

DC Current Sensor CYCT01-xnU0

The **CYCT01-xnU0** DC Current sensor/transducer works according to Photoelectrical Induction and is designed for applications to measurement and monitoring of DC current. The output signal (DC voltage or current) of this transducer is proportional to the input DC current. 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.

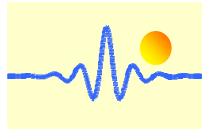
Specifications

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	$R=0.05V / I_x$, 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; 0.5% for power supply 165-265VAC and +230V-360VDC
Load capacity	voltage output: 5mA; current output: 6V
Response time	≤350ms
Thermal drift	voltage output : 100-350ppm/°C; current output: 250-350ppm/°C
Power supply	+12VDC, +24VDC, 165-265VAC, +230-360VDC
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	-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	U0 without aperture
MTBF	50000h
Unit weight	90g

Definition of Part number:

CYCT01	-	x	n	U0	-	0.2	-	m
(1)		(2)	(3)	(4)		(5)		(6)

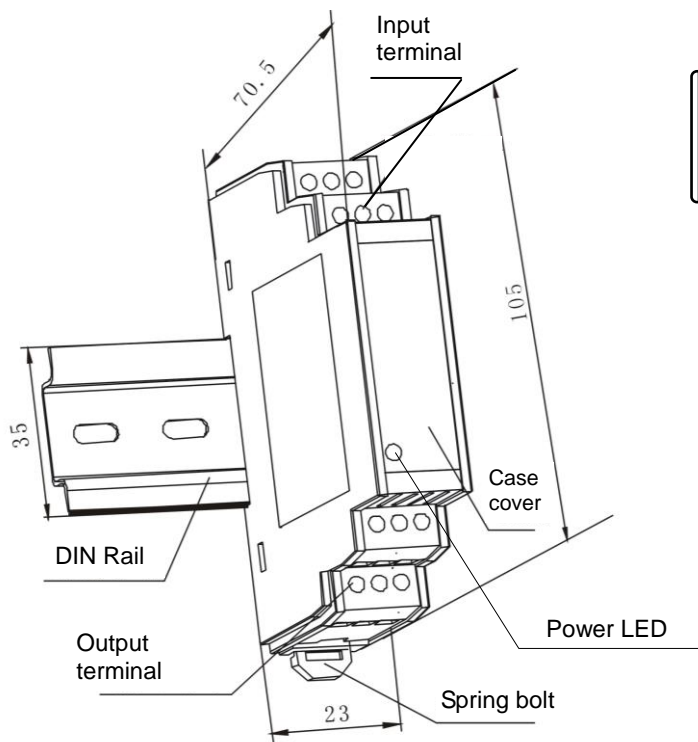
(1)	(2)	(3)	(4)	(5)	(6)
Series name	Output signal	Power supply	Case style	Accuracy class	Input current range (m)
CYCT01	x=3: 0-5V DC x=4: 0-20mA DC x=5: 4-20mA DC x=8: 0-10V DC	n=2: +12V DC n=4: +24V DC n=8: 165V-265VAC n=9: 230-360VDC	U0	0.2% 0.5%	1mA, 5mA, 10mA, 50mA, 100mA, 500mA, 1A, 2A, 3A, 4A, 5ADC



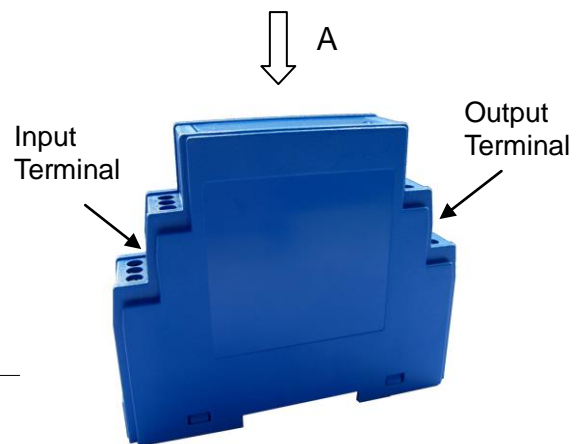
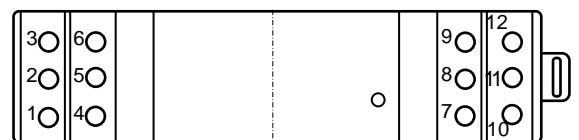
Example 1: CYCT01-32U0-0.2-100mA, DC Current sensor with
Output signal: 0-5V DC
Power supply: +12V DC
Rated input current: 0-100mA DC

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

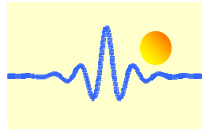
DIMENSIONS (mm)



View of A Direction

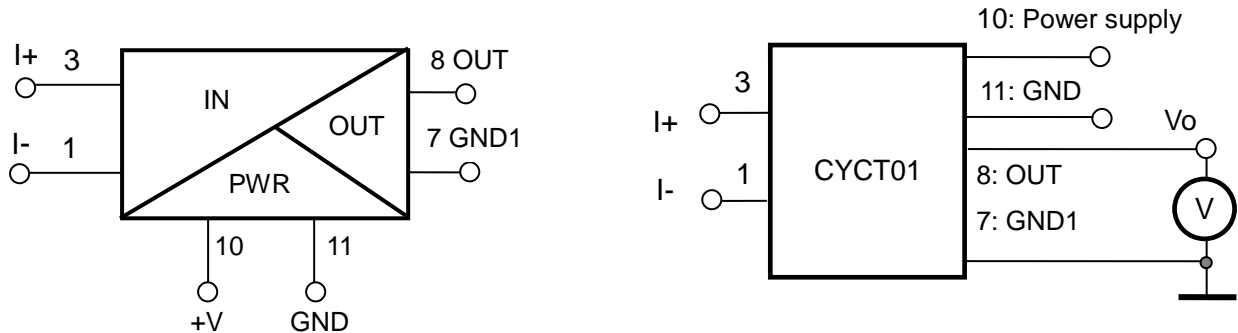


Dimensions: 105mm x 23mm x 70.5mm



CONNECTIONS

Wiring of Terminals for voltage output:

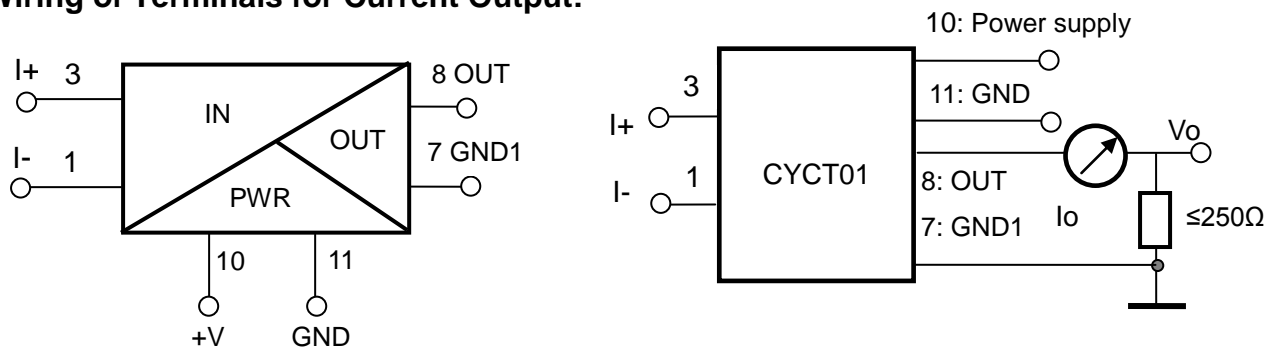


1, 3: Input Current; 10: +12V, +24V Power Supply 7, 11: GND 8: Voltage Output

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 (for $R_m=250\ \Omega$):

Sensor CYCT01-54U0-0.5-100mA		
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