

AC/DC Hall Effect Voltage Sensor CYHVS800D

CYHVS800D 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 AC and DC voltage with different wave forms. It has high electric isolation.

Features

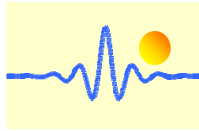
- High electrical isolation
- High reliability
- Good overload capability
- Small sizes
- Insulated plastic case recognized according to UL94-V0

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

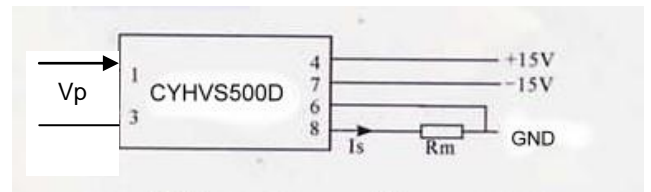
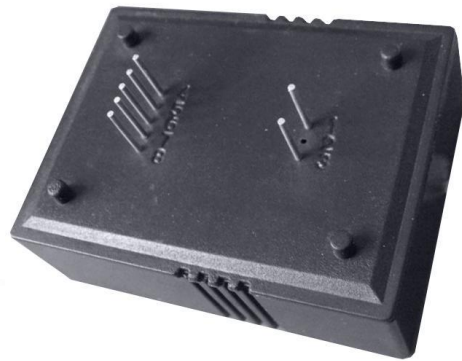
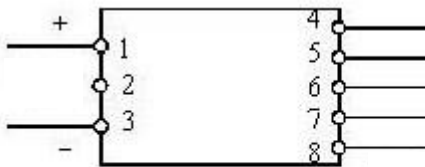
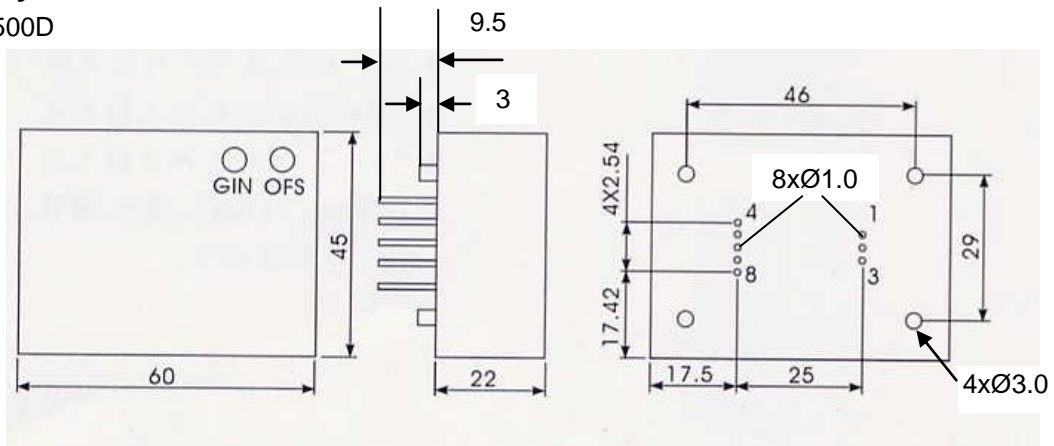
Electrical Parameters

Part number	CYHVS50D	CYHVS200D	CYHVS400D	CYHVS500D	CYHVS800D
Rated input voltage (V_N)	$\pm 50V$	$\pm 200V$	$\pm 400V$	$\pm 500V$	$\pm 800V$
Measuring voltage range (V_{in})	$0 \sim \pm 100V$	$0 \sim \pm 400V$	$0 \sim \pm 800V$	$0 \sim \pm 800V$	$0 \sim \pm 800V$
Rated output current (I_s)	$\pm 20mA$				
Turns ratio (N)	4000 : 1000				
Measuring Resistance (R_m)	$V_c = \pm 15VDC,$		54~360 Ω		
Power supply (V_c)	$\pm 12V \sim \pm 15V DC$				
Isolation voltage (V_d)	2.5kV/50Hz/1min				
Linearity (ϵ_L)	$\pm 0.2\% FS$				
Maximum measuring error (ϵ_M)	$T_a = 25^\circ C, V_c = \pm 15VDC$		$\pm 0.8\% FS$		
Offset current (I_o)	$T_a = 25^\circ C,$		$\pm 0.2mA$		
Thermal drift of offset current	$V_p = 0, T_a = -25^\circ C \sim +85^\circ C$		$\pm 0.5mA$		
Response time	100 μs				
Frequency band width (f_b)	DC~ 5kHz (-3dB)				
Ambient Operating Temperature (T_A)	$-25^\circ C \sim +85^\circ C$				
Ambient Storage Temperature (T_S)	$-40^\circ C \sim +100^\circ C$				
Input resistance (R_i)	$T_a = 25^\circ C,$		400k Ω		
Secondary coil resistance (R_s)	$T_a = 25^\circ C,$		50 Ω		



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 to 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)