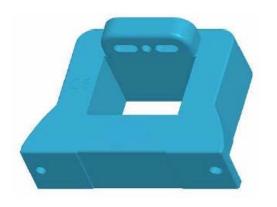


SIOY3SV2 Current Sensors



 $\mathbf{I}_{PN} = 40 \dots 1500 \mathbf{A} \ \mathbf{V}_{OUT} = \pm \ 4 \ \mathbf{V}$

Advantages

- Easy installation
- Small size and space saving
- Only one design for wide current ratings range
- High immunity to external interference

Features

- Hall effect measuring principle
- Galvanic isolation between primary and secondary circuit
- ♦ Isolation voltage 3000 V
- Low power consumption
- Extended measuring range (3 *IPN)
- Insulated plastic case recognized according to UL 94-V0

Industrial applications

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

TYPES OF PRODUCTS					
Туре	Primary nominal current	Primary current measuring range			
	r. m. s I _{PN} (A)	$\mathbf{I}_{\mathbf{P}}\left(\mathbf{A} ight)$			
SIOY3S400V2	400	±1200			
SIOY3S500V2	500	± 1500			
SIOY3S600V2	600	± 1800			
SIOY3S800V2	800	± 2400			
SIOY3S1000V2	1000	±2500			
SIOY3S1200V2	1200	±2500			
SIOY3S1500V2	1500	±2500			

General Description

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



Parameters Table

PARAMETERS	SYMBOL	UNIT	VALUE	CONDITIONS			
Electrical data							
Supply voltage($\pm 5\%$) ⁽¹⁾	V _C	V	±15				
Current consumption	I _C	mA	±15				
Output voltage	$\mathbf{V}_{\mathrm{out}}$	V	±4V	$\label{eq:PN} \begin{split} @\pm I_{PN}, R_L &= 10 \ \mathrm{k}\Omega, \\ T_A &= 25^\circ \mathrm{C} \end{split}$			
Isolation resistance	R _{IS}	MΩ	>1000	@ 500 VDC			
Output internal resistance	R _{OUT}	Ω	100				
Load resistance ⁽²⁾	R_L	KΩ	>10				
Accuracy - Dynamic performance data							
$Linearity^{(3)}(0\pm I_{PN})$	$\epsilon_{ m L}$	$\%$ of I_{PN}	<±1				
Accuracy	X	% of I_{PN}	<±1	@ I_{PN} , $T_A = 25^{\circ}C$ (excluding offset)			
Electrical offset voltage	V _{OE}	mV	<±20	$@T_{A} = 25^{\circ}C$			
Hysteresis offset voltage	V _{OH}	mV	<±10	@ $I_{P}=0$ after an excursion of 1* IPN			
Temperature coefficient of V_{OE}	TCV _{OE}	mV/K	<1				
Temperature coefficient of V_{OUT}	TCV _{OUT}	%/K	<±0.1				
Response time	t _r	μS	<5	@ 90% of I_{PN} step			
Frequency bandwidth ⁽⁴⁾	BW	kHz	DC~25	@-3dB			
General data							
Ambient operating temperature	T_A	°C	-40 ~ +85				
Ambient storage temperature	Ts	°C	-40 ~ +105				
Mass	m	g	300				
Isolation characteristics							
Rated isolation voltage rms	V_b	V	1000				
Rms voltage for AC isolation test	V_d	KV	3	50 Hz, 1 min			
Creepage distance	dC_p	mm	>11				
Clearance distance	dC_I	mm	>11				
Comparative Tracking Index	CTI		275	Group IIIa			

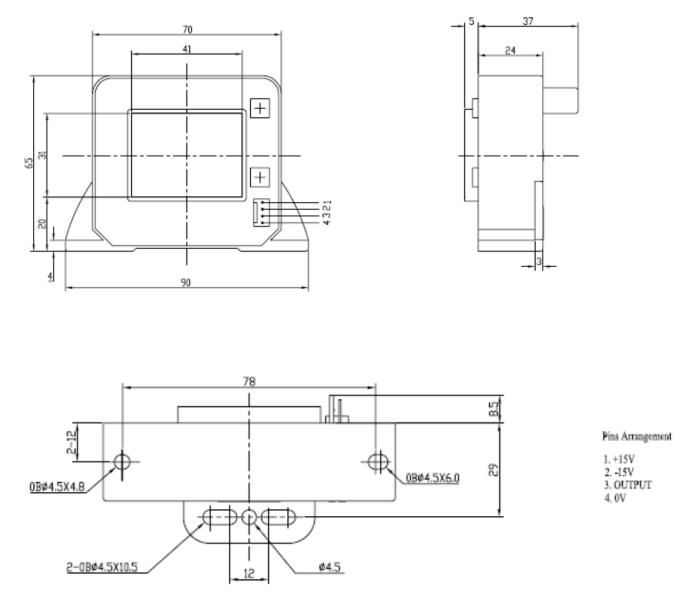
Notes:

1) Operating at $\pm 12V \leq VC \leq \pm 15V$ will reduce the measuring range.

- 2) If the customer uses $10K \Omega$ of the load resistor, the primary current has to be limited as the nominal.
- 3) Linearity data exclude the electrical offset.
- 4) Please refer to derating curves in the technical file to avoid excessive core heating at high frequency.



Dimensions SIOY3SV2 (in mm. 1 mm = 0.0394 inch)



Instructions of use

- 1) When the test current passes through the sensors you can get the size of the output voltage.(Warning: wrong connection may lead to sensors damage)
- 2) Based on user needs, the sensors output range can be appropriately regulated.
- 3) According to user needs, different rated input currents and output voltages of the sensors can be customized.



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