

$I_{PN} = 50...600A$   $V_{OUT} = \pm 4 V$

### Features

- ◆ Hall effect measuring principle
- ◆ Galvanic isolation between primary and secondary circuit
- ◆ Compact design for PCB mounting
- ◆ Low power consumption
- ◆ Extended measuring range (3 \*IPN)
- ◆ Insulated plastic case recognized according to UL 94-V0

### Advantages

- ◆ Easy installation
- ◆ Excellent accuracy
- ◆ No insertion losses
- ◆ Excellent performance and price
- ◆ Only one design for wide current ratings range
- ◆ High immunity against external interference

### 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)
SIOY2S50V2	50	±150
SIOY2S75V2	75	±225
SIOY2S100V2	100	±300
SIOY2S150V2	150	±450
SIOY2S200V2	200	±600
SIOY2S300V2	300	±900
SIOY2S400V2	400	±900
SIOY2S500V2	500	±900
SIOY2S600V2	600	±900

### General Description

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

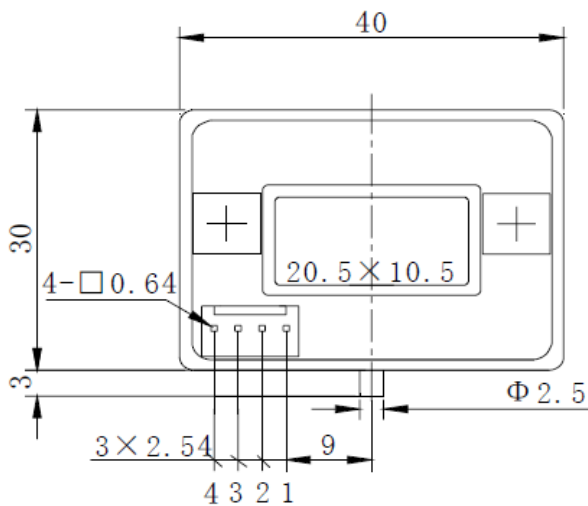
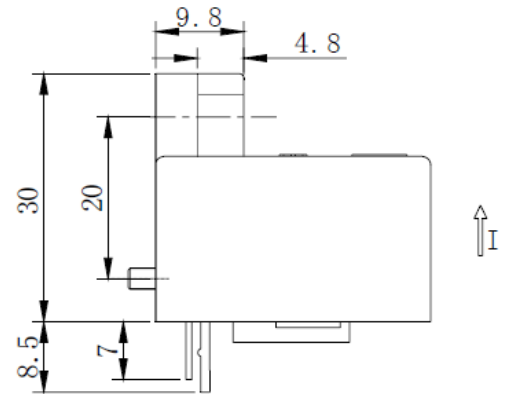
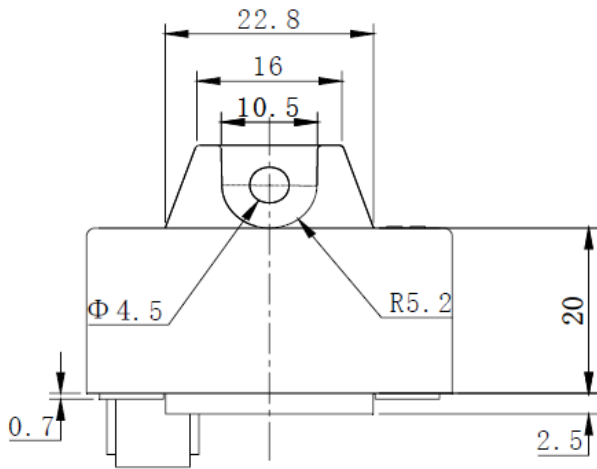
### Parameters Table

PARAMETERS	SYMBOL	UNIT	VALUE	CONDITIONS
<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	$V_{out}$	mV	$\pm 4V \pm 40$	@ $\pm I_{PN}$ , $R_L = 10\text{ k}\Omega$ , $T_A = 25^\circ\text{C}$
Overload capability(1 ms)	$I_{PC}$	At	$50 * I_{PN}$	
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	
R. m. s voltage for AC isolation test	$V_d$	KV	3	@50, 1 min
R. m. s rated voltage、 safe separation	$V_b$	V	500	
<b>Accuracy - Dynamic performance data</b>				
Linearity <sup>(3)</sup> ( $0 \dots \pm I_{PN}$ )	$\epsilon_L$	% of $I_{PN}$	$< \pm 1$	
Accuracy	X	% of $I_{PN}$	$< \pm 1.5$	@ $I_{PN}$ , $T_A = 25^\circ\text{C}$ (excluding offset)
Electrical offset voltage	$V_{OE}$	mV	$< \pm 20$	@ $T_A = 25^\circ\text{C}$
Hysteresis offset voltage	$V_{OH}$	mV	$< \pm 20$	@ $I_p = 0$ after an excursion of $1 * I_{PN}$
Temperature coefficient of $V_{OE}$	$TCV_{OE}$	mV/K	$< \pm 2$	@SIOY2S50-75V2
			$< \pm 3$	@SIOY2S100-600V2
Temperature coefficient of $V_{OUT}$	$TCV_{OUT}$	%/K	$< \pm 0.1$	@% of reading
Response time	$t_r$	$\mu\text{S}$	$< 3$	@ 90% of $I_{PN}$ step
$d_i/d_t$ accurately followed	$d_i/d_t$	A/ $\mu\text{S}$	$> 50$	
Frequency bandwidth <sup>(4)</sup>	BW	kHz	DC~50	@-3dB
<b>General data</b>				
Ambient operating temperature	$T_A$	$^\circ\text{C}$	-20 ~ +85	
Ambient storage temperature	$T_S$	$^\circ\text{C}$	-40 ~ +105	

#### 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  $1\text{ K}\Omega$  of the load resistor, the primary current has to be limited as the nominal. To measure the full defined measuring range, the load resistor should be at minimum  $10\text{ K}\Omega$ .
- 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 SIOY2SV2** (in mm. 1 mm = 0.0394 inch)



**Pins Arrangement**

1. +15V
2. -15V
3. OUTPUT
4. 0V

**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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