HCSP01 Series

For the electronic measurement of currents : DC, AC, pulsed, mixed, with a galvanic isolation between the primary (high power) circuit and the secondary (electronic) circuit.

LEAD FREE

RoHS COMPLIANT

Operating performance (AT =25 ℃)

Performance \ Part No.		HCSP01-100-11	HCSP01-250-11
Primary nominal current	I_{PN}(A)	10	25
Primary current measuring range	I_P(A)	0~±32	0~±80
Supply voltage(±5%)	V_{CC}	5V	
Output voltage	V_{OUT}	2.5V @I_P=0	
		2.5±0.625V @±I_{PN}	
Number of secondary turns(±1%)	N_S	2000	
Load resistance	R_L	≧2KΩ	
Internal measuring resistance(±0.5%)	R_{IM}	125Ω	50Ω
Thermal drift of R_{IM}	TCR_{IM}	＜50 PPm/℃	
Current consumption@V_C=5V	I_C	10+Is mA	
R.m.s. voltage for AC isolation test	V_d	2.5KV @50/60Hz/1MIN	
R.m.s.rated voltage	V_b	525V	
Accuracy @I_{PN}，TA=25℃	X	±0.2%	
Accuracy with R_{IM}@I_{PN}，TA=25℃	X_G	±0.7%	
Linearity	ε_L	＜0.1%	
Thermal drift of VOUT@IP=0	TCV_{OUT}	50 ppm/℃ (typ) 100ppm/℃(max)	
Thermal drift of the gain	$TC\varepsilon_G$	≦50ppm/℃	
Residual voltage	V_{OM}	±0.5 mV @3xI_{PN}→0	
		±2.0 mV @5xI_{PN}→0	
		±2.0 mV @10xI_{PN}→0	
Reaction time @10% of I_{PMAX}	tra	＜50ns @10% of I_{PMAX}	
Response time @90% of I_{PMAX}	t_r	＜400ns @90% of I_{PMAX}	
di/dt accurately followed	di/dt	＞50A/μs	
Frequency bandwidth@(-db)	f	DC…150 KHz	

General data

Operating temperature	TA	–25 ~ 85 ℃
Storage temperature	T_S	–40 ~ 100 ℃
Mass	m	16g
Note		Insulated plastic case recognized according to UL 94-V 0

Applications

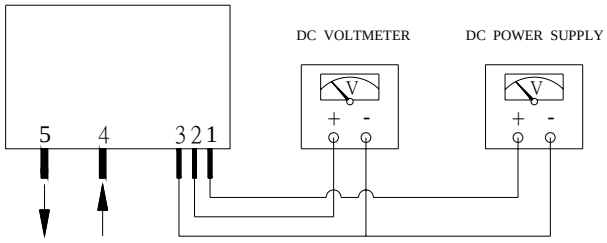
1.AC variable speed drives	4.DC motor drives
2.Battery supplied applications	5.Switched Mode Power Supplies(SMPS)
3.Uninterruptible Power Supplies(UPS)	6.Power supplies for welding applications

Advantages

1.Excellent accuracy	5.Very good linearity
2.Low temperature drift	6.High immunity to external interference
3.No insertion losses	7.Optimized response time
4.Wide frequency bandwidth	8.Current overload capability

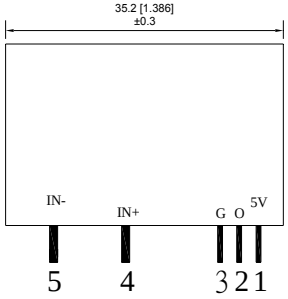
HCSP01 Series

Connection

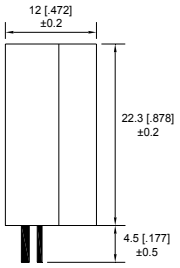


Current direction

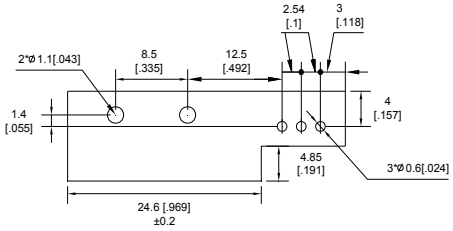
Dimensions (unit: mm/inch)



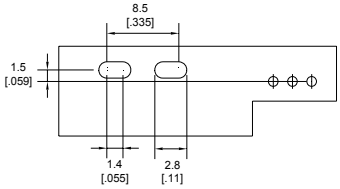
Front View



Right View



(HCSP01-100-11)



(HCSP01-250-11)

Bottom View

Terminal
1. 5V
2 .OUTPUT
3 .GND
4 .PRIMARY IN+
5 .PRIMARY IN-

Remarks

1.V_{OUT} is positive when I_P flows in the direction of the arrow.

2.Temperature of the primary conductor should not exceed 100℃.

3.These are standard models. For different versions (supply voltages, secondary connections, unidirectional measurements, operating temperatures, etc.) please contact us.