



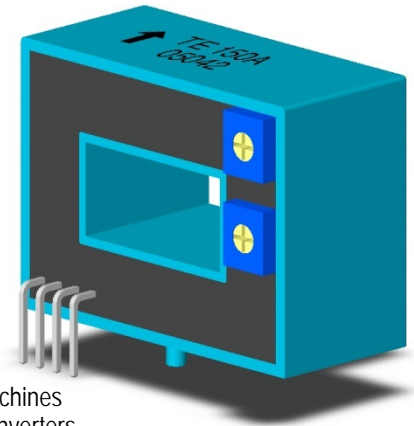
## TE 50A~500A-S12

### 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



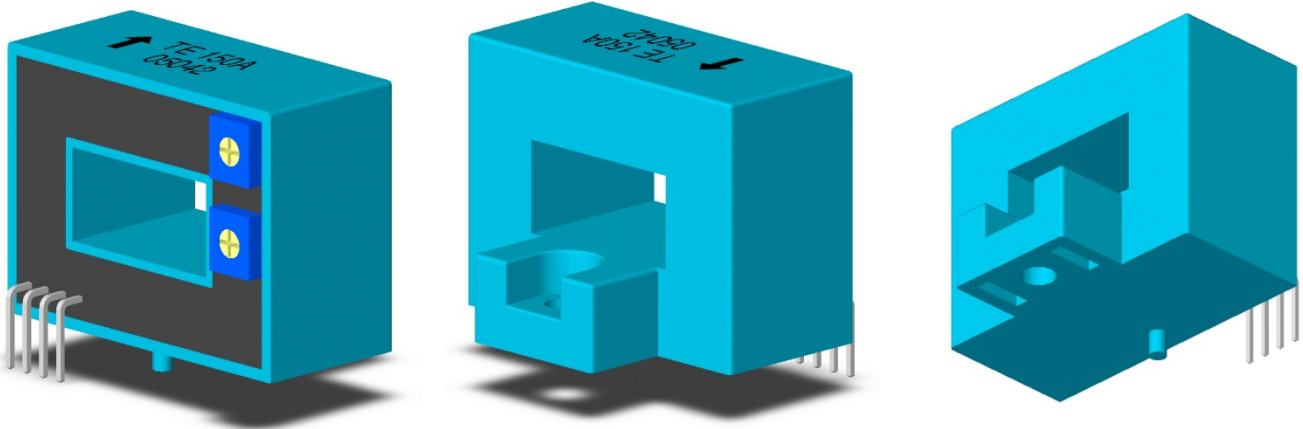
### Specifications

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	$R_{OUT}$	$\Omega$	< 100 $\Omega$									
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	$R_{OUT}$	$\Omega$	<100 $\Omega$									
Linearity	$\rho$	%	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/ $\mu$ sec	>50 A/ $\mu$ sec									
Response Time (90% $V_{hn}$ )	$T_r$	$\mu$ sec	3 $\mu$ 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 $\Omega$	>1000 M $\Omega$									
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									

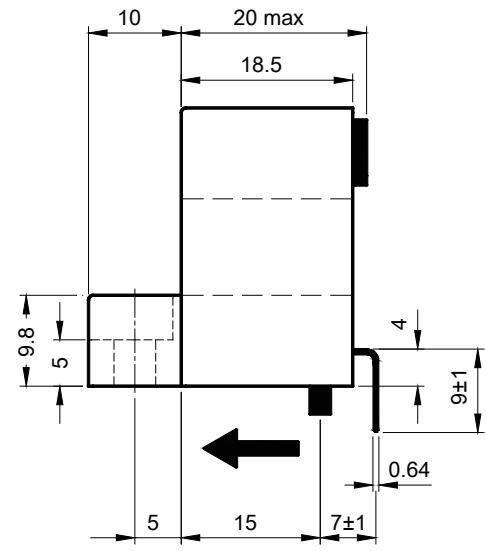
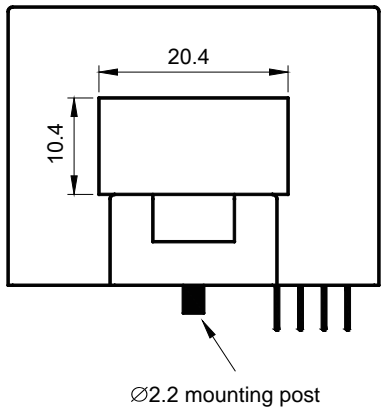
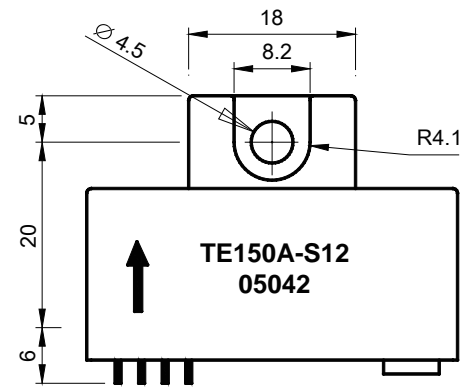


# Topstek Current Transducers TE50A .. TE500A-S12

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



Pin Assignment	
①	+12V
②	0V
③	V <sub>out</sub>
④	V <sub>ref</sub> (2.5V)



← Positive current flow direction

