

$I_{PN} = 200 \dots 2000A, V_{out} = \pm 4V$

**Features**

- ◆ Hall effect measuring principle
- ◆ Galvanic isolation between primary and secondary circuit
- ◆ Low power consumption
- ◆ Extended measuring range
- ◆ Isolation voltage 3000V

**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 application

<b>TYPES OF PRODUCTS</b>		
<b>Type</b>	<b>Primary nominal current r. m. s <math>I_{PN}</math> (A)</b>	<b>Primary current measuring range <math>I_P</math> (A)</b>
SIOLS200V2	200	±400
SIOLS400V2	400	±800
SIOLS600V2	600	±1200
SIOLS800V2	800	±1600
SIOLS1000V2	1000	±2000
SIOLS2000V2	2000	±3000

**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)

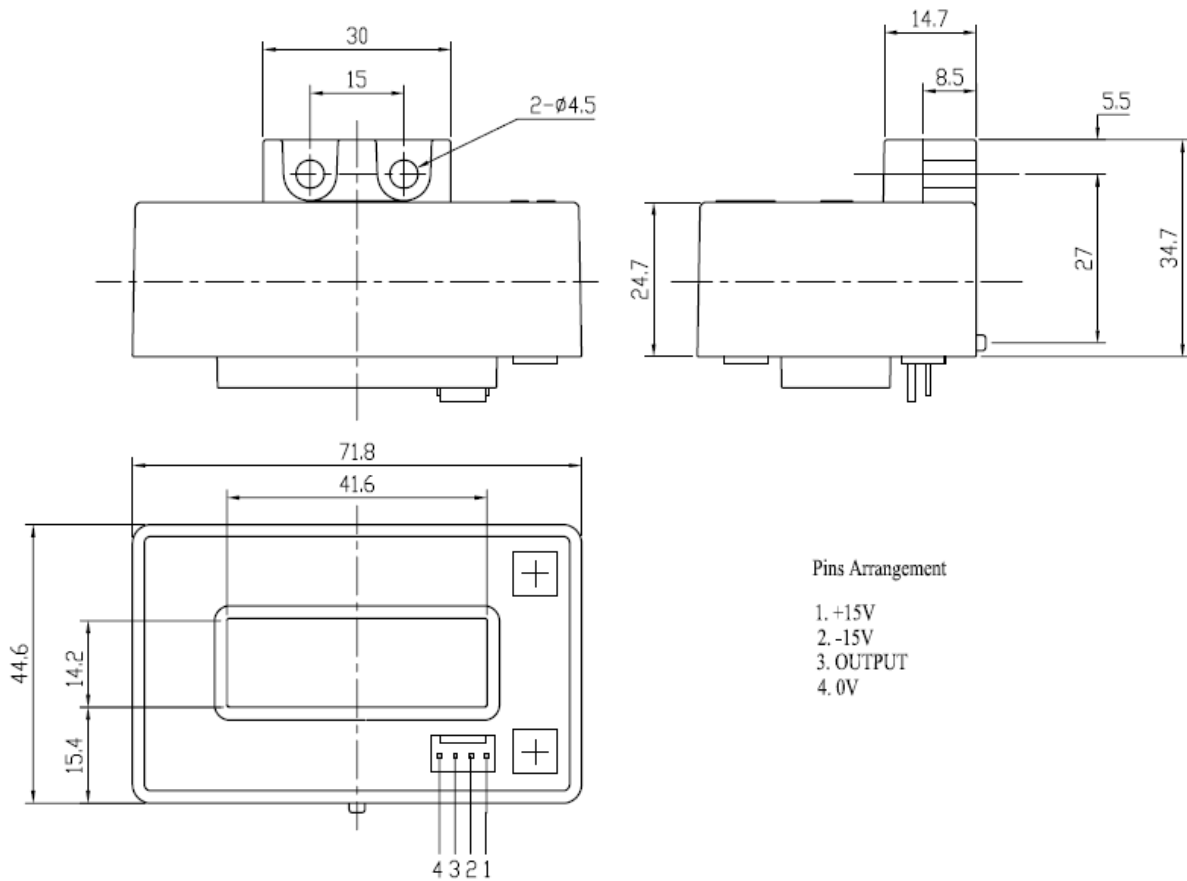
**Parameters Table**

PARAMETERS	SYMBOL	UNIT	VALUE	CONDITIONS
<b>Electrical data</b>				
Supply voltage( $\pm 5\%$ ) <sup>(1)</sup>	$V_C$	V	$\pm 15$	
Current consumption	$I_C$	mA	$\pm 15$	
Output voltage	$V_{out}$	V	$\pm 4$	@ $\pm I_{PN}$ , $R_L = 10\text{ k}\Omega$ , $T_A = 25^\circ\text{C}$
Isolation resistance	$R_{IS}$	$M\Omega$	$>1000$	@ 500 VDC
Output internal resistance	$R_{OUT}$	$\Omega$	100	
Load resistance <sup>(2)</sup>	$R_L$	$K\Omega$	$>10$	
<b>Accuracy - Dynamic performance data</b>				
Linearity <sup>(3)</sup> ( $0 \dots \pm I_{PN}$ )	$\epsilon_L$	% of $I_{PN}$	$<\pm 1$	@ $I_{PN}$ , $T_A = 25^\circ\text{C}$
Accuracy	$X_G$	% 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	$<\pm 10$	@ $I_p = 0$
Temperature coefficient of $V_{OE}$	$TCV_{OE}$	mV/K	$<\pm 1$	
Temperature coefficient of $V_{OUT}$	$TCV_{OUT}$	%/K	$<\pm 0.1$	
Response time	$t_r$	$\mu\text{s}$	$<5$	@ 90% of $I_{PN}$
Frequency bandwidth <sup>(4)</sup>	BW	kHz	DC~25	@ -3dB
<b>General data</b>				
Ambient operating temperature	$T_A$	$^\circ\text{C}$	-40 ~ +85	
Ambient storage temperature	$T_S$	$^\circ\text{C}$	-40 ~ +105	
Mass	m	g	300	
<b>Isolation characteristics</b>				
Rated isolation voltage rms	$V_b$	V	1000	
Rms voltage for AC isolation test	$V_d$	kV	3	@ 50 Hz, 1 min

**Notes:**

- 1) Operating at  $\pm 12\text{V} \leq V_C < \pm 15\text{V}$  will reduce the measuring range.
- 2) If the customer uses  $10\text{K}\Omega$  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 SIOLSV2 (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**

The information contained herein is subject to change without notice.

SEC ELECTRONICS INC. (for short SEC) exerts the greatest possible effort to ensure high quality and reliability. Nevertheless, semiconductor devices in general can malfunction or fail due to their inherent electrical sensitivity and vulnerability to physical stress. It is the responsibility of the buyer, when utilizing SEC products, to comply with the standards of safety in making a safe design for the entire system, including redundancy, fire-prevention measures, and malfunction prevention, to prevent any accidents, fires, or community damage that may ensue. In developing your designs, please ensure that SEC products are used within specified operating ranges as set forth in the most recent SEC products specifications.

The SEC products listed in this document are intended for usage in general electronics applications (computer, personal equipment, office equipment, measuring equipment, industrial robotics, domestic appliances, etc.). These SEC products are neither intended nor warranted for usage in equipment that requires extraordinarily high quality and/or reliability or a malfunction or failure of which may cause loss of human life or bodily injury ("Unintended Usage"). Unintended Usage include atomic energy control instruments, airplane or spaceship instruments, transportation instruments, traffic signal instruments, combustion control instruments, medical instruments, all types of safety devices, etc.. Unintended Usage of SEC products listed in this document shall be made at the customer's own risk.