AC/DC Voltage Sensor CYVS-xnU0

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

Specifications

Rated input voltage (Ux)	50mV-1000V AC/DC (DC calibration, option: AC calibration)
Frequency range	DC – 5kHz
Linear measuring range	0 - 1.2 times of rated input voltage
Overload capacity	2 times of rated input voltage
Input response	Bi-directional DC and AC voltages
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	0.5%
.Load capacity	voltage output: 5mA; current output: 6V
Response time	≤250ms
Thermal drift	voltage output : 250ppm/°C; current output: 300-350ppm/°C
Power supply	+12VDC, +24VDC
Static current	Voltage output: 34mA; Current output: 34-38mA
Isolation	Isoltion 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	U0 without aperture
MTBF	50000h
Unit weight	90g

Definition of Part number:

CYVS	-	x	n	U0	-	0.5	-	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)
CYVS	**x=3:** 0-5V DC **x=4:** 0-20mA DC **x=5:** 4-20mA DC	n**=2:** +12V DC n**=4:** +24V DC	U0	0.5%	m=50mV-1000V AC/DC
	x=8: 0-10V DC	n**=4:** +24V DC			

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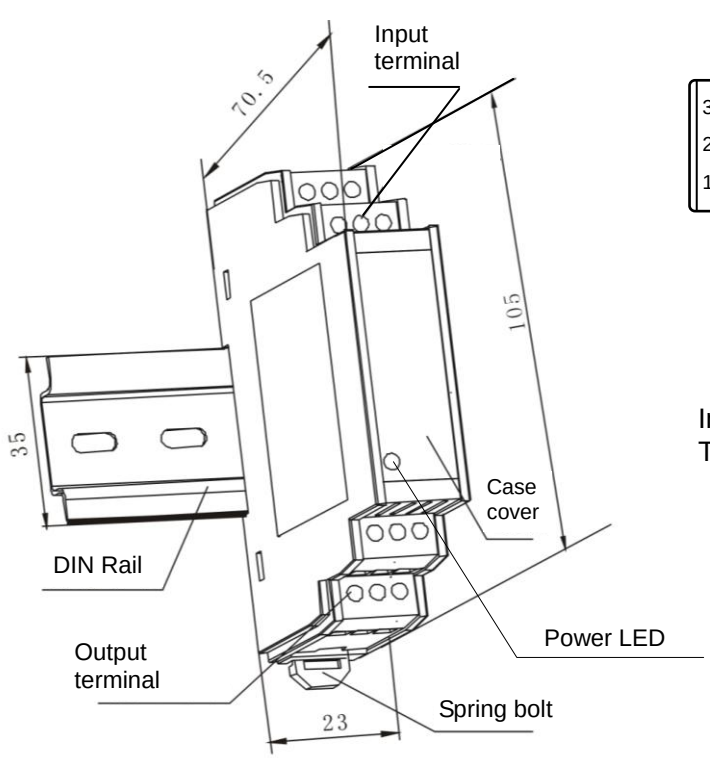
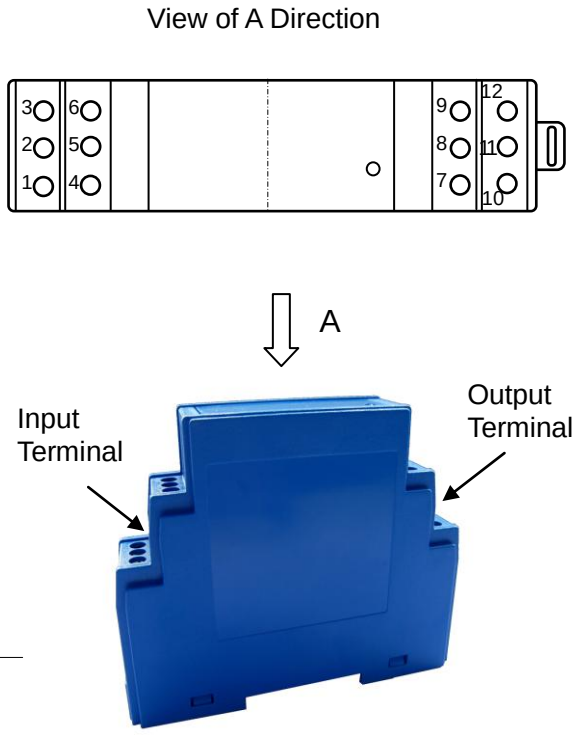
Example 1: CYVS-32U0-0.5-100V, AC/DC voltage sensor with
Output signal: 0-5V DC
Power supply: +12V DC
Rated input voltage: 0-100V AC/DC

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

DIMENSIONS (mm)





Dimensions: 105mm x 23mm x 70.5mm

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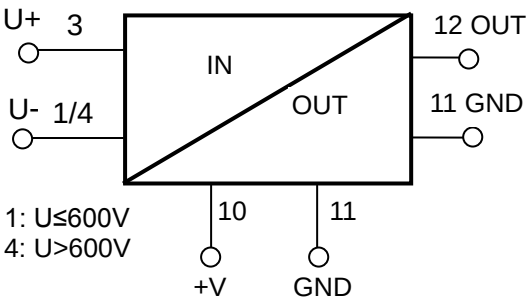
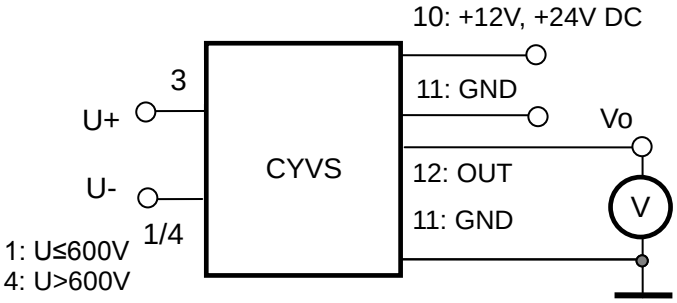
CONEECTIONS

Wiring of Terminals for voltage output:



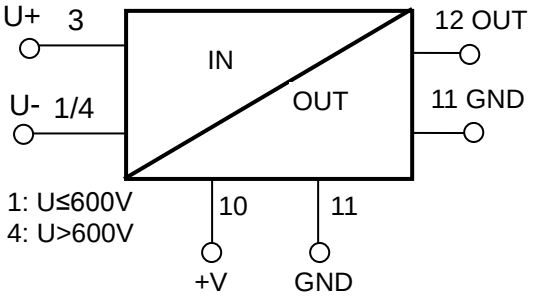


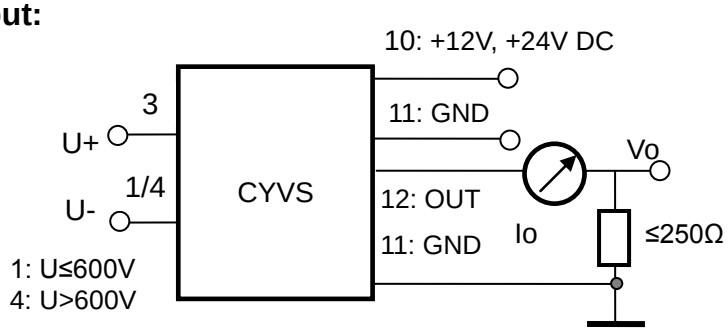
1/4,3: Input Voltage; 10: +12V, +24V Power Supply 11: GND 12: Voltage output

Relation between Input and Output:

Sensor CYVS-32U0-0.5-100V	
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: +12V, +24V Power Supply 11: GND 12: Current output

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

Sensor CYVS-54U0-0.5-100V		
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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