



Topstek Current Transducers TE50A .. TE500A-S12

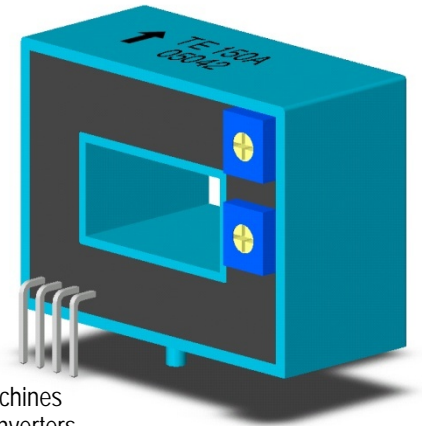
TE 50A~500A-S12

Features

- ◆ Highly reliable Hall Effect device
- ◆ 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 nominal)
- ◆ 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

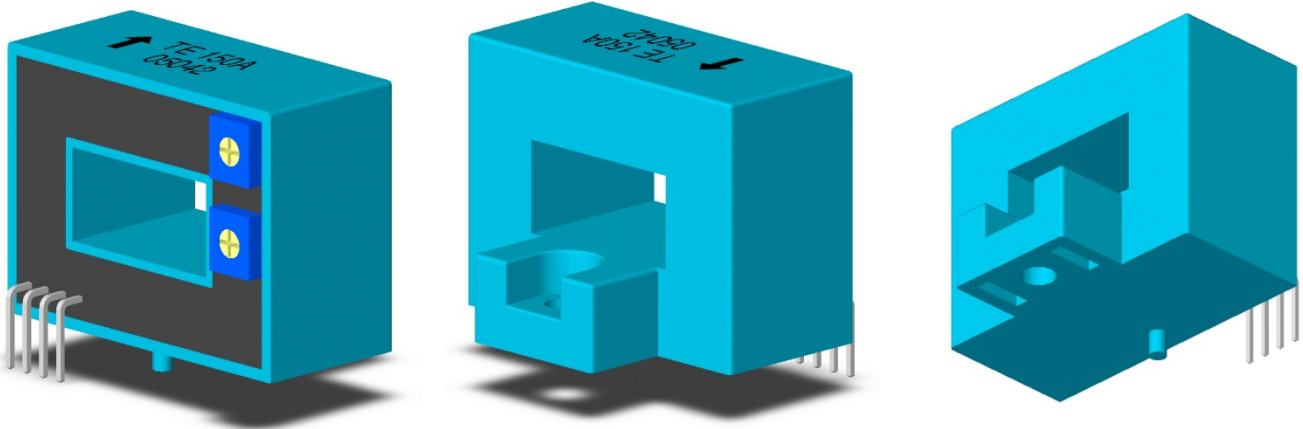
Parameter	Symbol	Unit	25A	37.5A	50A	75A	100A	150A	200A	250A	300A	500A
Nominal Input Current	I_{fn}	A DC	25	37.5	50	75	100	150	200	250	300	500
Linear Range	I_{fs}	A DC	$\pm I_{fn} \times 1.25$									
Output Voltage @ ($R_L=10k\Omega$, $T_a=25^\circ C$)	$I_f = I_{fn}$	V_{hn+}	$V_{hn0} + 2.0 V \pm 20mV$									
	$I_f = 0$	V_{hn0}	$2.5 V \pm 10 mV$									
	$I_f = -I_{fn}$	V_{hn-}	$V_{hn0} - 2.0 V \pm 20mV$									
Output Resistance	R_{OUT}	Ω	< 100 Ω									
Hysteresis Error	V_{oh}	mV	Within $\pm 10 mV$ @ $I_f=I_{fn} \rightarrow 0$									
Supply Voltage	V_{CC}	V	+12V $\pm 5\%$									
Output Resistance	R_{OUT}	Ω	<100 Ω									
Linearity	ρ	%	Within $\pm 1\% I_{fn}$ @25 $^\circ C$, Within $\pm 1.5\%$ @ -25~80 $^\circ C$									
Consumption Current	I_{CC}	mA	12 mA nominal, 15 mA max									
di/dt accurately followed	dI_f / dt	A/ μ sec	>50 A/ μ sec									
Response Time (90% V_{hn})	T_r	μ sec	3 μ sec max. @ $dI_f / dt = I_{fn} / \mu$ sec									
Frequency bandwidth (-3dB)	f_{BW}	Hz	DC to 50kHz									
Thermal Drift of Output @ I_{fn}	-	%	Within $\pm 1\%$ @25 $^\circ C$, Within $\pm 3\%$ @ -25~80 $^\circ C$									
Thermal Drift of Zero Current Offset	-	mV/ $^\circ C$	Within $\pm 1 mV/^\circ C$ @ $T_a=-25\sim 25^\circ C$, Within $\pm 3 mV/^\circ C$ @ $T_a=25\sim 80^\circ C$									
Reference Voltage Output	V_{REF}	V	$2.5 V \pm 25 mV$									
Dielectric Strength	-	V	AC3KV X 60 sec									
Isolation Resistance @ 1000 VDC	R_{IS}	M Ω	>1000 M Ω									
Operating Temperature	T_a	$^\circ C$	-25 $^\circ C$ to 80 $^\circ C$									
Storage Temperature	T_s	$^\circ C$	-40 $^\circ C$ to 85 $^\circ C$									
Mass	W	g	50g									



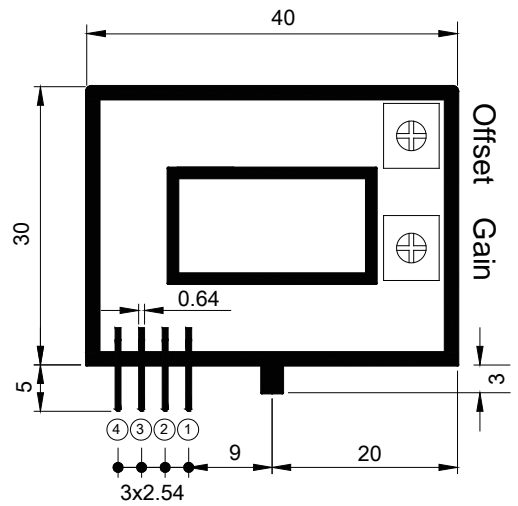
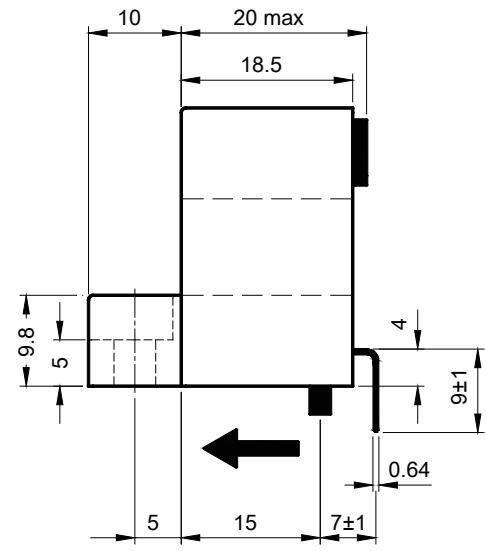
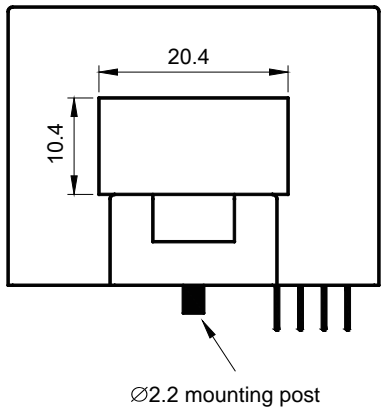
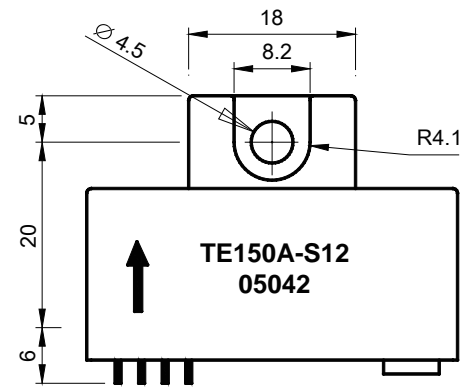


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Appearance, dimensions and pin identification
 All dimensions in mm ± 0.5 , holes -0 , $+0.2$ except otherwise noted.



Pin Assignment	
①	+12V
②	0V
③	V _{out}
④	V _{ref} (2.5V)



← Positive current flow direction

