

## Hall Effect Voltage Sensor CYHVS5000LV

CYHVS5000LV is a Hall Effect Voltage sensor, which is based on 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

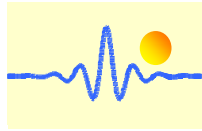
- High electrical isolation
- High reliability
- Good overload capability
- Small sizes
- Insulated plastic case recognized according to UL94-V0
- Very good property-price ratio

### Applications

- Battery supplied applications
- Uninterruptible power supplies (UPS)
- Variable speed drives
- Welding machine
- Electric power network monitoring
- AC frequency conversion servo-motors
- Electrochemical applications

### Technical Data

Parameters	CYHVS-100LV	CYHVS-300LV	CYHVS-500LV	CYHVS-1000LV	CYHVS-2000LV	CYHVS-3000LV	CYHVS-4000LV	CYHVS-5000LV	Unit
Rated input Voltage ( $V_N$ )	100	300	500	1000	2000	3000	4000	5000	V
Measuring range( $V_P$ )	200	600	1000	2000	4000	6000	6000	7500	V
Total input power consumption	1	1.5	3.125	2.5	5	5.625	10	8	W
Rated Input current ( $I_p$ )	10	5	6.25	2.5	2.5	1.875	2.5	1.6	mA
Turns ratio ( $N_p/N_s$ )	5000 : 1000	10000 : 1000	8000 : 1000	20000 : 1000	20000 : 1000	26666 : 1000	20000 : 1000	30000 : 960	T
Secondary coil resistance ( $R_s$ )	@ $T_a=85^\circ\text{C}$ , 55								$\Omega$
Rated output current $I_s$	@ $V_p=\pm V_N$ , $\pm 50 \pm 0.5\%$								mA
Measuring resistance ( $R_M$ )	@ $\pm 15V V_{PN}$ 50(min), 200(max)								$\Omega$
	@ $\pm 15V 2 \times V_{PN}$ 50(min), 100(max)								$\Omega$
	@ $\pm 24V V_{PN}$ 100(min), 330(max)								$\Omega$
	@ $\pm 24V 2 \times V_{PN}$ 100(min), 200(max)								$\Omega$
Power supply ( $V_c$ )	$\pm 15 \sim \pm 24$								V
Current consumption ( $I_c$ )	20+ $I_s$								mA
Galvanic isolation voltage	@ 50Hz,AC,1min, between primary and secondary + shield: 12.0								kV
	@ 50Hz,AC,1min Between secondary and shield : 2.0								
Measuring accuracy ( $X_G$ )	$\pm 0.5\%$ FS (Full Scale)								
Linearity ( $\epsilon_L$ )	@ $V_p = 0 \sim \pm V_{pn}$ $\leq 0.1$								% FS
Offset current ( $I_o$ )	@ $V_p = 0$ , $\leq \pm 0.2$								mA
Thermal drift of offset current $I_o$	@ $-40^\circ\text{C} \sim +85^\circ\text{C}$ $\leq \pm 0.6$								mA
Response time ( $t_r$ )	$\leq 200$								$\mu\text{s}$

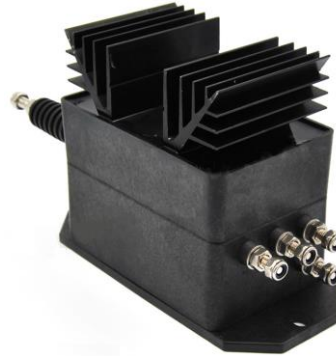


### General Data

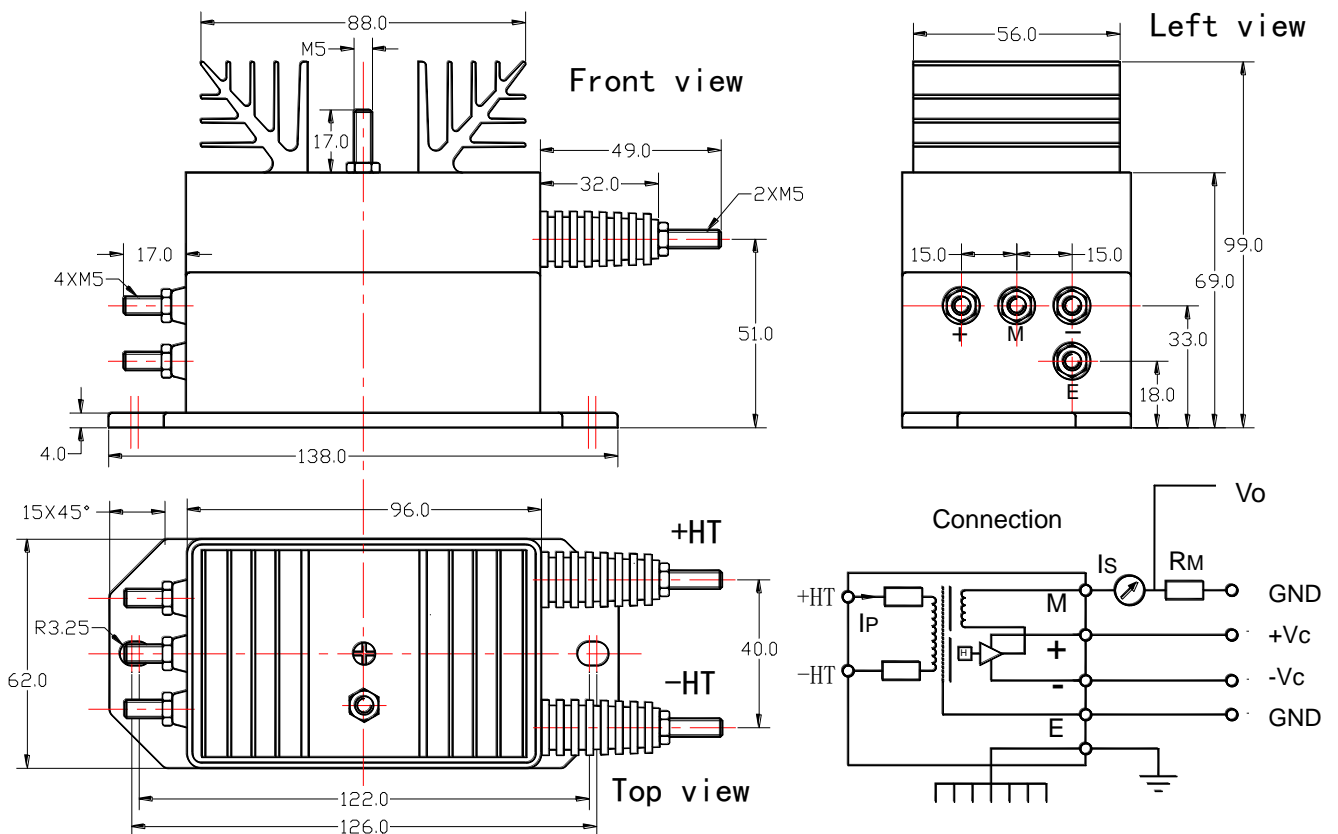
Ambient operating temperature ( $T_A$ )	-40 ~ +85	°C
Ambient storage temperature ( $T_S$ )	- 40 ~ +125	°C
Unit weight	850	g

### Standards used for this sensor:

- UL94-V0.
- EN60947-1:2004
- IEC60950-1:2001
- EN50178:1998
- SJ 20790-2000



### Case Style and Connection (all dimensions are in mm)



The output current  $I_s$  is positive when the  $I_p$  is applied to the terminal +HT. Temperature of the primary conductor should not exceed 100°C.