



## DC Voltage Sensor CYVT01-xnU0

The **CYVT01-xnU0** 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 be applied to power supply management, DC motor drivers, battery chargers and systems etc.

### Specifications

Rated input voltage ( $U_x$ )	10mV -1000V DC
Linear measuring range	0 - 1.2 times of rated input voltage
Overload capacity	2 times of rated input voltage
Input response	Uni-directional DC and DC impulse voltage
Input resistance	$R_i > 1M\Omega$ for $U_x \leq 1V$ , $R_i = U_x \times 10k\Omega/V$ for $U_x > 1V$ , $U_x$ : input voltage
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 +230V~360VDC
Load capacity	voltage output: 5mA; current output: 6V
Response time	$\leq 350ms$
Thermal drift	voltage output : 100-350ppm/ $^{\circ}C$ ; current output: 250-350ppm/ $^{\circ}C$
Power supply	+12VDC, +24VDC, +230V-360VDC
Static current	Voltage output: 20mA; Current output: 13-17mA
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 $^{\circ}C$ ~ +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	U0 without aperture
MTBF	50000h
Unit weight	90g

### Definition of Part number:

CYVT01	-	x	n	U0	-	0.2	-	m
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(1)                      (2)    (3)    (4)                      (5)                      (6)

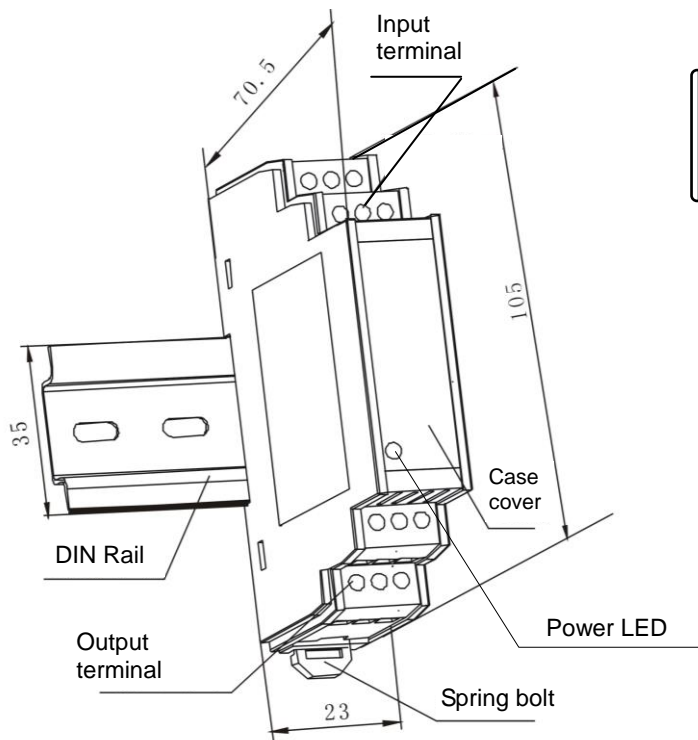
(1)	(2)	(3)	(4)	(5)	(6)
Series name	Output signal	Power supply	Case style	Accuracy class	Input Voltage range (m)
CYVT01	<b>x=3:</b> 0-5V DC <b>x=4:</b> 0-20mA DC <b>x=5:</b> 4-20mA DC <b>x=8:</b> 0-10V DC	<b>n=2:</b> +12VDC <b>n=4:</b> +24V DC <b>n=9:</b> 230-360VDC	U0	0.2% 0.5%	m=10mV-1000V DC



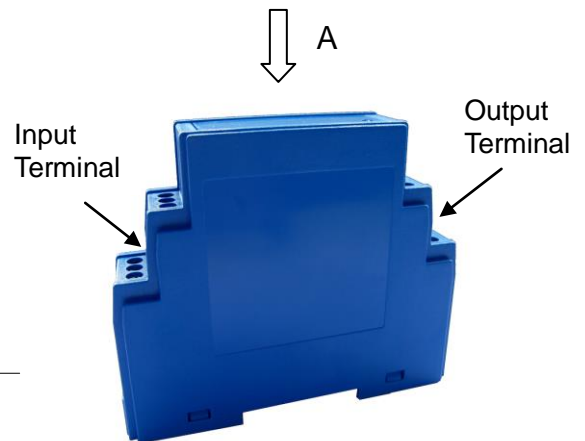
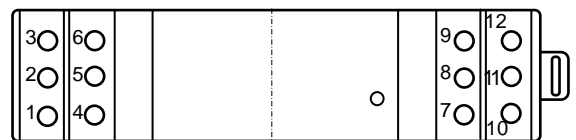
**Example 1:** CYVT01-34U0-0.2-100V, DC voltage sensor with  
Output signal: 0-5V DC  
Power supply: +24V DC  
Rated input voltage: 0-100V DC

**Example 2:** CYVT01-54U0-0.5-100V, DC voltage sensor with  
Output signal: 4-20mA DC  
Power supply: +24V DC  
Rated input voltage: 0 -100V DC

### DIMENSIONS (mm)



View of A Direction

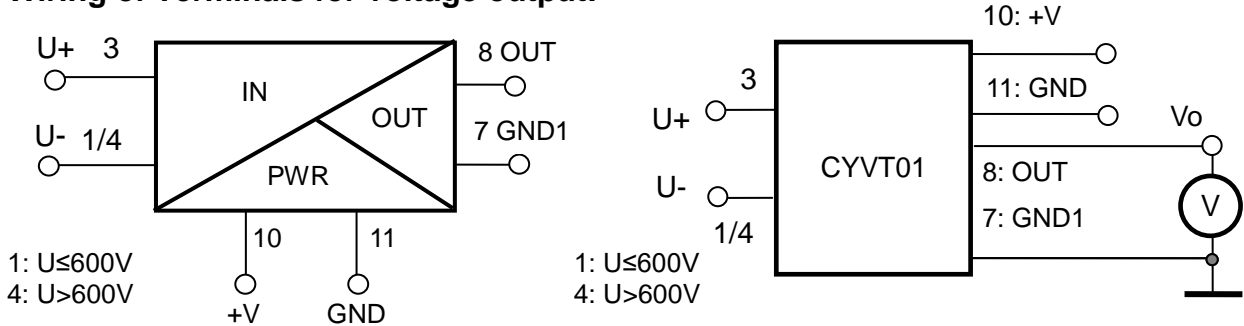


Dimensions: 105mm x 23mm x 70.5mm



## CONNECTIONS

### Wiring of Terminals for voltage output:

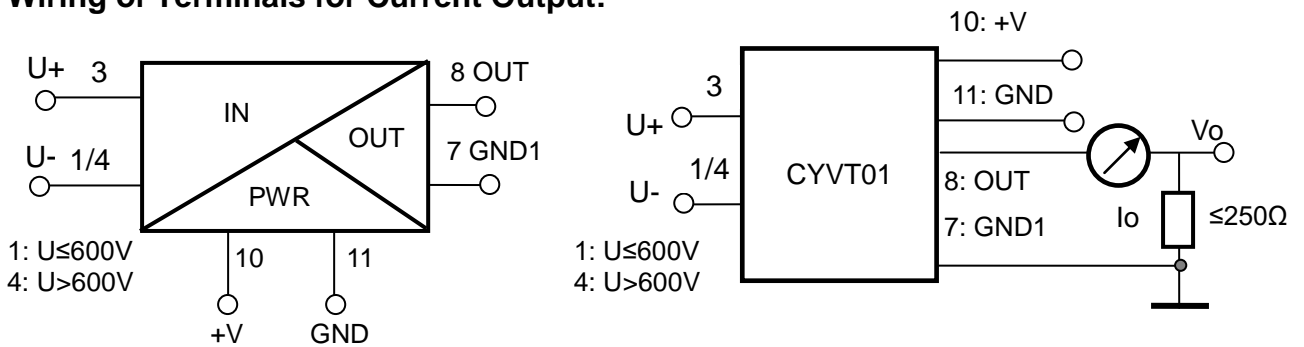


1/4,3: Input Voltage; 10: +24V Power Supply 7,11: GND 8: Voltage output

### Relation between Input and Output:

Sensor CYVT01-34U0-0.2-100V	
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:



1/4,3: Input Voltage; 10: +24V Power Supply 7,11: GND 8: current output

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

Sensor CYVT01-54U0-0.5-100V		
Input Voltage (V)	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