

Features

- ◆ Galvanic isolation between primary and secondary circuit
- ◆ Hall effect measuring principle
- ◆ Isolation voltage 3000V
- ◆ Low power consumption
- ◆ Extended measuring range($3 \cdot I_{PN}$)
- ◆ Power supply from $\pm 12V$ to $\pm 15V$

Advantages

- ◆ Low insertion losses
- ◆ Easy to mount with automatic handling system
- ◆ 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

TYPES OF PRODUCTS

Type	Primary nominal current r. m. s I_{PN} (A)	Primary current measuring range I_P (A)
SIOT1S10V2	10	± 15
SIOT1S15V2	15	± 25
SIOT1S20V2	20	± 35
SIOT1S25V2	25	± 35
SIOT1S30V2	30	± 75

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

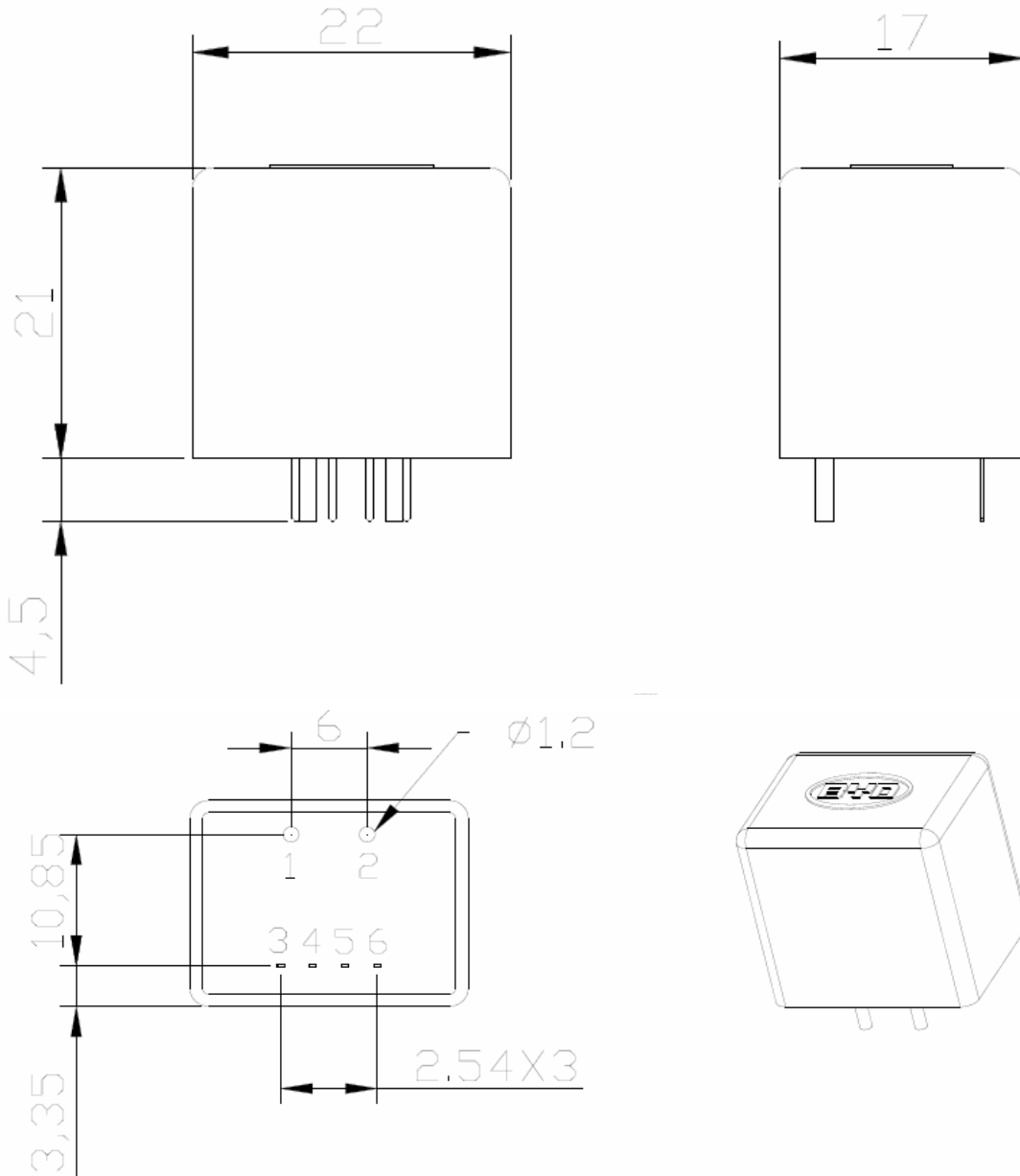
PARAMETERS	SYMBOL	UNIT	VALUE	CONDITIONS
Electrical data				
Supply voltage($\pm 5\%$) ⁽¹⁾	V_C	V	± 15	
Current consumption	I_C	mA	± 15	
Output voltage	V_{out}	V	± 4	@ $\pm I_{PN}$, $R_L = 10\text{ k}\Omega$, $T_A = 25^\circ\text{C}$
Output internal resistance	R_{OUT}	Ω	< 50	
Load resistance	R_L	$\text{K}\Omega$	≥ 10	
R. m. s voltage for AC isolation test	V_d	KV	> 3	@50/60Hz, 1 min
Accuracy - Dynamic performance data				
Linearity($0 \dots \pm I_{PN}$)	ϵ_L	% of I_{PN}	$< \pm 1$	@ I_{PN} , $T_A = 25^\circ\text{C}$
Accuracy($0 \dots \pm I_{PN}$)	X	% of I_{PN}	$< \pm 1.5$	@ I_{PN} , $T_A = 25^\circ\text{C}$ (excluding offset)
Electrical offset voltage	V_{OE}	mV	$< \pm 40$	@ $T_A = 25^\circ\text{C}$
Hysteresis offset voltage	V_{OH}	mV	$< \pm 15$	@ $I_P = 0$
Response time	t_r	μs	< 3	@ 90% of I_{PN}
Frequency bandwidth	BW	kHz	DC~50	@ -3dB
Thermal drift of V_{OE}	V_{OT}	mV/K	± 1.5	
Thermal drift of the gain	$TC\epsilon_G$	%/K	± 0.1	
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 $\pm 12\text{V} < V_C < \pm 15\text{V}$ will reduce measuring range.

Dimensions SIOT1SV2 (in mm. 1 mm = 0.0394 inch)

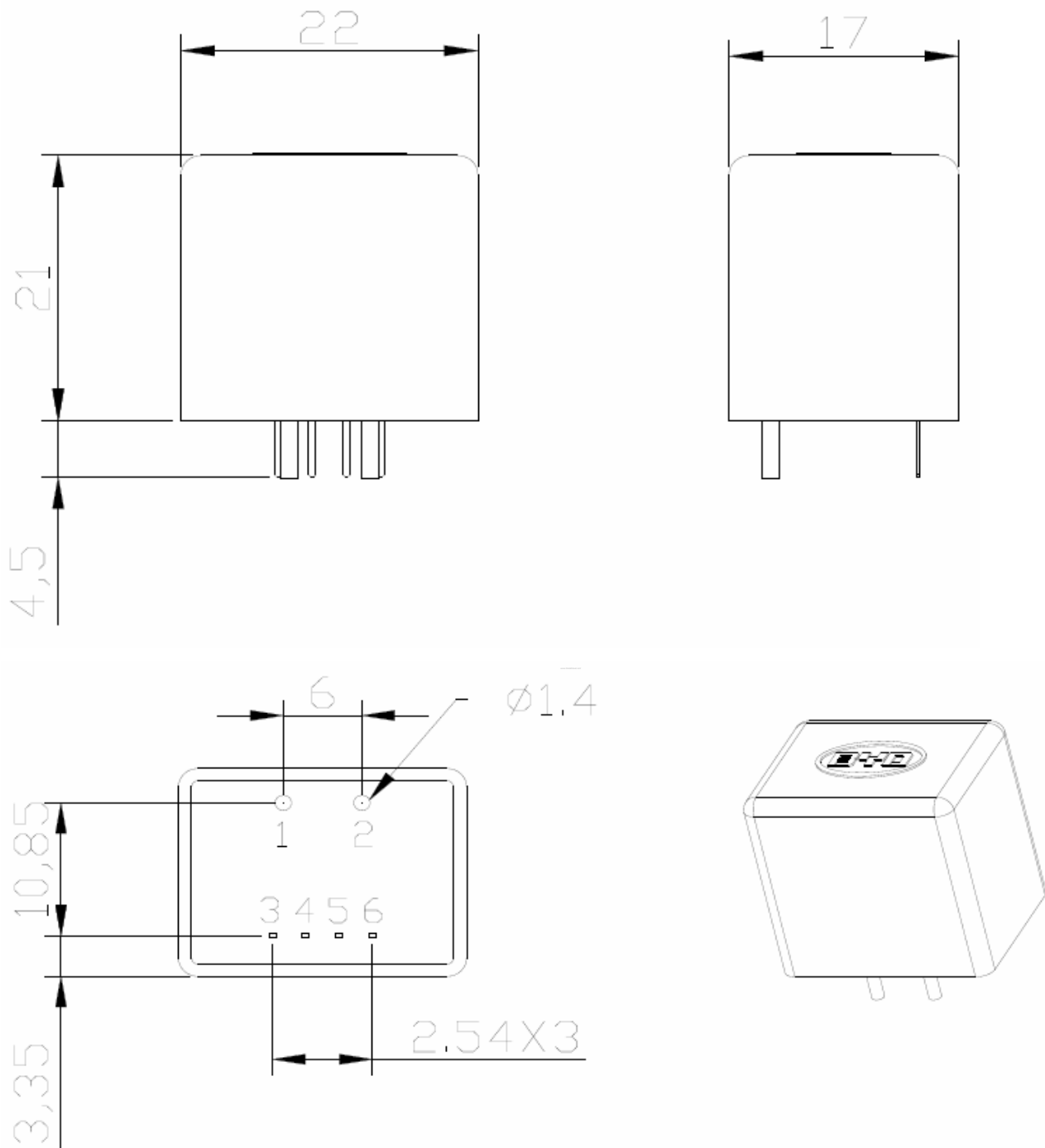
1) **SIOT1S10...15V2**



Terminal Pin

1. Primary input Current(-)
2. Primary input Current(+)
3. Output
4. +15V
5. 0V
6. -15V

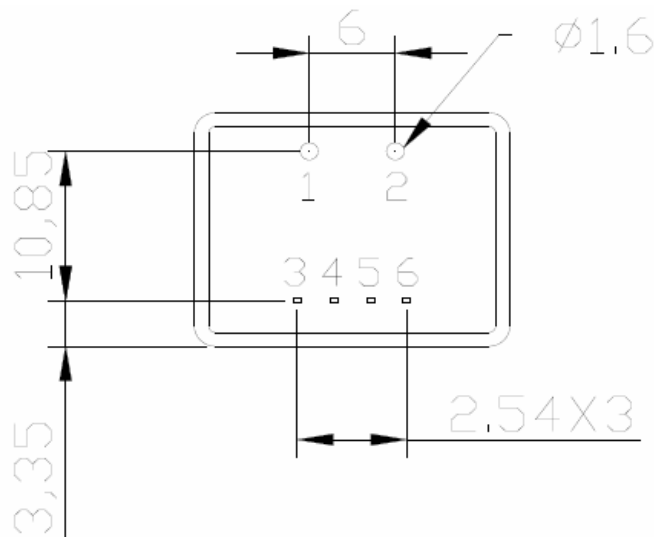
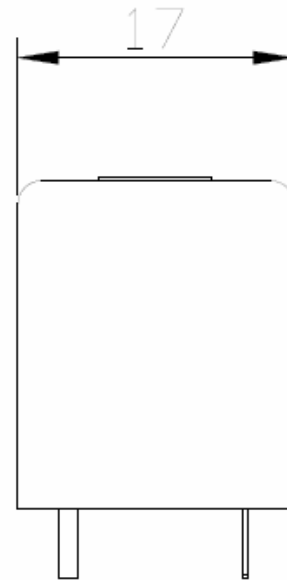
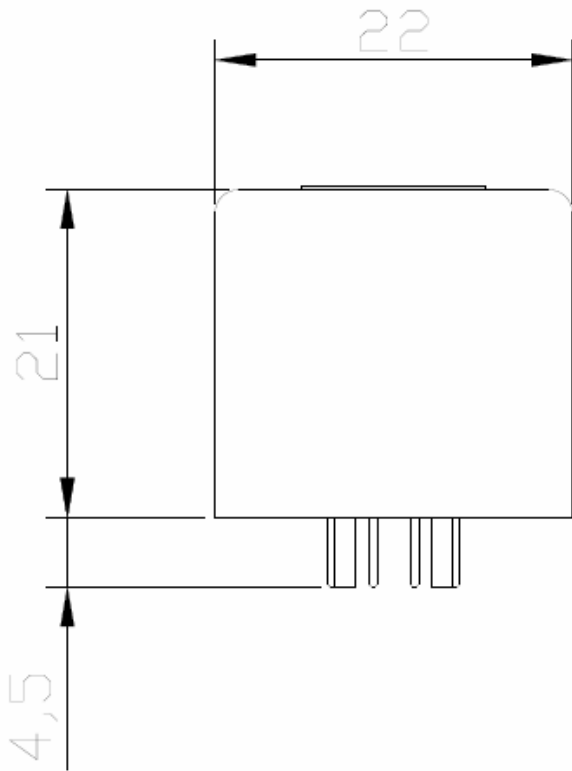
2) SIOT1S20...25V2



Terminal Pin

- 1. Primary input Current(-)
- 2. Primary input Current(+)
- 3. Output
- 4. +15V
- 5. 0V
- 6. -15V

3) SIOT1S30V2



Terminal Pin

1. Primary input Current(-)
2. Primary input Current(+)
3. Output
4. +15V
5. 0V
6. -15V

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.