

### Features

- ◆ Galvanic isolation between primary and secondary circuit
- ◆ Hall effect measuring principle
- ◆ Isolation voltage 3000V
- ◆ Low power consumption
- ◆ Extended measuring range(3\*I<sub>PN</sub>)
- ◆ Power supply from ±12V to ±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 <sub>PN</sub> (A)	Primary current measuring range I <sub>P</sub> (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

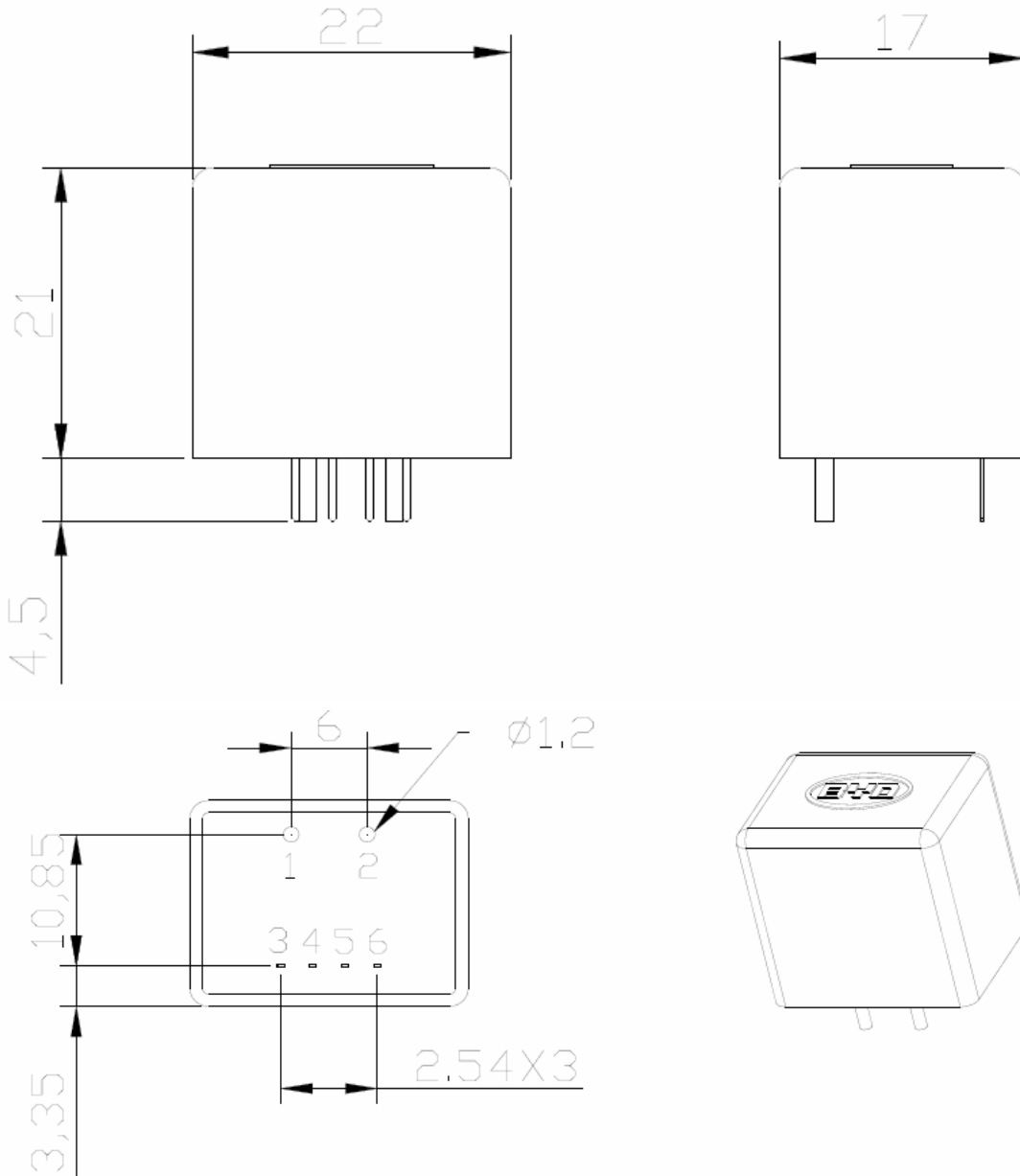
PARAMETERS	SYMBOL	UNIT	VALUE	CONDITIONS
<b>Electrical data</b>				
Supply voltage( $\pm 5\%$ ) <sup>(1)</sup>	$V_C$	V	$\pm 15$	
Current consumption	$I_C$	mA	$\pm 15$	
Output voltage	$V_{out}$	V	$\pm 4$	@ $\pm I_{PN}$ , $R_L = 10\text{ k}\Omega$ , $T_A = 25^\circ\text{C}$
Output internal resistance	$R_{OUT}$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

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

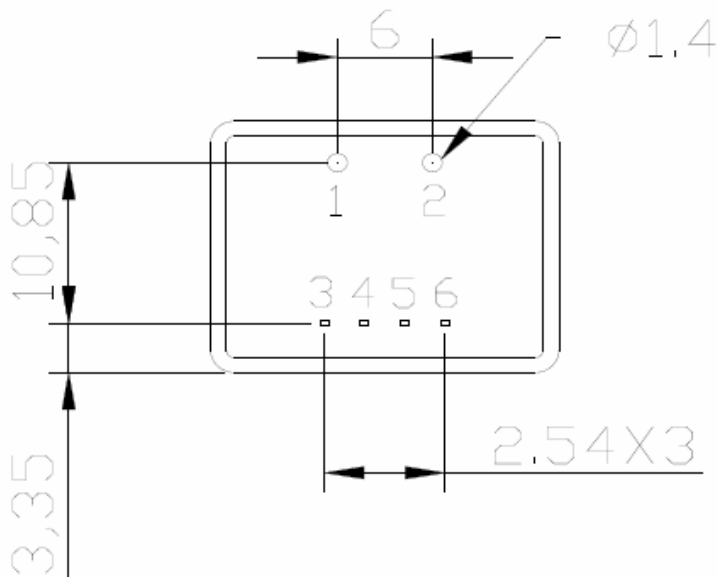
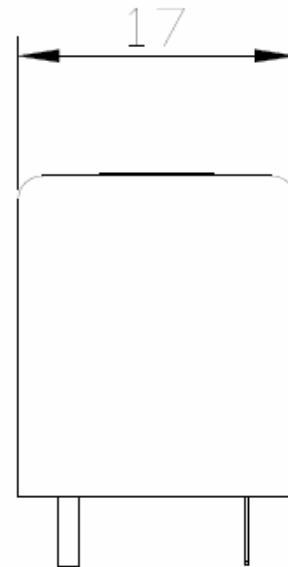
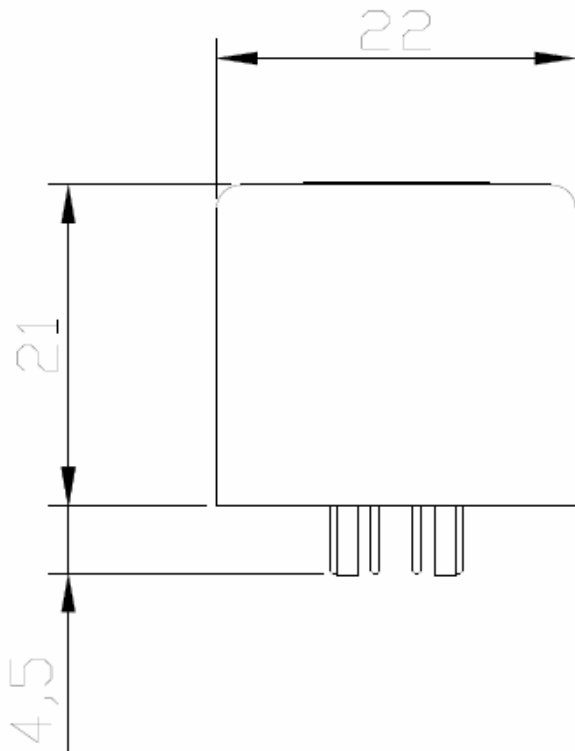
1) **SIOT1S10...15V2**



**Terminal Pin**

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

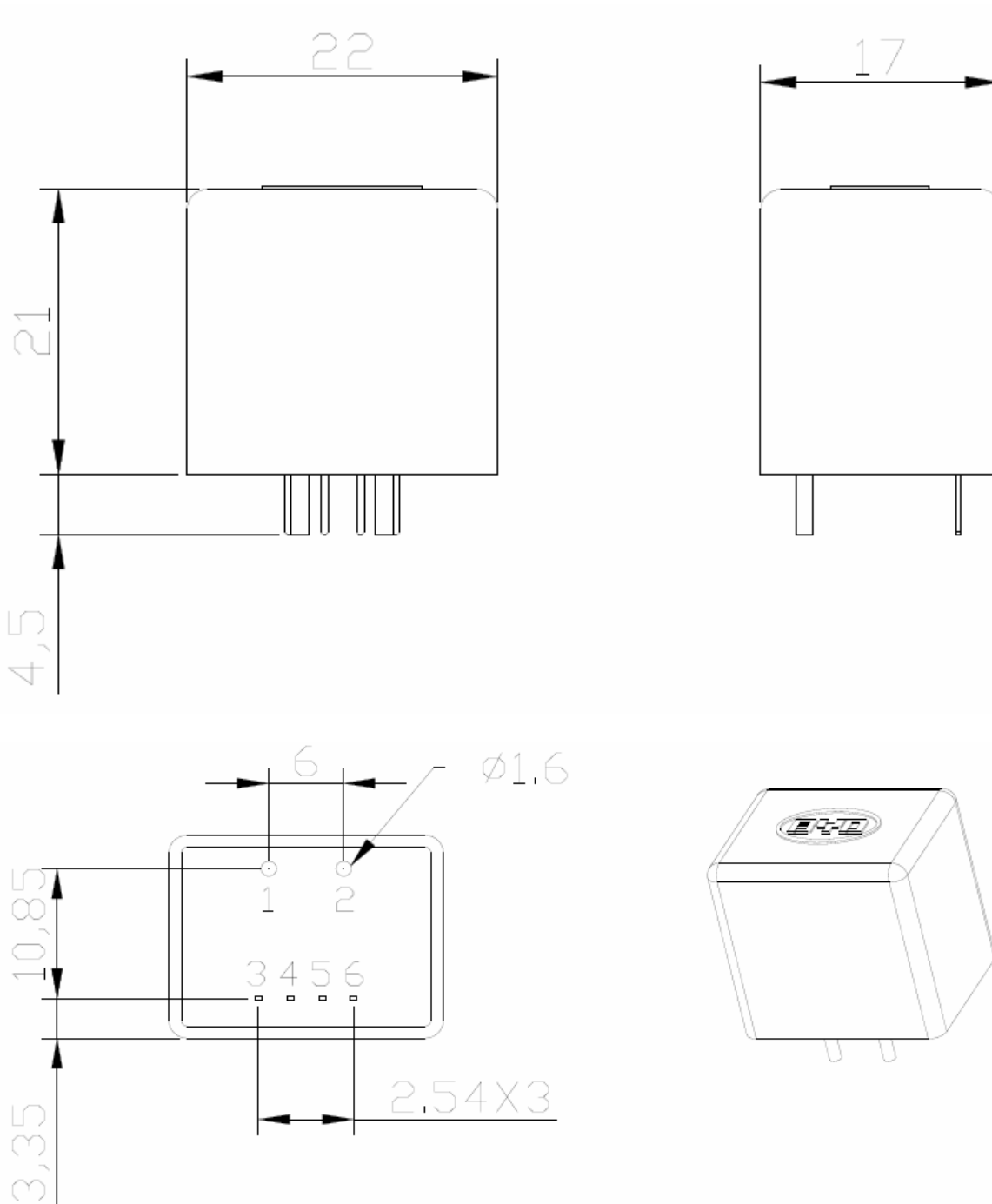
2) SIOT1S20...25V2



**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**

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