

Topstek Current Transducer THT6A .. THT37.5A

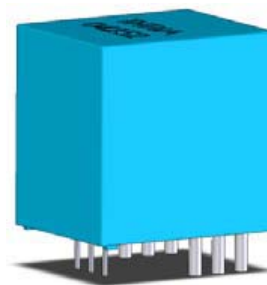
THT 6A~37.5A

Features

- ◆ Highly reliable Hall Effect device
- ◆ Wide selectable input ranges with flexible pin configurations.
- ◆ Compact and light weight
- ◆ Fast response time
- ◆ Excellent linearity of the output voltage over a wide input range
- ◆ Excellent frequency response (> 50 kHz)
- ◆ Low power consumption (<12 mA)
- ◆ Capable of measuring both DC and AC, both pulsed and mixed
- ◆ High isolation voltage between the measuring circuit and the current-carrying conductor (AC2.5KV)
- ◆ Extended operating temperature range
- ◆ Flame-Retardant plastic case and silicone encapsulate, using UL classified materials, ensures protection against environmental contaminants and vibration over a wide temperature and humidity range

Applications

- ◆ UPS systems
- ◆ Industrial robots
- ◆ NC tooling machines
- ◆ Elevator controllers
- ◆ Process control devices
- ◆ AC and DC servo systems
- ◆ Motor speed controller
- ◆ Electrical vehicle controllers
- ◆ Inverter-controlled welding machines
- ◆ General and special purpose inverters
- ◆ Power supply for laser processing machines
- ◆ Controller for traction equipment e.g. electric trains
- ◆ Other automatic control systems



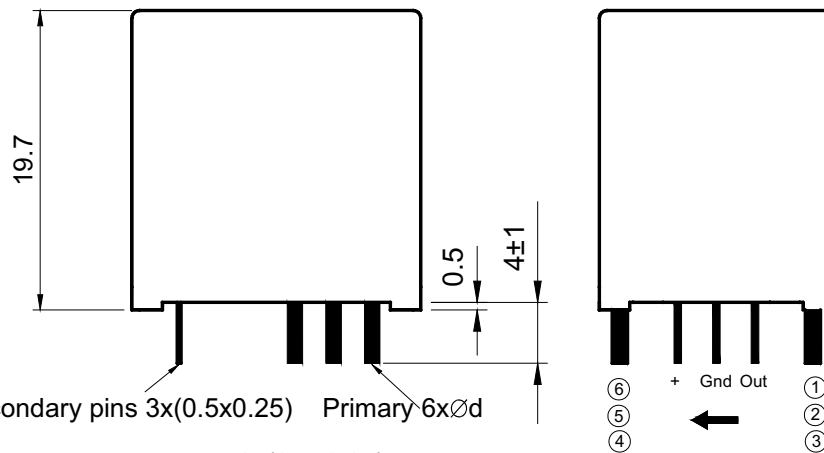
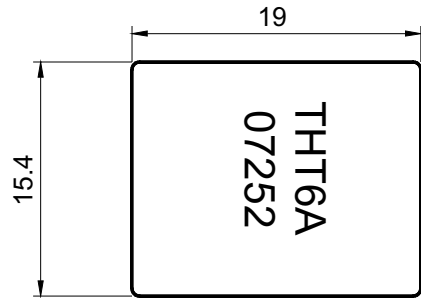
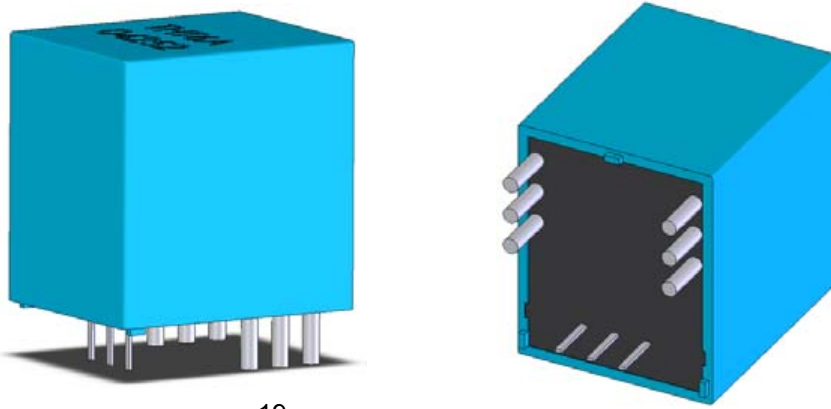
Specifications

Parameter	Symbol	Unit	Configuration			
Primary Pin Configurations (to change N and I_{fn})						
Number of Primary Turns	N		1	2	3	
THT6A	Nominal Input Current	I_{fn}	A DC	6	3	2
	Linear Range	I_{fs}	A DC	±19.2	±9.6	±6.4
THT15A	Nominal Input Current	I_{fn}	A DC	15	7.5	5
	Linear Range	I_{fs}	A DC	±48	±24	±16
THT25A	Nominal Input Current	I_{fn}	A DC	25	12.5	8.33
	Linear Range	I_{fs}	A DC	±80	±40	±26.67
THT37.5A	Nominal Input Current	I_{fn}	A DC	37.5	18.75	12.5
	Linear Range	I_{fs}	A DC	±120	±60	±40
Nominal Output Voltage	V_{hn}	V	$V_{REF} + 0.625 V \pm 1\%$ at $I_f = I_{fn}$ ($R_L = 10k\Omega$)			
Nominal Output @ $I_f = 0$	V_{REF}	V	$V_{CC}/2 \pm 25 mV$, $T_a = 25^\circ C$			
Output Resistance	R_{OUT}	Ω	<50 Ω			
Hysteresis Error	V_{oh}	mV	Within $\pm 2 mV$ @ $I_f = I_{fn} \rightarrow 0$			
Supply Voltage	V_{CC}/V_{EE}	V	+5V $\pm 5\%$			
Linearity	ρ	%	Within $\pm 0.5\%$ of I_{fn}			
Consumption Current	I_{CC}	mA	<12 mA			
Response Time (90% V_{hn})	T_r	μsec	3 μsec max. @ $d I_f / dt = I_{fn} / \mu sec$			
Frequency bandwidth (-3dB)	f_{BW}	Hz	DC to 50kHz			
Thermal Drift of Output	-	%/ $^\circ C$	Within $\pm 0.1 \%$ / $^\circ C$ @ I_{fn}			
Thermal Drift of Zero Current Offset	-	mV/ $^\circ C$	Within $\pm 0.4 mV$ / $^\circ C$ @ I_{fn}			
Dielectric Strength	-	V	AC2.5KV X 60 sec			
Isolation Resistance @ 1000 VDC	R_{IS}	M Ω	>1000 M Ω			
Operating Temperature	T_a	$^\circ C$	-15 $^\circ C$ to 80 $^\circ C$			
Storage Temperature	T_s	$^\circ C$	-20 $^\circ C$ to 85 $^\circ C$			
Mass	W	g	10 g			

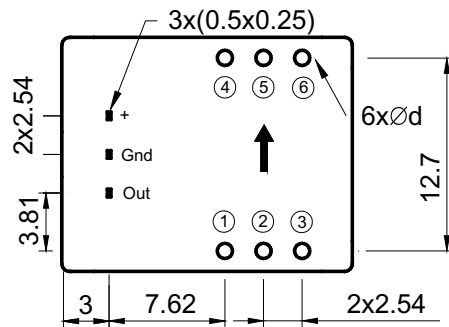
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Appearance, dimensions and pin identification

All dimensions in mm ± 0.1 , holes $-0, +0.2$ except otherwise noted.



Secondary pins 3x(0.5x0.25) Primary 6xØd



Bottom View

← Positive current flow direction

Primary Current Input Pins	I+	I-	Primary Current Input Pin Diameter	THT6A	THT15A	THT25A	THT37.5A
pin	1,2,3	4,5,6	d(mm)	0.6	0.8	1.0	1.2