

AC Hall Effect Voltage Sensor CYHVS800DA

CYHVS800DA is an AC Hall Effect Voltage sensor, which is based on Hall Effect closed loop and magnetic compensation principle. This sensor can be used for measuring AC voltage with different wave forms. It has high electric isolation.

Features

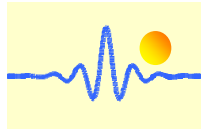
- High electrical isolation
- High reliability
- Good overload capability
- Small sizes
- Insulated plastic case recognized according to UL94-V0

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

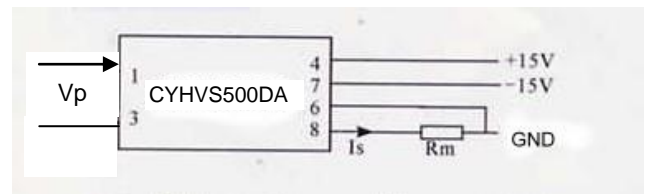
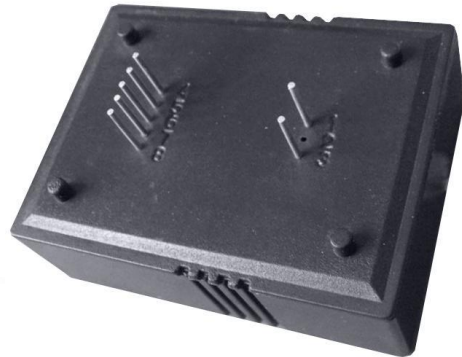
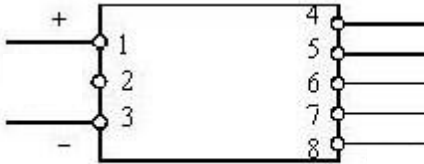
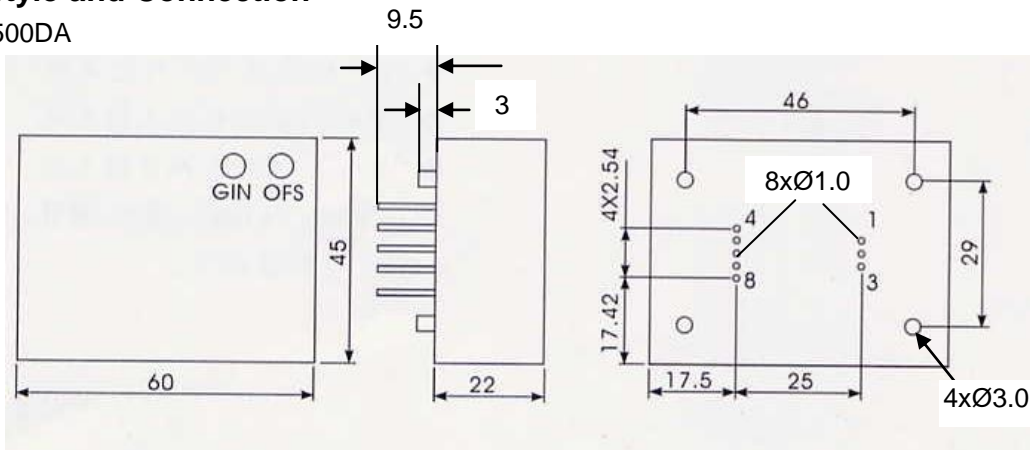
Electrical Parameters

Part number	CYHVS50DA	CYHVS200DA	CYHVS400DA	CYHVS500DA	CYHVS800DA
Rated input voltage (V_N)	50V AC	200V AC	400V AC	500V AC	800V AC
Measuring voltage range(V_{in})	100V AC	400V AC	800V AC	1000V AC	1000V AC
Rated output current (I_s)	0-20mADC				
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 (Vd)	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	100ms				
Frequency band width (f_b)	20Hz ~ 5kHz (-3dB)				
Ambient Operating Temperature (T_A)	40 $^\circ C \sim +85^\circ C$				
Ambient Storage Temperature (T_S)	-55 $^\circ C \sim +125^\circ C$				
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

CYHVS500DA



- | | |
|-------------------|-------------------|
| 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)