



## Hall Effect Voltage Sensor CYHVS500D

CYHVS500D is a Hall Effect Voltage sensor, which is based on Hall Effect closed loop and magnetic compensation principle. This sensor can be used for measuring DC and AC voltage with different wave forms. It has high electric isolation.

### Features

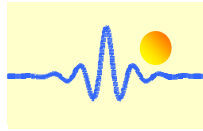
- High electrical isolation
- High reliability
- Good overload capability
- Small sizes
- Insulated plastic case recognized according to UL94-V0

### Applications

- Switched Mode Power Supplies
- Uninterruptible power supplies (UPS)
- Overvoltage protection
- Feedback of control systems
- Electric power network monitoring
- AC frequency conversion servo-motors
- Various power supplies

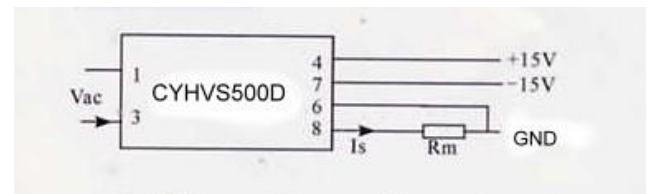
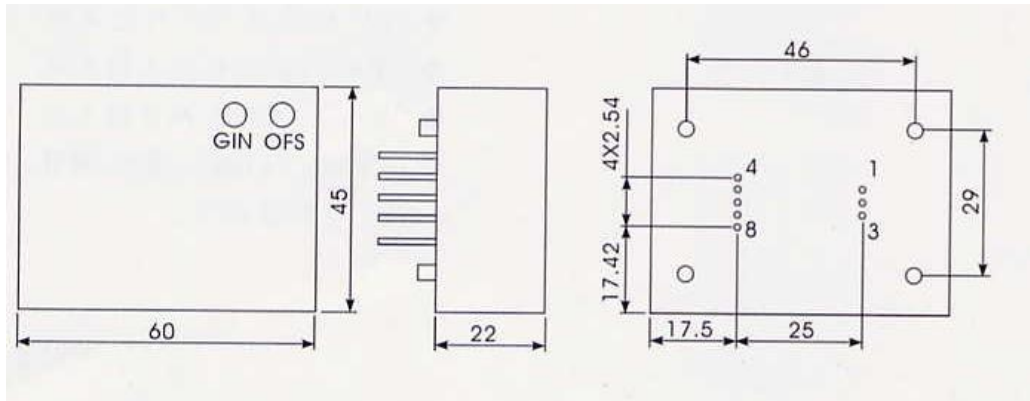
### Electrical Parameters

Parameters	Typical	Maximum
Rated input voltage ( $V_N$ )	500V AC	
Measuring voltage range ( $V_{in}$ )	0~600V AC	
Measuring Resistance ( $R_m$ )	250~350 $\Omega$	
Maximum measuring error ( $\epsilon_M$ )	$\pm 0.5\%$ FS	
Power supply ( $V_c$ )	$\pm 12V \sim \pm 15V$ ( $\pm 5\%$ )	
Rated output current ( $I_s$ )	20mA DC	
Turns ratio (N)	4000 : 1000	
Isolation voltage (Vd)	2.5kV/50Hz/1min	
Linearity ( $\epsilon_L$ )	$\pm 0.2\%$ FS	$\pm 0.4\%$ FS
Offset current ( $I_o$ )	$\pm 0.02mA$	$\pm 0.05mA$
Thermal drift of offset current $I_o$	$\pm 0.03mA$	$\pm 0.05mA$
0 $^{\circ}C \sim 70^{\circ}C$ -40 $^{\circ}C \sim +85^{\circ}C$	$\pm 0.06mA$	$\pm 0.10mA$
Frequency band width ( $f_b$ )	DC~ 10kHz (-3dB)	
Ambient Operating Temperature ( $T_A$ )	C: -10 $^{\circ}C \sim +70^{\circ}C$	E: - 40 $^{\circ}C \sim +85^{\circ}C$
Ambient Storage Temperature ( $T_S$ )	C: - 25 $^{\circ}C \sim +85^{\circ}C$	E: -55 $^{\circ}C \sim +125^{\circ}C$
Input resistance ( $R_i$ )	@Ta=25 $^{\circ}C$ , 400k $\Omega$	
Secondary coil resistance ( $R_s$ )	@Ta=25 $^{\circ}C$ , 40 $\Omega$	



## Case Style and Connection

CYHVS500D



- |                   |                   |
|-------------------|-------------------|
| 1. Input -        | 2. NC             |
| 3. Input +        | 4. Power supply + |
| 5. NC             | 6. GND            |
| 7. Power supply - | 8. Output         |

## Application Note

- 1) The sensor is connected according to the figure shown above. The output voltage can be detected at the output terminal when the measuring voltage is applied on the input terminal of the sensor. (Note: the sensor can be damaged by a incorrect connection)
- 2) Maximum measuring voltage range of this sensor is 1.5 times of the rated input voltage.
- 3) OFS: adjustment of DC zero point;  
GIN: adjustment of the gain (amplitude of the output voltage)