5-100A, AC Current sensor with
Output signal: 4-20mA DC
Power supply: +24V DC
Rated input current: 0 -100A AC

DIMENSIONS (mm)



Dimensions: 107x 24 x 60mm, Aperture: $\varnothing 20$ mm

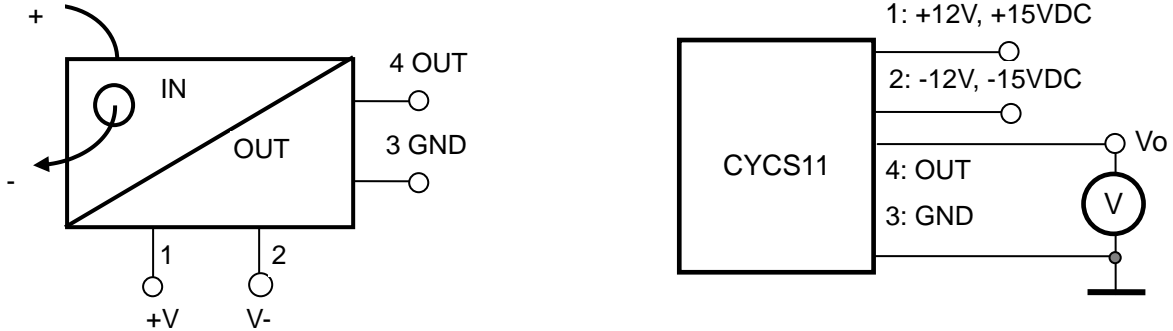
Pin Arrangement:

+: V+
-: V- (or NC)
GND: Ground of power supply and output
OUT: Output



CONNECTIONS

Wiring of Terminals for tracing voltage output:

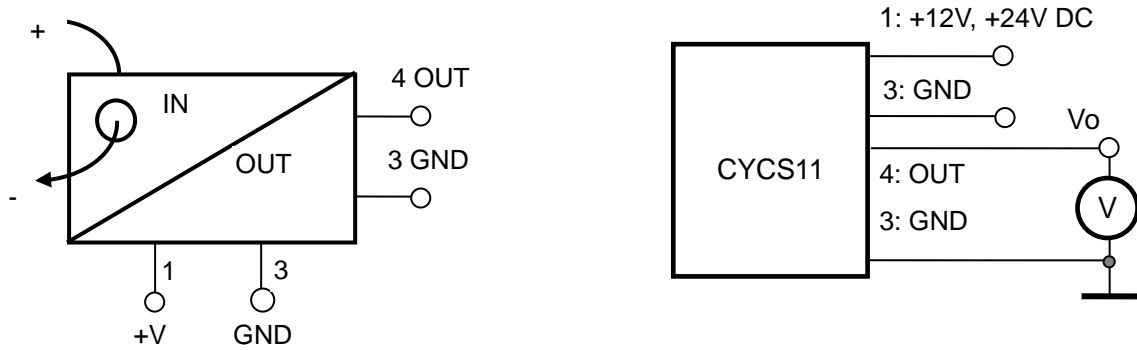


1, 2: $\pm 12V, \pm 15V$ power supply; 3: GND; 4: tracing voltage output

Relation between Input and Output:

Sensor CYCS11-15WF2-0.1-100A	
Input current (A)	Output voltage (V)
-100	-5
-50	-2.5
0	0
50	2.5
100	5

Wiring of Terminals for DC voltage output:



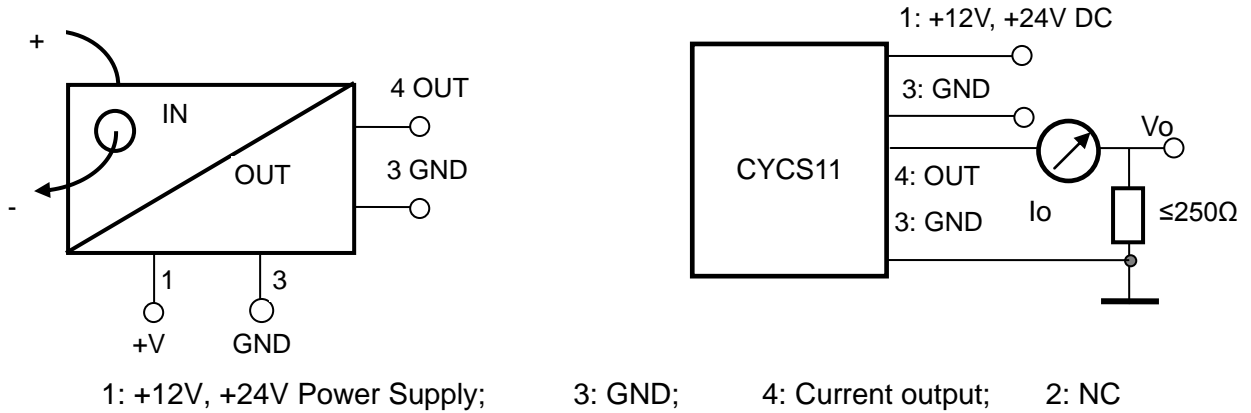
1: +12V, +24V Power Supply; 3: GND; 4: Voltage Output; 2: NC

Relation between Input and Output:

Sensor CYCS11-32WF2-0.2-100A	
Input current (A)	Output voltage (V)
0	0
25	1.25
50	2.5
75	3.75
100	5



Wiring of Terminals for DC Current Output:



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

Sensor CYCS11-54WF2-0.5-100A		
Input current (A)	Output current I_o (mA)	Output voltage V_o (V)
0	4	1
25	8	2
50	12	3
75	16	4
100	20	5

NOTE

The power supply for sensors with tracing voltage output is normally $\pm 12\text{VDC}$ and $\pm 15\text{VDC}$. Custom made sensors with tracing voltage output can be powered with $+12\text{VDC}$ and $+24\text{VDC}$. The sensor connection is shown in the following:

