

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

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.

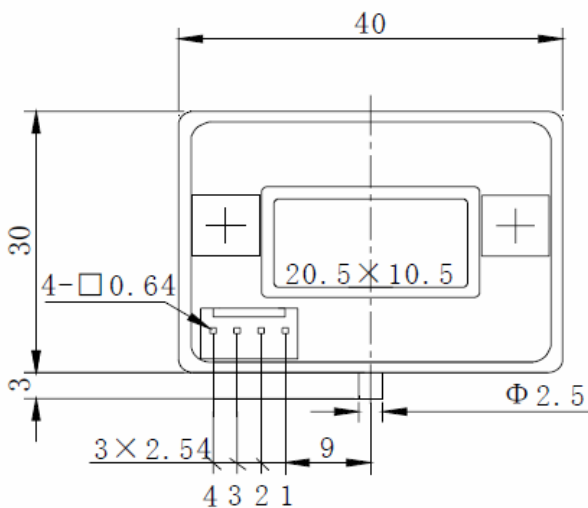
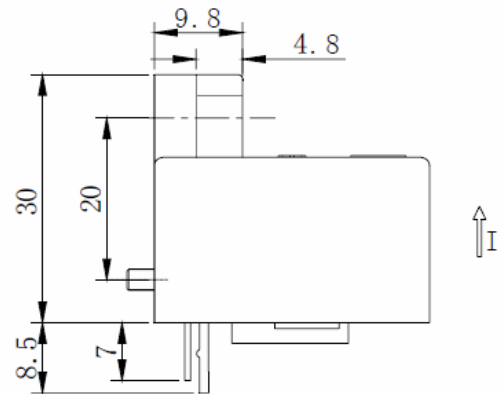
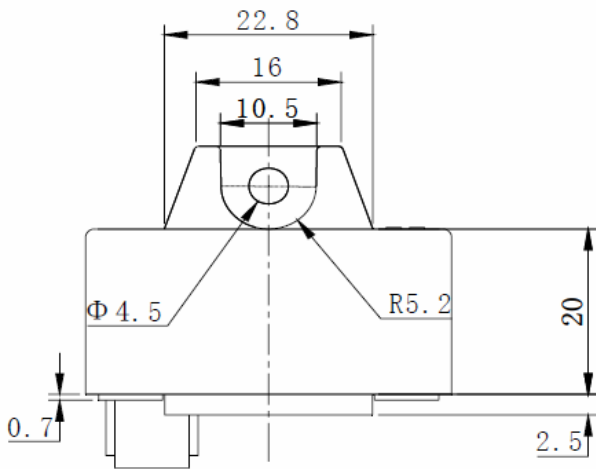
Parameters Table

PARAMETERS	SYMBOL	UNIT	VALUE	CONDITIONS
Electrical data				
Supply voltage($\pm 5\%$) ⁽¹⁾	V_C	V	± 15	
Current consumption	I_C	mA	± 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(1ms)	I_{PC}	At	$50 * I_{PN}$	
Isolation resistance	R_{IS}	$M\Omega$	> 1000	@ 500 VDC
Output internal resistance	R_{OUT}	Ω	100	
Load resistance ⁽²⁾	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	
Accuracy - Dynamic performance data				
Linearity ⁽³⁾ ($0 \dots \pm I_{PN}$)	ϵ_L	% of I_{PN}	$< \pm 1$	
Accuracy	X	% of I_{PN}	$< \pm 1.5$	@ 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	μS	< 3	@ 90% of I_{PN} step
d_i/d_t accurately followed	d_i/d_t	$A/\mu\text{S}$	> 50	
Frequency bandwidth ⁽⁴⁾	BW	kHz	DC~50	@-3dB
General data				
Ambient operating temperature	T_A	$^\circ\text{C}$	-20 ~ +85	
Ambient storage temperature	T_S	$^\circ\text{C}$	-40 ~ +105	

Notes:

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