

Hall Effect Voltage Sensor CYHVS100C

CYHVS100C is a new Hall Effect voltage sensor, which is based on Hall Effect closed loop and magnetic compensation principle. This sensor can be used for measuring and monitoring DC voltages.

Features

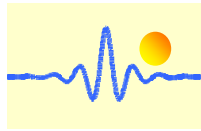
- High electrical isolation
- High reliability
- Good overload capability
- Small sizes
- Insulated plastic case recognized according to UL94-V0

Applications

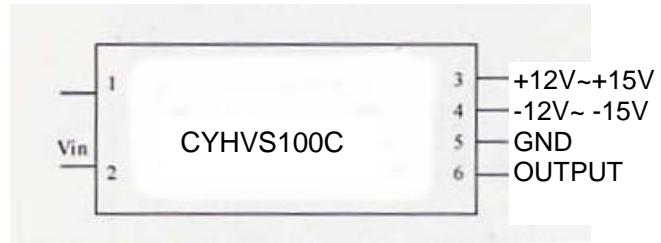
- Switched Mode Power Supplies
- Uninterruptible power supplies (UPS)
- Overvoltage protection
- Feedback of control systems
- Electric power network monitoring
- AC frequency conversion servo-motors
- Various power supplies

Electrical Parameters

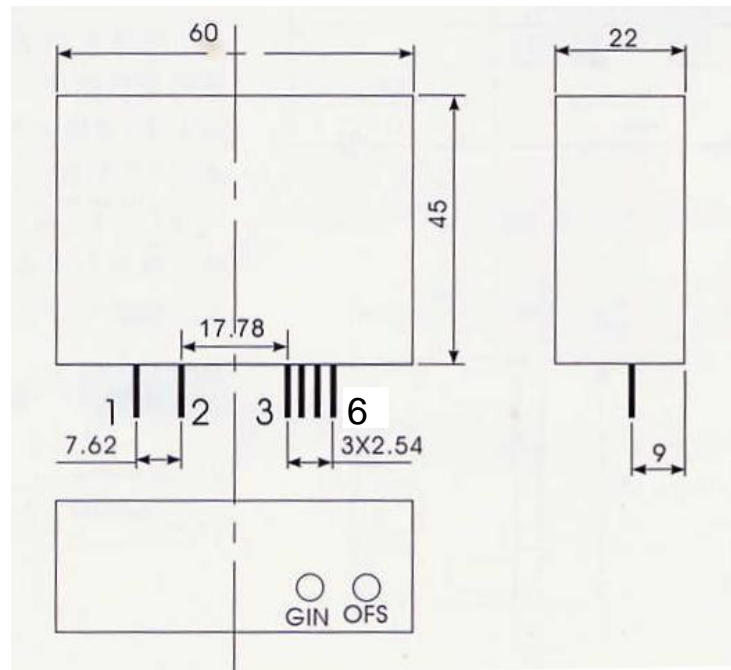
Parameters	Typical	Maximum
Rated input voltage (V_N)	100V DC	
Measuring voltage range (V_{in})	0~200V DC	
Maximum measuring error (ε_M)	$\pm 0.5\%$ FS	
Power supply (V_c)	$\pm 12V \sim \pm 15V (\pm 5\%)$	
Rated output voltage (V_o)	5 V DC	
Turns ratio (N)	4000 : 1000	
Isolation voltage (V_d)	2.5kV/50Hz/1min	
Linearity (ε_L)	$\pm 0.2\%$ FS	$\pm 0.4\%$ FS
Offset voltage (V_{os})	$\pm 10mV$	$\pm 20mV$
Thermal drift of offset voltage V_{os}	$\pm 0.5mV/^\circ C$	$\pm 1.0mV/^\circ C$
0 $^\circ C$ ~70 $^\circ C$ -40 $^\circ C$ ~+85 $^\circ C$	$\pm 1.0mV/^\circ C$	$\pm 2.0mV/^\circ C$
Frequency band width (f_b)	DC~ 10kHz (-3dB)	
Ambient Operating Temperature (T_A)	-10 $^\circ C$ ~ +70 $^\circ C$	
Ambient Storage Temperature (T_S)	- 25 $^\circ C$ ~ +85 $^\circ C$	
Input resistance (R_i)	@ $T_a=25^\circ C$, 21k Ω	



Case Style and Connection



- | | |
|-------------------|-------------------|
| 1. Input + | 2. Input - |
| 3. Power supply + | 4. Power supply - |
| 5. GND | 6. 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) Measuring voltage range of this sensor is 100V~200V.
- 3) OFS: adjustment of DC zero point;
GIN: adjustment of the gain (amplitude of the output voltage)