

DATA SHEET

Hall Effect Current Sensor



PN : HVS5-25A/10-25A

VPN = 1200V - 500V

Features

- Closed loop
- High accuracy
- Supply voltage : $\pm 15V$ DC
- Current output
- PCB mounting
- Can be customized

Very good linearity
 Low response time
 Low temperature drift
 High immunity to external interferences



Applications

- AC/DC variable speed motor driver
- Battery applications
- Uninterruptible power supplies (UPS)
- Power supplies for welding applications

ELECTRICAL DATA

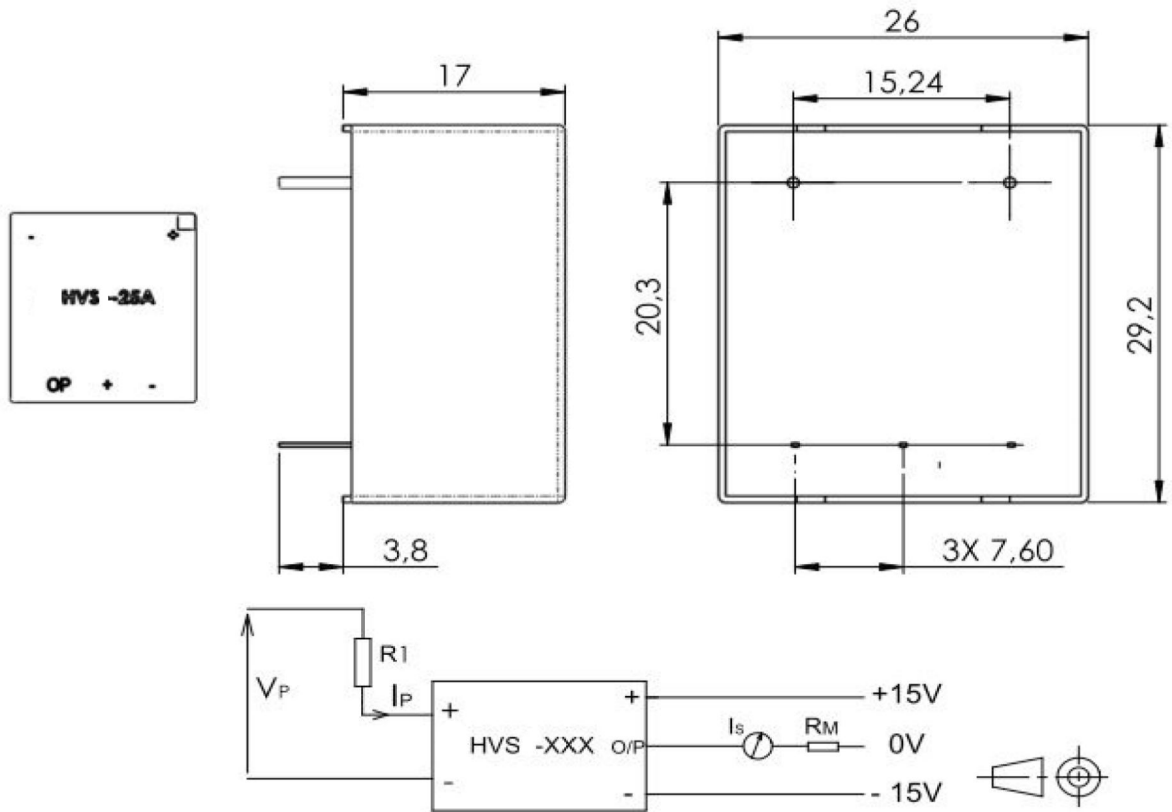
HVS-...	5-25A		10-25A	
Measuring voltage V_{PN} (V)	5-1200		10-500	
Nominal rms current I_{PN} (mA)	5		10	
Sensed current range I_{PM} (mA)	± 7		± 14	
Measuring resistance with $V_C = \pm 15V$	@ $\pm I_P$ (mA)		5	
	R_M min(Ω) =	R_M max(Ω) =	100	350
	@ $\pm I_P$ max (A)		7	
	R_M min(Ω) =	R_M max(Ω) =	100	190
Coil turns ratio K ($P^N:S^Y$)	5000:1000		2500:1000	
Primary coil resistance (Ω)	650		200	
Secondary coil resistance (Ω)	110		110	
Nominal output rms current I_{SN} (mA)	25			
Supply voltage V_C (Vdc)	$\pm 15 \pm 5\%$			
Current consumption I_C (mA)	$15 + I_S$			

ACCURACY DYNAMIC PERFORMANCE

GENERAL & ISOLATION CHARACTERISTICS

Overall accuracy X_G @ V_{PN} , $T=25^\circ C$	$\pm 0,5$	%	Operating temperature	-40 to +85	$^\circ C$
Offset current I_0 @ $I_P=0$, $T= 25^\circ C$	$\leq \pm 0,1$	mA	Storage temperature	-40 to +125	$^\circ C$
I_0 Thermal drift @ -40 to +85 $^\circ C$	$\leq \pm 0,5$	mA/ $^\circ C$	Weight (25A/025A)	27/22	g
Linearity error ϵ_L	$< 0,2$	% FS	Insulation voltage (50Hz, 1mn)	2,5	KV
Response time t_r	< 40	μs	Creepage distance (shell)	19,5	mm

DIMENSIONS



MECHANICAL CHARACTERISTICS

General tolerance	$\pm 0,2$ mm
Fastening and connection of primary	2 pins 0,8 mm x 0,8 mm
Terminal connection	3 pins 0,8 mm x 0,8 mm

Cautions :

The choice of R_1 is important, the best accuracy of the sensor is achieved when the current flowing through R_1 is near the rated primary current;
 Considering the resistance of primary coil (compared with R_1 and temperature difference kept as low as possible);
 Do respect electrical isolation within measure range;
 For the required connection circuit, see the drawing above.

WARNING : Incorrect wiring may cause damage to the sensor.