ChenYang
Technologies GmbH & Co. KG

AC/DC Voltage Sensor CYVS-xnS0

The **CYVS-xnS0** AC/DC voltage sensor/transducer works according to Linear Photoelectrical Isolation and is designed for applications to measurement and monitoring of AC/DC voltage and DC impulse voltage. The output voltage 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-500V AC/DC (DC calibration, option: AC calibration)
Frequency range	DC , 20Hz–10kHz
Linear measuring range	0 - 1.2 times of rated input voltage
Overload capacity	2 times of rated input voltage
Input response	Uni-directional DC, 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 signal	Tracing voltage ±5V AC/DC, DC Output 0-5V, 0-20mA, 4-20mADC
Measuring accuracy	0.2% for tracing voltage output, 0.5% for DC voltage & current output
Load capacity	voltage output: 5mA, current output: 6V
.Response time	≤15μs for tracing output, 250ms for DC voltage & current output
Thermal drift	150ppm/°C for tracing output, 250-300ppm/°C for DC output
Power supply	±12VDC, ±15VDC, 12VDC, 24VDC
Static current	25mA for tracing output, 34mA+Output current for DC output
Isolation	Isolation 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	S0 without aperture
MTBF	50000h
Unit weight	90g

Definition of Part number:

CYVS	-	x	n	S0	-	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)
CYVS	**x=1:** ±5V AC/DC	n**=5:** ±12V DC n**=6:** ±15V DC	S0	0.2%	m=50mV-500V AC/DC
	x=3: 0-5V DC **x=4:** 0-20mA DC **x=5:** 4-20mA DC	n**=2:** 12V DC n**=4:** 24V DC		0.5%	
	x=8: 0-10V DC	n**=4:** 24V DC			

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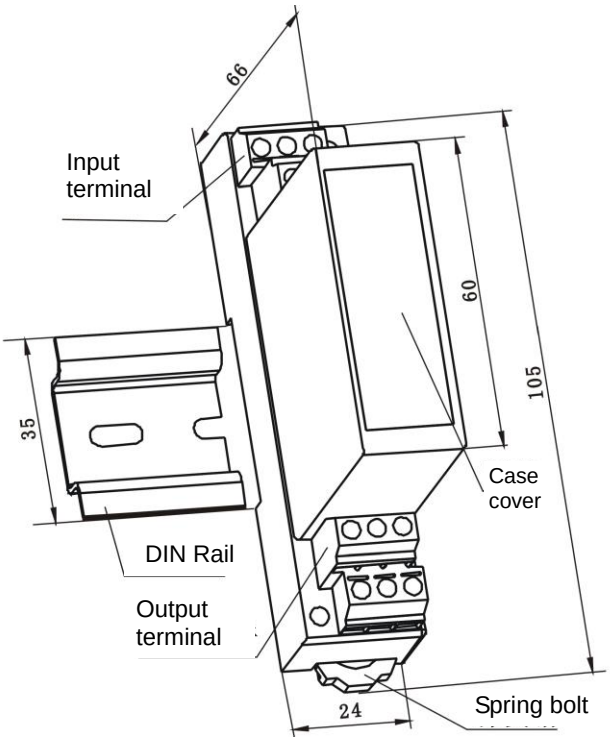
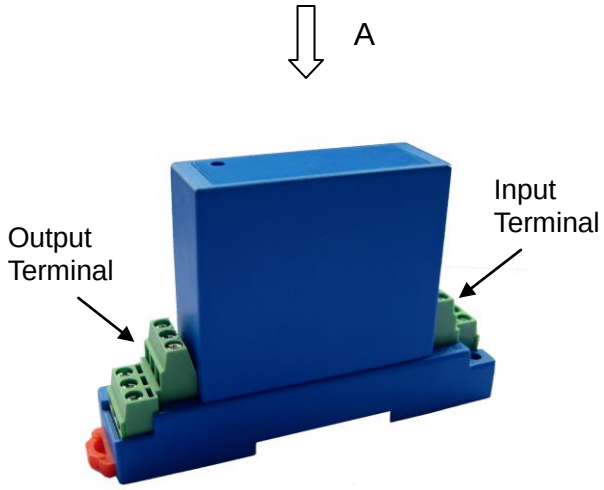
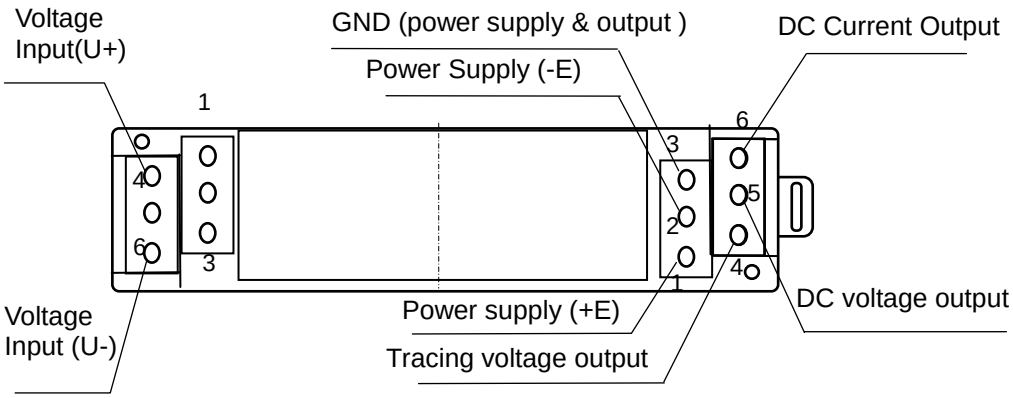
Example 1: CYVS-15S0-0.2-100V, AC/DC voltage sensor with
Output signal: ±5V AC/DC
Power supply: ±12V DC
Rated input voltage: ±100V AC/DC

DIMENSIONS (mm)





View of A Direction



Please don‘t use the undefined terminals

Dimensions: 105mm x 24mm x 66mm

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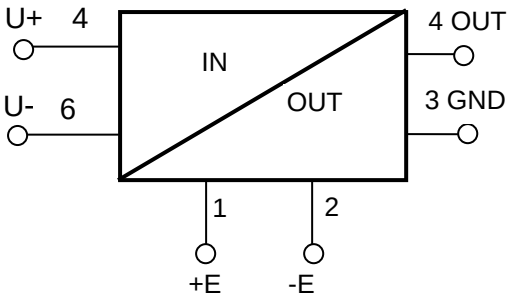
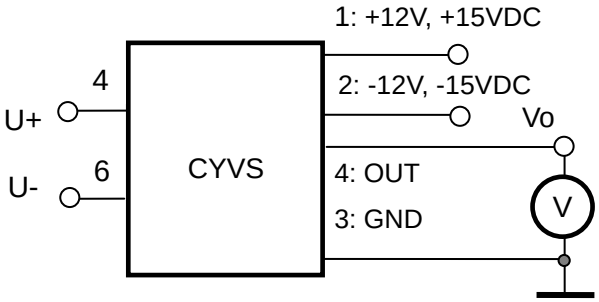
CONNECTION

Wiring of Terminals for Tracing Voltage Output:





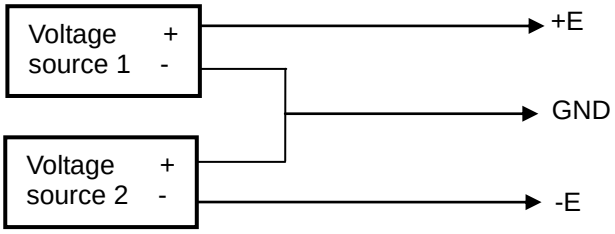
Input Terminals:

4, 6: Input Voltage U+ and U-;

Output Terminals:

1, 2: Power Supply +E and -E
3: GND (for power supply and output)
4: Tracing Voltage Output

The power supply +E and -E can be generated by using two voltage sources:



Relation between Input and Output:

Sensor CYVS-15S0-0.2-100V	
Input Voltage (V)	Output voltage (V)
-100	-5
-50	-2.5
0	0
50	2.5
100	5

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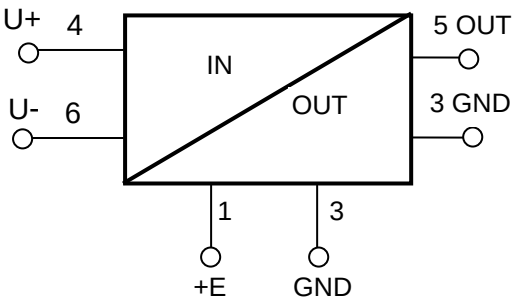
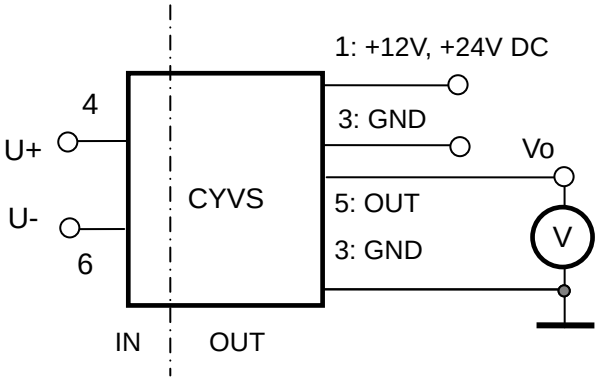
Wiring of Terminals for DC voltage output:



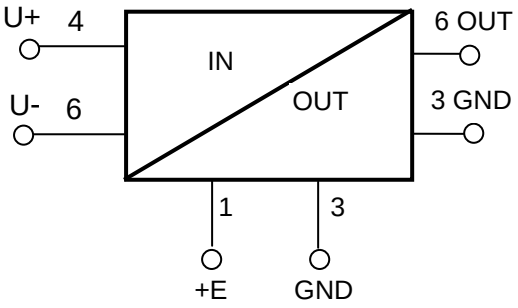


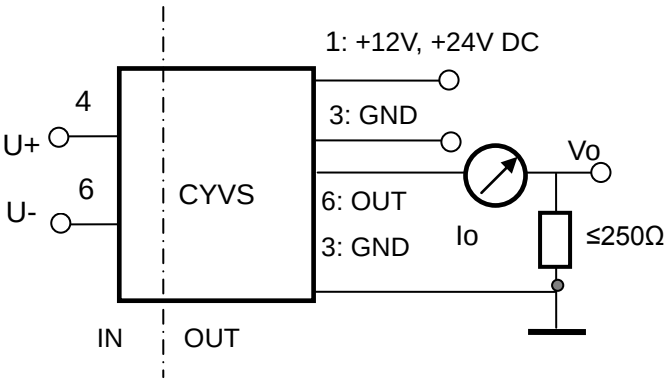
4, 6: Input Voltage; 1: +12V or +24V Power Supply 3: GND 5: Voltage output

Relation between Input and Output:

Sensor CYVS-32S0-0.5-100V	
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:





4, 6: Input Voltage; 1: +12V or +24V Power Supply 3: GND 6: Current output

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

Sensor CYVS-54S0-0.5-100V		
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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