ChenYang
Technologies GmbH & Co. KG

DC Voltage Sensor CYVT01-xnH2

The **CYVT01-xnH2** DC voltage sensor/transducer works according to Linear Photoelectrical Isolation and is designed for applications to measurement and monitoring of DC voltage. The output signal (DC voltage or current) of this transducer is proportional to the input DC voltage. They are suitable for measurements and long time monitoring of DC voltages and can applied to power supply management, DC motor drivers, battery chargers and systems etc.

Specifications

Rated input voltage (Ux)	10mV - 1000V DC		
Linear measuring range	0 - 1.2 times of rated input voltage		
Overload capacity	2 times of rated input voltage (1s, time interval 10s, 10 times)		
Input response	Uni-directional DC and DC impulse voltage		
Input resistance	R_i>1MΩ for Ux≤1V, $R_i=U_x$ *x 10kΩ/V* for Ux >1V, U_x : input voltage		
Output signals DC	0-5V, 0-10V, 0-20mA, 4-20mA DC		
Measuring accuracy	0.2% FS for voltage output; 0.5% FS for current output		
Load capacity	300Ω (6V) for current output; voltage output: 10mA		
Response time	≤350ms		
Thermal drift	200ppm/°C		
Power supply	AC/DC: 85V-265V		
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 1.5kV DC, 1min for power supply - output		
Operating temperature	-25°C ~ +70°C		
Storage temperature	-25°C ~ + 70°C		
Relative humidity	10% ~ 90%		
Output ripple	35mV (when the output load is 250Ω)		
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	H2 without aperture
MTBF	50000h	Safety standard	IEC61010-1
Protection of Case	IP20	Unit weight	150g

Definition of Part number:

CYVT01	-	x	n	H2	-	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 Voltage range (m)
CYVT01	**x=3:** 0-5V DC **x=4:** 0-20mA DC **x=5:** 4-20mA DC **x=8:** 0-10V DC	n**=8:** 85V~265VAC n**=9:** +85V~265VDC	H2	0.2% 0.5%	m=10mV-1000V DC

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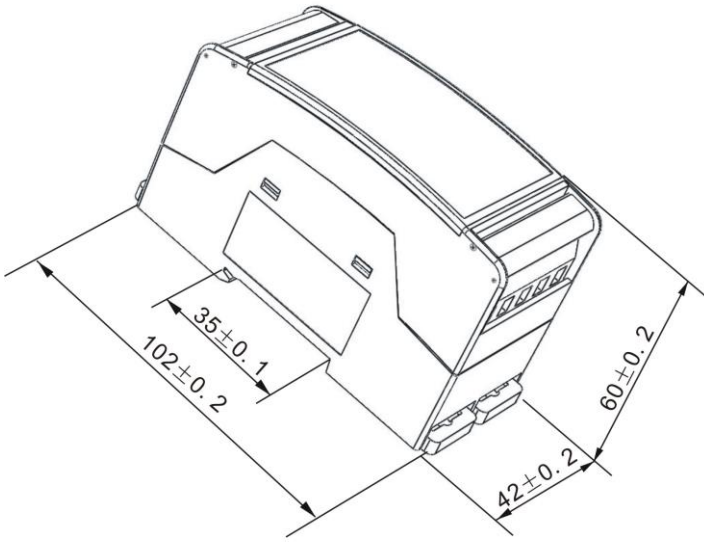
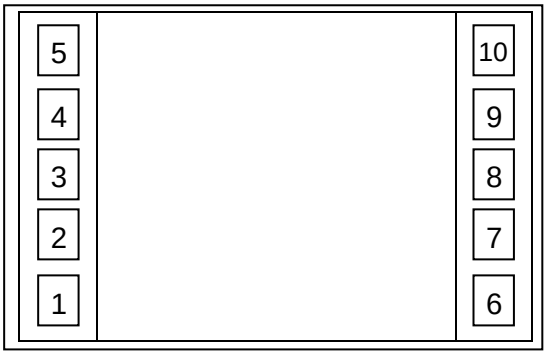
Example 1: CYVT01-38H2-0.2-100V, DC voltage sensor with
Output signal: 0-5V DC
Power supply: 85V~265V AC
Rated input voltage: 0-100V DC

Example 2: CYVT01-59H2-0.5-100V, DC voltage sensor with
Output signal: 4-20mA DC
Power supply: +85V~265V DC
Rated input voltage: 0 -100V DC

DIMENSIONS (mm)



Dimensions: 102mm x 42mm x 60mm



Input Voltage

Output Signal

and

Power Supply

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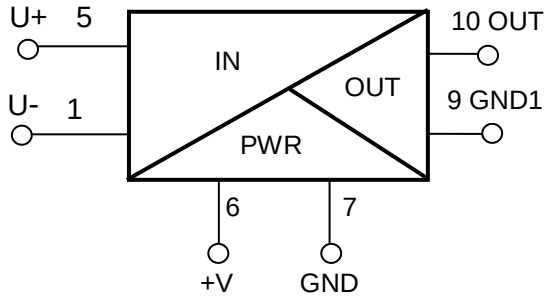
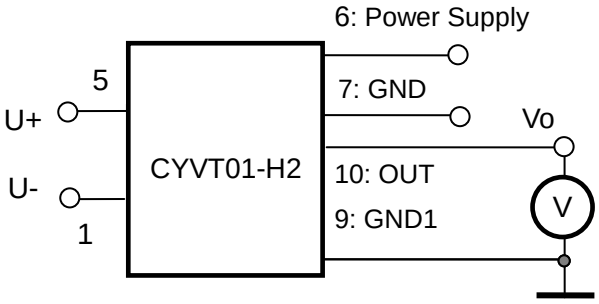
CONNECTIONS

Wiring of Terminals for voltage output:



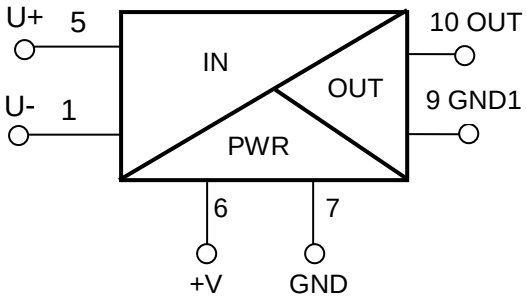


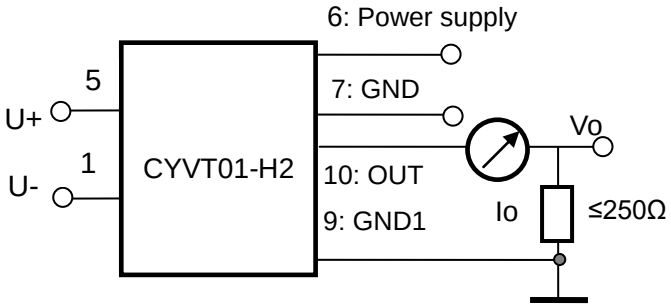
1, 5: Input Voltage; 6: Power Supply 7,9: GND 10: Voltage output

Relation between Input and Output:

Sensor CYVT01-38H2-0.2-100V	
Input Voltage (V)	Output voltage (V)
0	0
25	1.25
50	2.5
75	3.75
100	5

Wiring of Terminals for Current Output:





1,5: Input Voltage; 6: Power Supply 7,9: GND 10: current output

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

Sensor CYVT01-59H2-0.5-100V		
Input Voltage (V)	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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