

## 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 be applied to power supply management, motor drivers, battery chargers and systems etc.

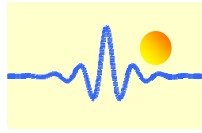
### Specifications

Rated input voltage (U <sub>x</sub> )	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	$R_i > 1M\Omega$ for $U_x \leq 1V$ , $R_i = U_x \times 10k\Omega/V$ for $U_x > 1V$ , $U_x$ : input voltage
Output signal	Tracing voltage $\pm 5V$ 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	$\leq 15\mu s$ for tracing output, 250ms for DC voltage & current output
Thermal drift	150ppm/°C for tracing output, 250-300ppm/°C for DC output
Power supply	$\pm 12VDC$ , $\pm 15VDC$ , 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:

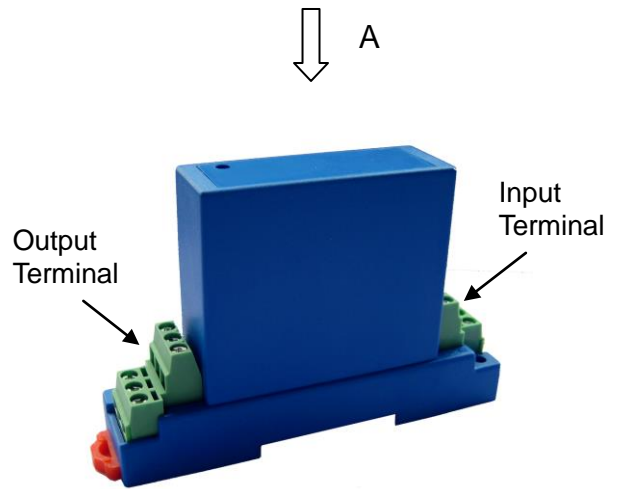
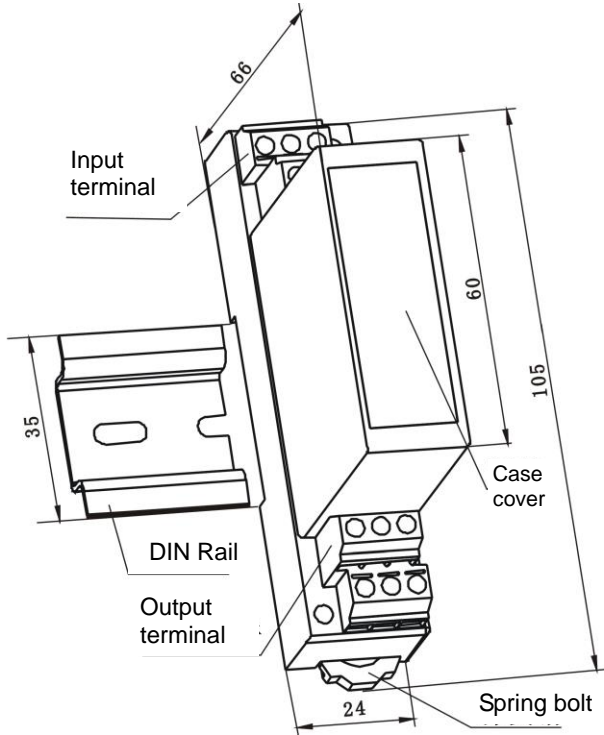
CYVS	-	x	n	S0	-	0.2	-	m
(1)		(2)	(3)	(4)		(5)		(6)

(1)	(2)	(3)	(4)	(5)	(6)
Series name	Output signal	Power supply	Case style	Accuracy class	Input Voltage range (m)
CYVS	<b>x=1:</b> $\pm 5V$ AC/DC	<b>n=5:</b> $\pm 12V$ DC <b>n=6:</b> $\pm 15V$ DC	S0	0.2%	m=50mV-500V AC/DC
	<b>x=3:</b> 0-5V DC <b>x=4:</b> 0-20mA DC <b>x=5:</b> 4-20mA DC	<b>n=2:</b> 12V DC <b>n=4:</b> 24V DC		0.5%	
	<b>x=8:</b> 0-10V DC	<b>n=4:</b> 24V DC			

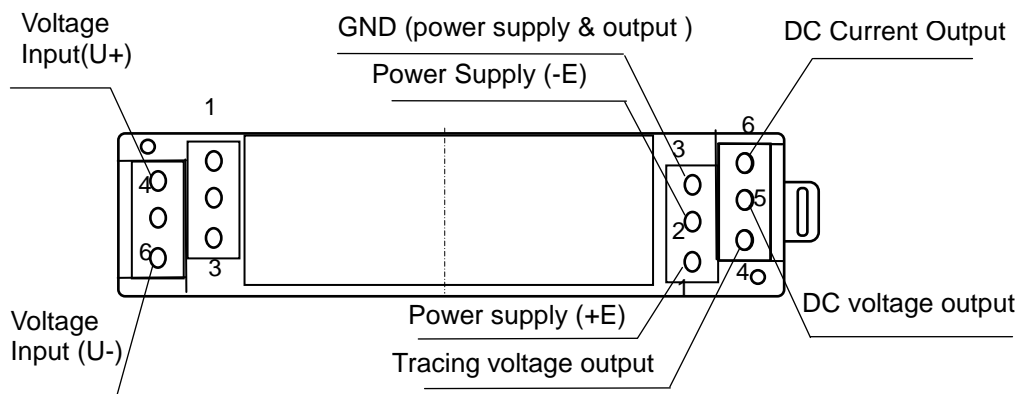


**Example 1:** CYVS-15S0-0.2-100V, AC/DC voltage sensor with  
Output signal:  $\pm 5V$  AC/DC  
Power supply:  $\pm 12V$  DC  
Rated input voltage:  $\pm 100V$  AC/DC

**DIMENSIONS (mm)**

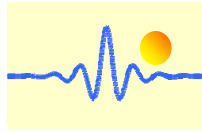


View of A Direction



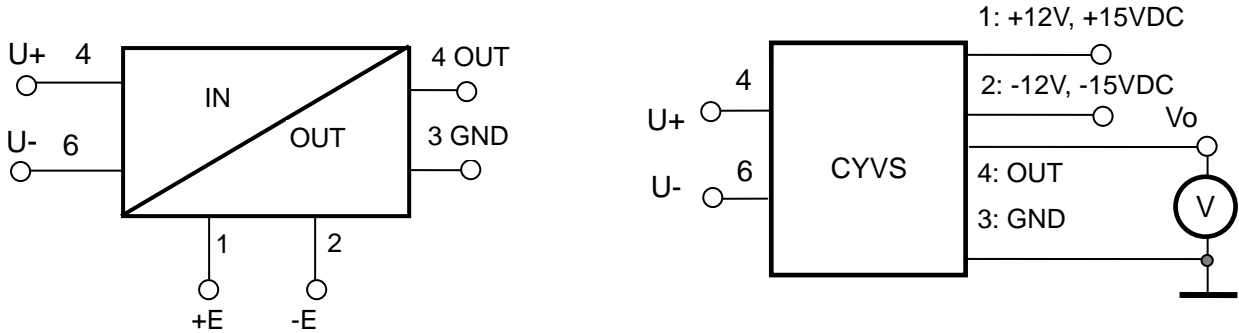
Please don't use the undefined terminals

Dimensions: 105mm x 24mm x 66mm



## CONNECTION

### Wiring of Terminals for Tracing Voltage Output:



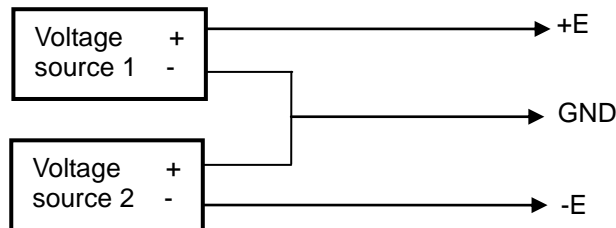
#### Input Terminals:

4, 6: Input Voltage  $U_+$  and  $U_-$ ;

#### Output Terminals:

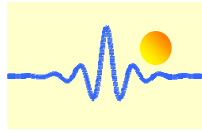
1, 2: Power Supply  $+E$  and  $-E$   
3: GND (for power supply and output)  
4: Tracing Voltage Output

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

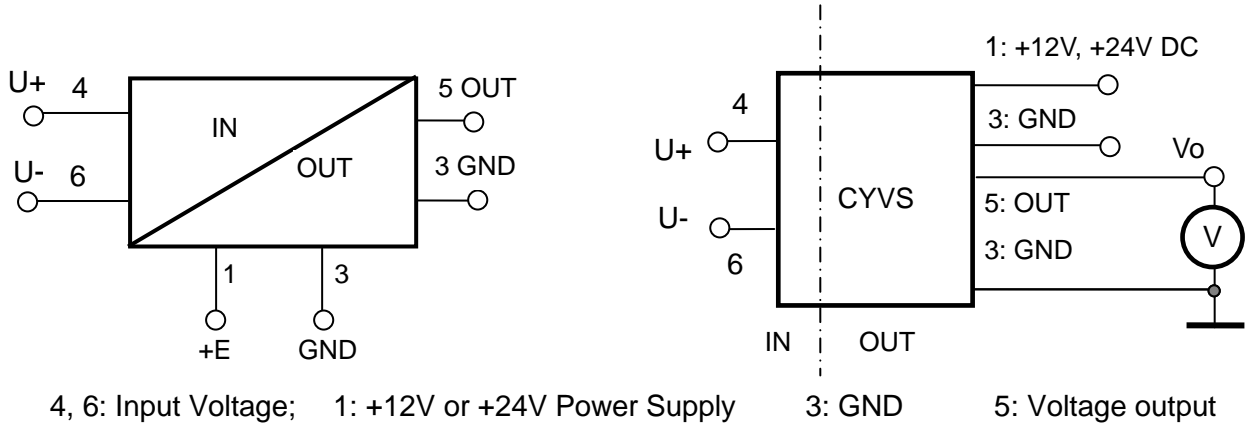


#### Relation between Input and Output:

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



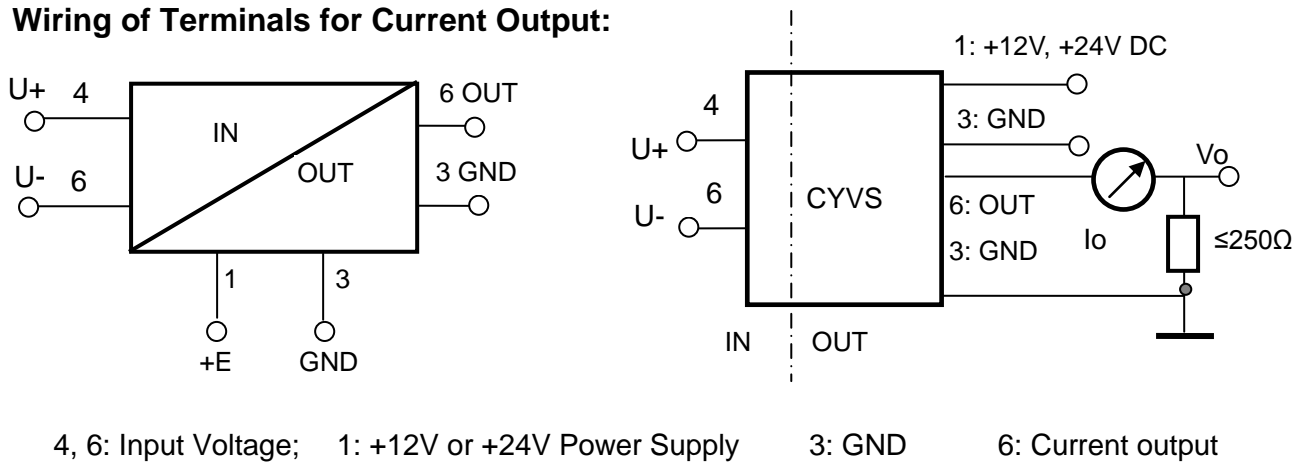
**Wiring of Terminals for DC voltage output:**



**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:**



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

Sensor CYVS-54S0-0.5-100V		
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