

$I_{PN} = 50A$

Features

- ◆ Hall effect measuring principle
- ◆ Galvanic isolation between primary and secondary circuit
- ◆ Low power consumption
- ◆ Extended measuring range
- ◆ Insulated plastic case recognized according to UL 94-V0

Advantages

- ◆ Very good linearity
- ◆ Excellent accuracy
- ◆ Low temperature drift
- ◆ Wide frequency bandwidth
- ◆ Optimized response time
- ◆ No insertion losses
- ◆ High immunity against external Interference
- ◆ Excellent performance and price

Industrial applications

- ◆ AC variable speed drives
- ◆ Battery supplied applications
- ◆ Uninterruptible Power Supplies (UPS)
- ◆ Power supplies for welding applications
- ◆ Static converters for DC motor drives
- ◆ Switched-Mode Power Supplies (SMPS)

TYPES OF PRODUCTS				
Type	Primary nominal current r. m. s I_{PN} (A)	Primary current measuring range I_P (A)	Measuring resistance (@70°C) R_M (Ω)	
SICDS50V6	50	0~±70	10~100	with±12V@±50Amax
			10 ~ 50	with±12V@±70Amax
			50~160	with±15V@±50Amax
			50 ~ 90	with±15V@±70Amax

General Description

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

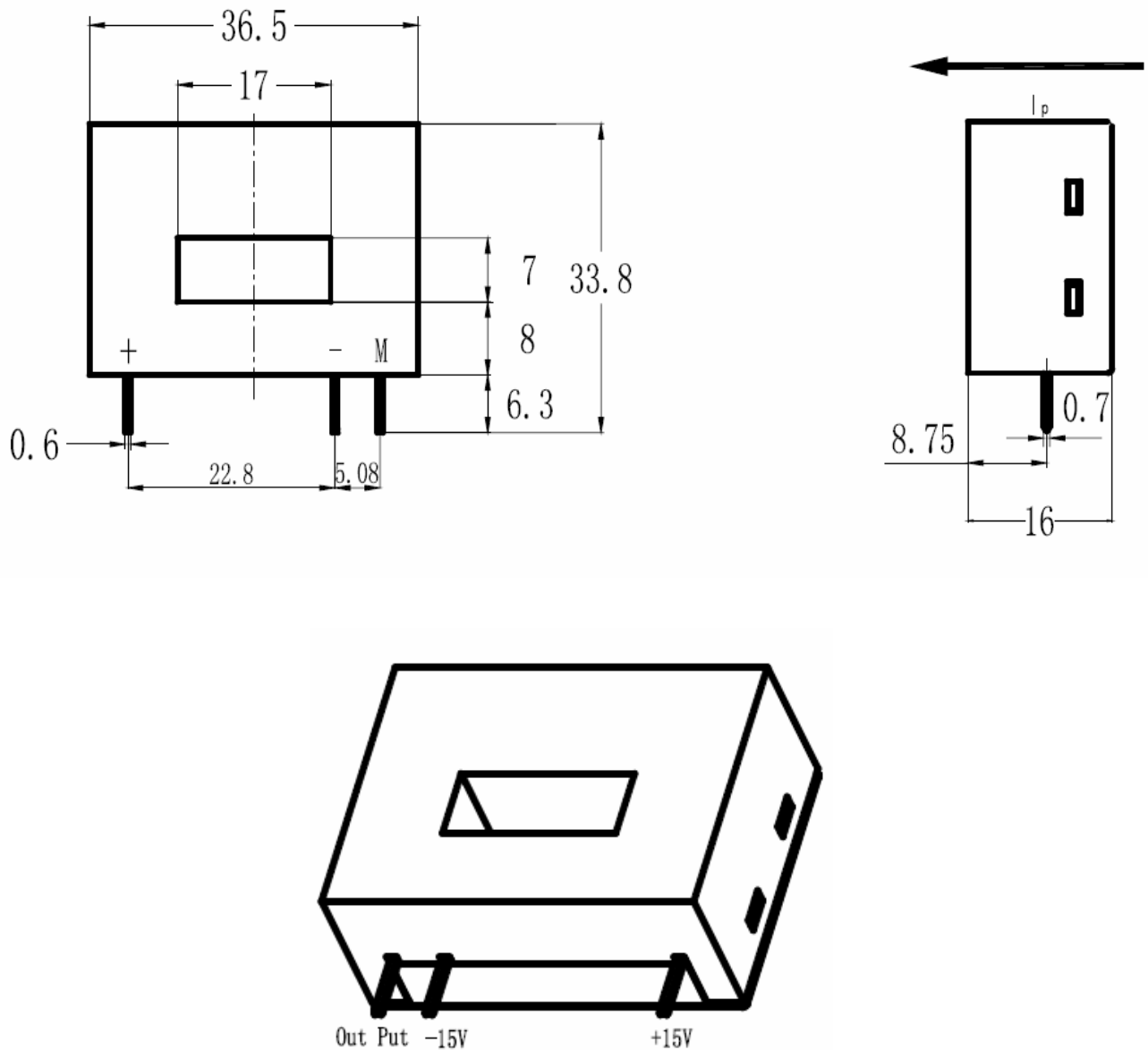
Parameters Table

PARAMETERS	SYMBOL	UNIT	VALUE	CONDITIONS
Electrical data				
Supply voltage($\pm 5\%$)	V_C	V	$\pm 12 \dots 15$	
Current consumption	I_C	mA	$10(@\pm 15)+I_s$	
Secondary nominal r.m.s. current	I_{SN}	mA	50	@ I_{PN}
Conversion ratio	K_N		1:1000	
Accuracy - Dynamic performance data				
Linearity	ϵ_L	%	$< \pm 0.15$	
Accuracy	X_G	%	$< \pm 0.65$	@ I_{PN} , $V_C = \pm 15V$, $T_A = 25^\circ C$
			$< \pm 0.90$	@ I_{PN} , $V_C = \pm 12 \dots 15V$, $T_A = 25^\circ C$
Offset current	I_O	mA	$< \pm 0.20$	@ $I_P = 0$, $T_A = 25^\circ C$
Thermal drift of I_O	I_{OT}	mA	Typ	Max
			± 0.1	± 0.6
			± 0.2	± 1.0
Response time	t_r	μS	< 1	@ 90% of I_{PN} step
di/dt accurately followed	d_i/dt	A/ μS	> 200	
Frequency bandwidth (1)	BW	kHz	DC~200	@ -1dB
General data				
Ambient operating temperature	T_A	$^\circ C$	-40 ~ +85	
Ambient storage temperature	T_S	$^\circ C$	-40 ~ +90	
Secondary coil resistance	R_s	Ω	80	@ $T_A = 70^\circ C$
Isolation characteristics				
R. m. s voltage for AC isolation test	V_d	KV	2.5	@ 50Hz, 1 min
Impulse withstand voltage 1.2/50us	V_w	KV	5.7	
Creepage distance	dCp	mm	5	
Clearance distance	dCI	mm	5	
Comparative Tracking Index	CTI		175	Group IIIa

Notes:

Please refer to derating curves in the technical file to avoid excessive core heating at high frequency.

Dimensions SICDS50V6 (in mm. 1 mm = 0.0394 inch)



Instructions of use

- 1 When the test current passes through the sensor, you can get the size of the output current. (Warning: wrong connection may lead to sensors damage.)
- 2 I_s is positive when I_p flows in the direction of the arrow.
- 3 In order to achieve the best magnetic coupling, the primary windings have to be wound over the top edge of the device.
- 4 According to user needs, different rated input currents and output currents of the sensors can be customized.

RESTRICTIONS ON PRODUCT USE

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