

AC/DC Current Sensor CYCS-xnS0

The **CYCS-xnS0** AC/DC current sensor/transducer works according Photoelectrical Induction and is designed for applications to measurement and monitoring of AC/DC current and DC impulse current. The output signal of this transducer is tracing voltage, DC voltage and current, which is proportional to the input AC/DC current. They are suitable for measurements and long time monitoring of DC, AC and impulse currents.

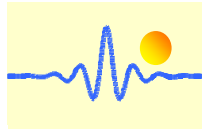
Specifications

Rated input current	1mA, 5mA, 10mA, 50mA, 100mA, 500mA, 1A, 2A, 3A, 4A, 5A (DC calibration, option: AC calibration)
Linear measuring range	0 - 1.2 times of rated input current
Overload capacity	10 times of rated input current
Input frequency	±DC, 20Hz ~ 10kHz
Input resistance	$R_f=0.05V / I_x$, I_x : Input current
Output signals	Tracing output ±5V, DC output: 0-5V, 0-10V, 0-20mA and 4-20mADC
Measuring accuracy	0.2% for tracing output, 0.5% for DC output
Load capacity	Voltage output: 5mA ; Current output: 6V
Response time	≤15μs for tracing output, 250ms for DC output
Thermal drift	150ppm/°C for tracing output, 250-300ppm/°C for DC output
Power supply	±12VDC, ±15VDC, 12VDC, 15VDC, 24VDC
Static current	30mA for tracing output, 34mA+Output current for DC output
Isolation	Isolation between input and output, power supply at the output
Isolation withstanding voltage	1.5 kV DC, 1min
Operating temperature	-10°C ~ +60°C
Storage temperature	-25°C ~ + 70°C
Relative humidity	10% ~ 90%
Protection of Case	IP20
Material of Case	ABS (according to UL94V-0)
Mounting	DIN Rail
Case Style	S0 without aperture
MTBF	50000h
Unit weight	90g

Definition of Part number:

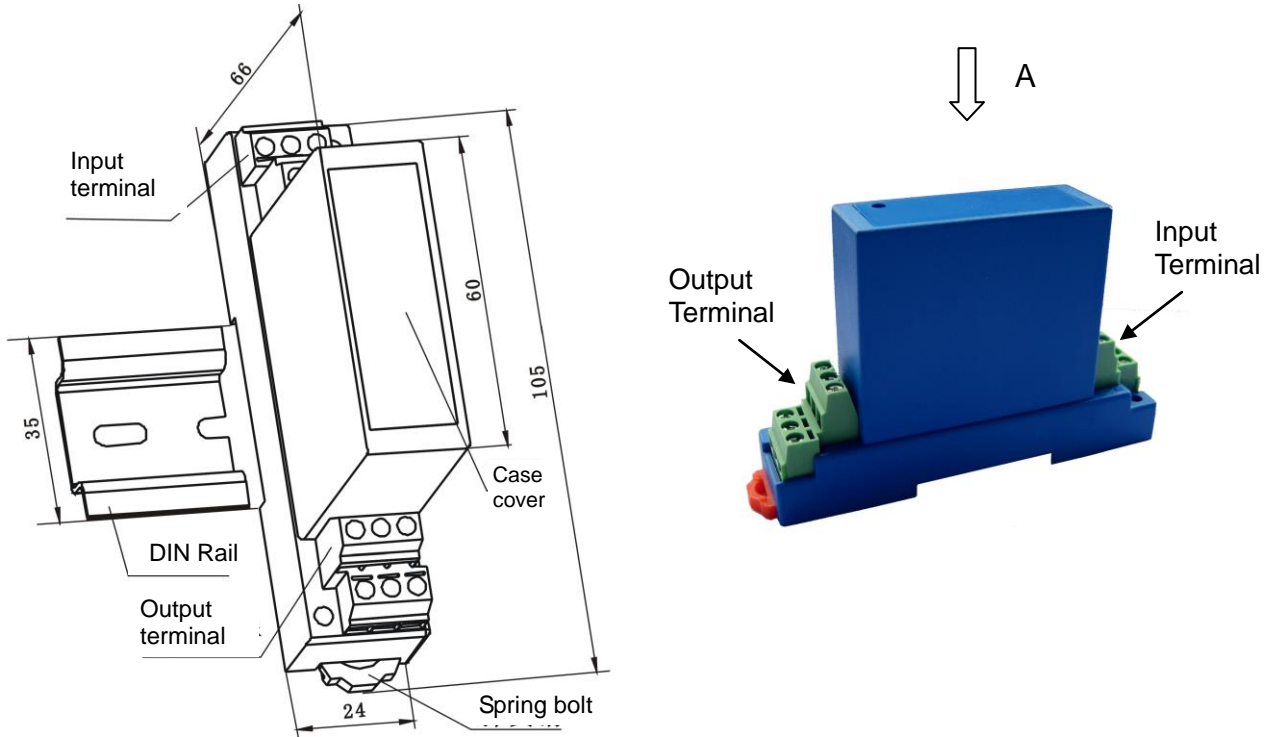
CYCS	-	x	n	S0	-	0.2	-	m
(1)		(2)	(3)	(4)		(5)		(6)

(1)	(2)	(3)	(4)	(5)	(6)
Series name	Output signal	Power supply	Case style	Accuracy class	Input current range (m)
CYCS	x=1: ±5V AC/DC	n=5: ±12V DC n=6: ±15V DC	S0	0.2%	1mA, 5mA, 10mA, 50mA, 100mA, 500mA, 1A, 2A, 3A, 4A, 5A
	x=3: 0-5VDC	n=2: 12V DC		0.5%	
	x=4: 0-20mADC	n=3: 15V DC			
	x=5: 4-20mADC	n=4: 24V DC			
	x=8: 0-10VDC	n=4: 24V DC			

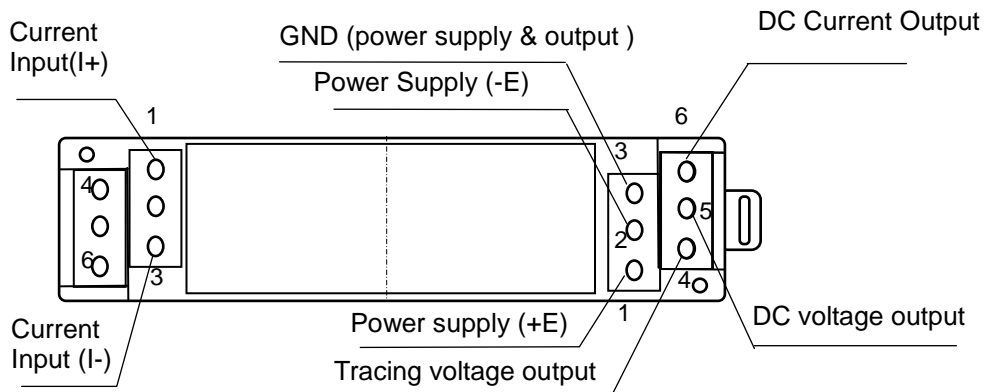


Example 1: CYCS-15S0-0.2-100mA, AC/DC Current sensor with
Output signal: $\pm 5V$ AC/DC
Power supply: $\pm 12V$ DC
Rated input current: $\pm 100mA$ AC/DC

DIMENSIONS (mm)

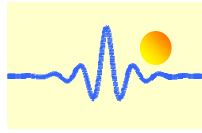


View of A Direction



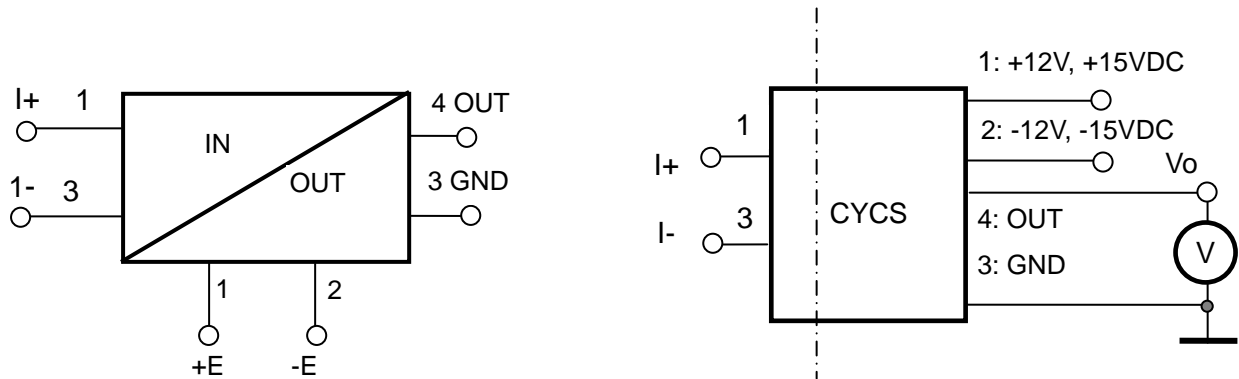
Please don't use the undefined terminals

Dimensions: 105mm x 24mm x 66mm



CONNECTION

Wiring of Terminals for Tracing Voltage Output:



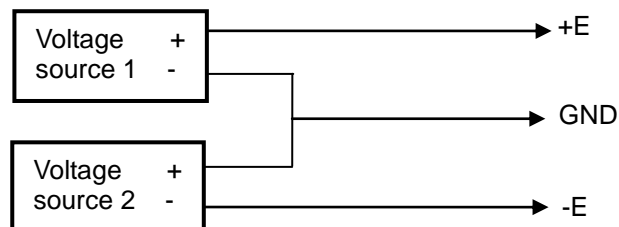
Input Terminals:

1, 3: Input Current I+ and I-;

Output Terminals:

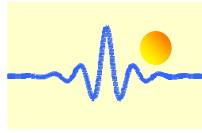
1, 2: Power Supply +E and -E
3: GND (for power supply and output)
4: Tracing Voltage Output

The power supply +E and -E can be generated by using two voltage sources:

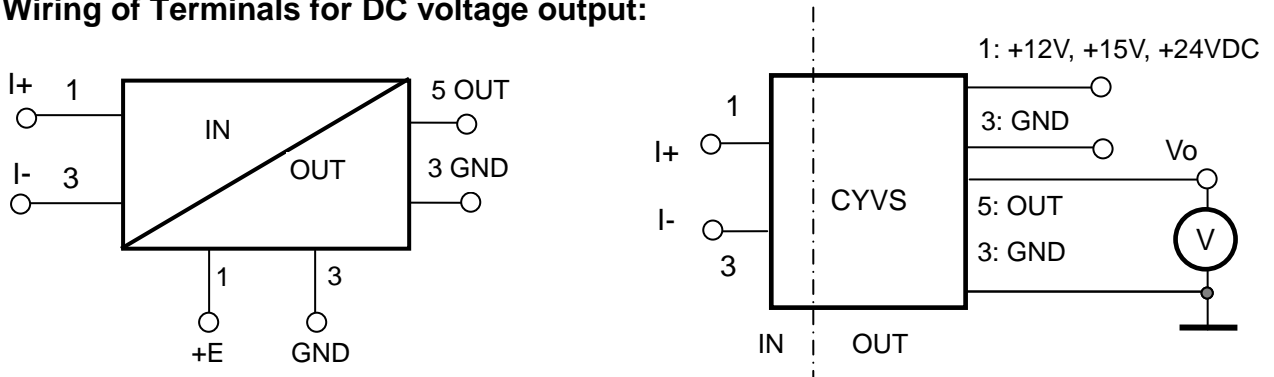


Relation between Input and Output:

Sensor CYCS-15S0-0.2-100mA	
Input current (mA)	Output voltage (V)
-100	-5
-50	-2.5
0	0
50	2.5
100	5



Wiring of Terminals for DC voltage output:

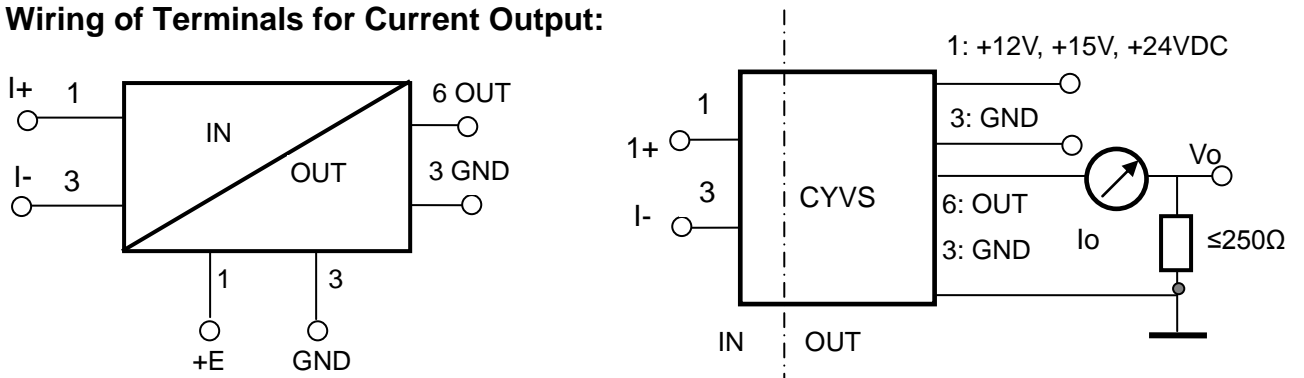


1, 3: Input current; 1: +12V, +15V, +24V Power Supply 3: GND 5: Voltage output

Relation between Input and Output:

Sensor CYCS-32S0-0.5-100mA	
Input Current (mA)	Output voltage (V)
0	0
25	1.25
50	2.5
75	3.75
100	5

Wiring of Terminals for Current Output:



1, 3: Input Current; 1: +12V, +15V,+24V Power Supply 3: GND 6: Current output

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

Sensor CYCS-54S0-0.5-100mA		
Input Current (mA)	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