ChenYang
Technologies GmbH & Co. KG

DC Current Sensor CYCT01-xnU0

The **CYCT01-xnU0** DC Current sensor/transducer works according to linear Photoelectrical Isolation and is designed for applications to the measurement and monitoring of DC current. The output signal (DC voltage or current) of this transducer is proportional to the DC current input. They are suitable for measurements and long-time monitoring of DC currents and can be applied to power supply management, DC motor drivers, battery chargers and systems etc.

Specifications

Rated input current DC	1mA, 5mA, 10mA, 50mA, 100mA, 500mA, 1A, 2A, 3A, 4A, 5A DC		
Linear measuring range	0 - 1.2 times of rated input current		
Overload capacity	10 times of rated input current		
Input response	Uni-directional DC and DC impulse currents		
Input resistance	R_i=0.05V / I_x, I_x : Input current		
Output signals DC	0-5V, 0-10V, 0-20mA, 4-20mA DC		
Measuring accuracy	0.2% for voltage output; 0.5% for current output;		
Load capacity	voltage output: 5mA; current output: 6V		
.Response time	≤350ms		
Thermal drift	voltage output: 200ppm/°C; current output: 250-350ppm/°C		
Power supply	+12VDC, +24VDC		
Static current	Voltage output: 20mA; Current output: 23-27mA		
Isolation	Isolation between input and output and power supply		
Isolation withstanding voltage	2.5 kV DC, 1min for Input-Output and power supply – Input, 1.5-2.5kV DC, 1min for power supply - output		
Operating temperature	-25°C ~ +70°C		
Storage temperature	-25°C ~ + 70°C		
Relative humidity	10% ~ 90%		
Electromagnetic compatibility:	Surge: 1kV, Electrostatic discharge: 6KV/8KV Electric Fast transient pulse Group: 2kV		
Material of Case	ABS (According to UL94V-0)		
Mounting	DIN Rail	Case style	U0 without aperture
MTBF	50000h	Safe Standard	IEC61010-1
Protection of Case	IP20	Unit weight	90g

Definition of Part number:

CYCT01	-	x	n	U0	-	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)
CYCT01	**x=3:** 0-5V DC **x=4:** 0-20mA DC **x=5:** 4-20mA DC **x=8:** 0-10V DC	n**=2:** +12V DC n**=4:** +24V DC	U0	0.2% 0.5%	1mA, 5mA, 10mA, 50mA, 100mA, 500mA, 1A, 2A, 3A, 4A, 5ADC

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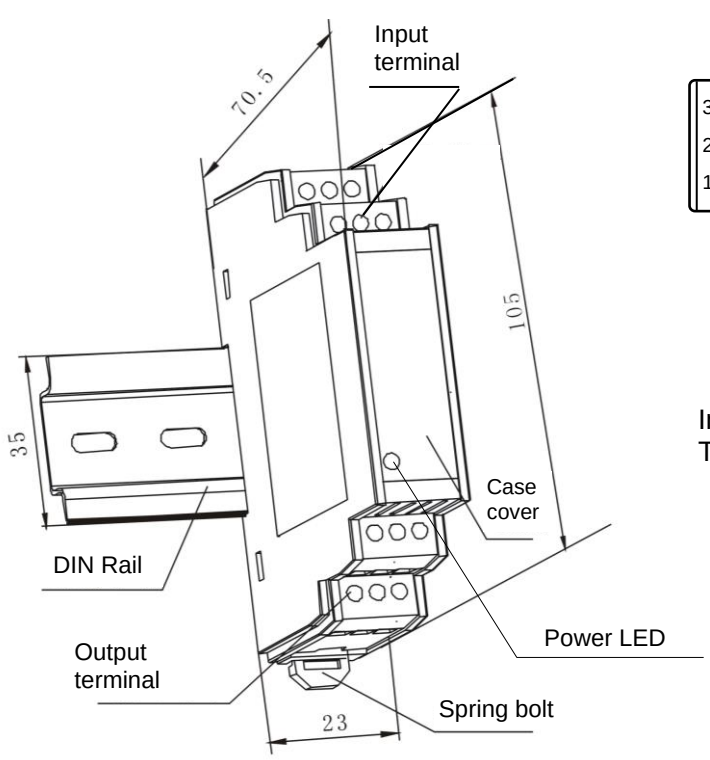
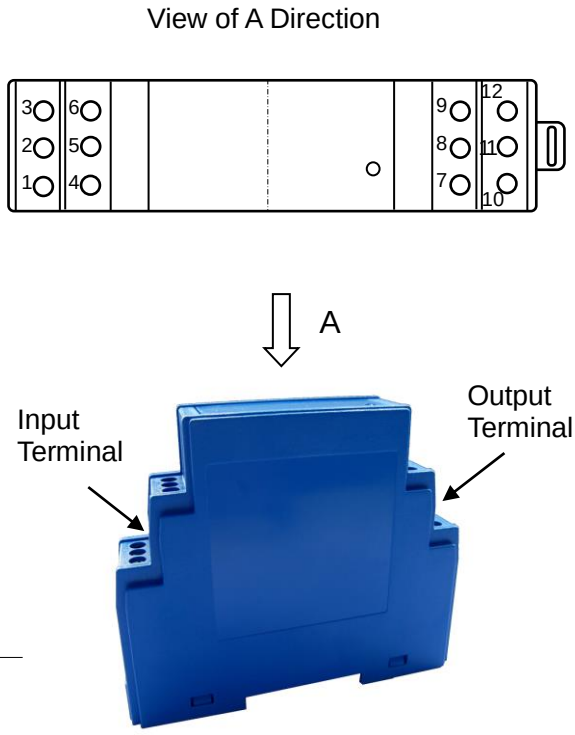
Example 1: CYCT01-32U0-0.2-100mA, DC Current sensor with accuracy ±0.2% and
Output signal: 0-5V DC
Power supply: +12V DC
Rated input current: 0-100mA DC

Example 2: CYCT01-54U0-0.5-100mA, DC Current sensor with accuracy ±0.5% and
Output signal: 4-20mA DC
Power supply: +24V DC
Rated input current: 0 -100mA DC

DIMENSIONS (mm)





Dimensions: 105mm x 23mm x 70.5mm

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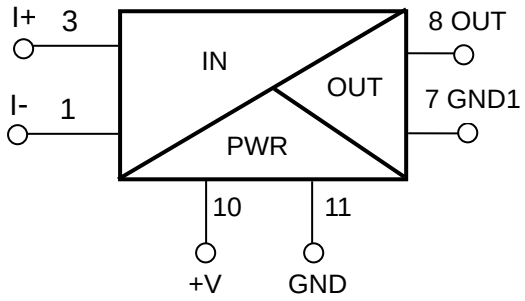
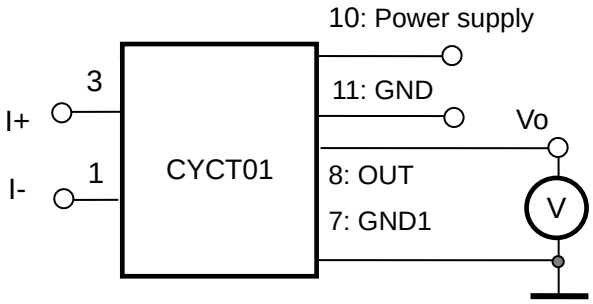
CONEECTIONS

Wiring of Terminals for voltage output:



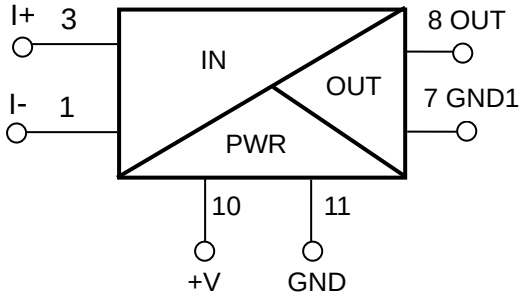


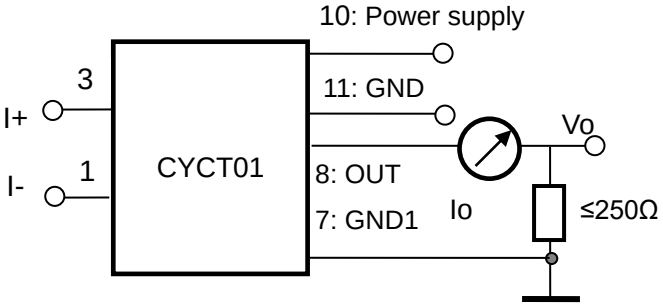
1, 3: Input Current; 10: +12V, +24V Power Supply 7, 11: GND 8: Voltage Output

Relation between Input and Output:

Sensor CYCT01-32U0-0.2-100mA	
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; 10: +12V, +24V Power Supply 7, 11: GND 8: Current Output

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

Sensor CYCT01-54U0-0.5-100mA		
Input current (mA)	Output current Io(mA)	Output voltage Vo (V)
0	4	1
25	8	2
50	12	3
75	16	4
100	20	5

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