

$I_{PN} = 40...1500A$ $V_{OUT} = \pm 4 V$

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

Advantages

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

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		
Type	Primary nominal current r. m. s I_{PN} (A)	Primary current measuring range I_P (A)
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.

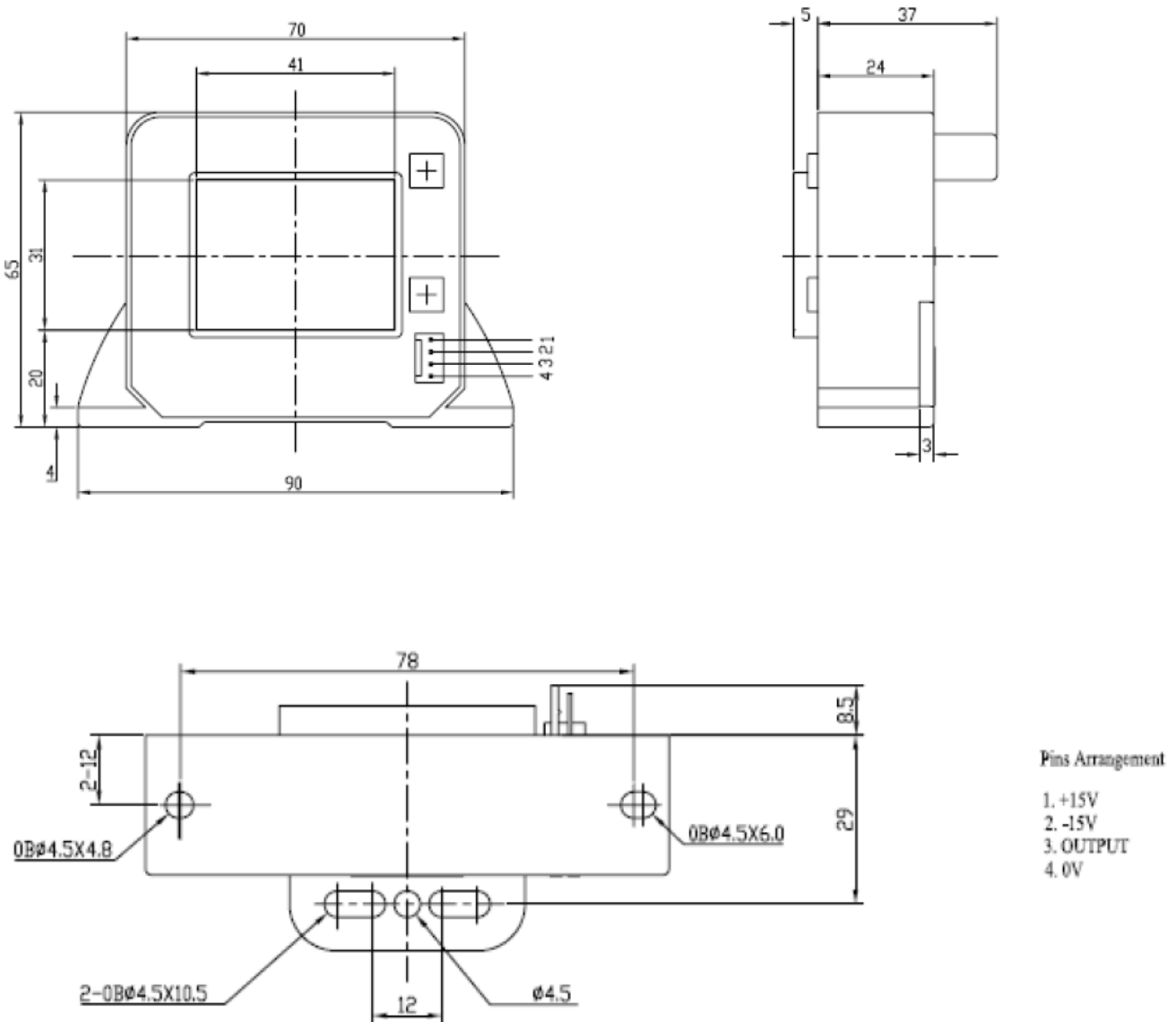
Parameters Table

PARAMETERS	SYMBOL	UNIT	VALUE	CONDITIONS
Electrical data				
Supply voltage($\pm 5\%$) ⁽¹⁾	V_C	V	± 15	
Current consumption	I_C	mA	± 15	
Output voltage	V_{out}	V	$\pm 4V$	@ $\pm I_{PN}$, $R_L = 10\text{ k}\Omega$, $T_A = 25^\circ\text{C}$
Isolation resistance	R_{IS}	$M\Omega$	>1000	@ 500 VDC
Output internal resistance	R_{OUT}	Ω	100	
Load resistance ⁽²⁾	R_L	$K\Omega$	>10	
Accuracy - Dynamic performance data				
Linearity ⁽³⁾ ($0 \dots \pm I_{PN}$)	ϵ_L	% of I_{PN}	$<\pm 1$	
Accuracy	X	% of I_{PN}	$<\pm 1$	@ I_{PN} , $T_A = 25^\circ\text{C}$ (excluding offset)
Electrical offset voltage	V_{OE}	mV	$<\pm 20$	@ $T_A = 25^\circ\text{C}$
Hysteresis offset voltage	V_{OH}	mV	$<\pm 10$	@ $I_P = 0$ after an excursion of $1 * I_{PN}$
Temperature coefficient of V_{OE}	TCV_{OE}	mV/K	<1	
Temperature coefficient of V_{OUT}	TCV_{OUT}	%/K	$<\pm 0.1$	
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	$^\circ\text{C}$	-40 ~ +85	
Ambient storage temperature	T_S	$^\circ\text{C}$	-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_l	mm	>11	
Comparative Tracking Index	CTI		275	Group IIIa

Notes:

- 1) Operating at $\pm 12V \leq V_C < \pm 15V$ 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.

RESTRICTIONS ON PRODUCT USE

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