

# Topstek Current Transducers TD4A..TD25A-LTC

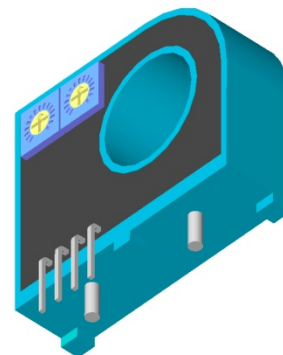
## TD 4A~25A-LTC

### 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 (> 25 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
- ◆ Elevator controllers
- ◆ NC tooling machines
- ◆ Motor speed controller
- ◆ Process control devices
- ◆ Leakage current detection
- ◆ AC and DC servo systems
- ◆ General and special purpose inverters
- ◆ Other automatic control systems



### Specifications

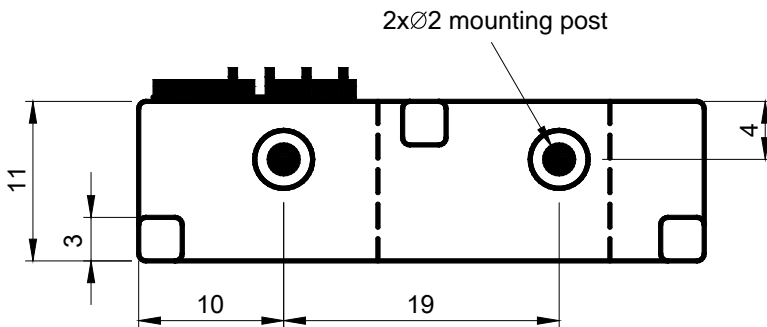
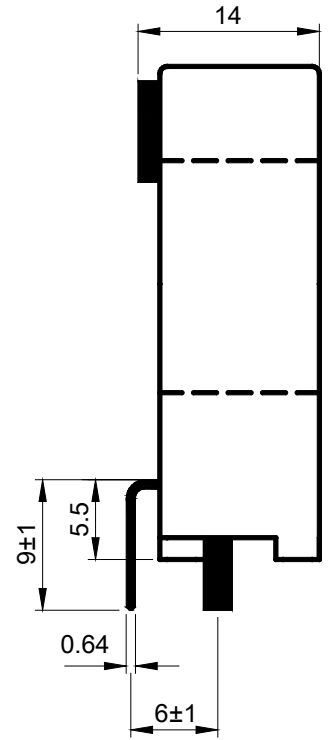
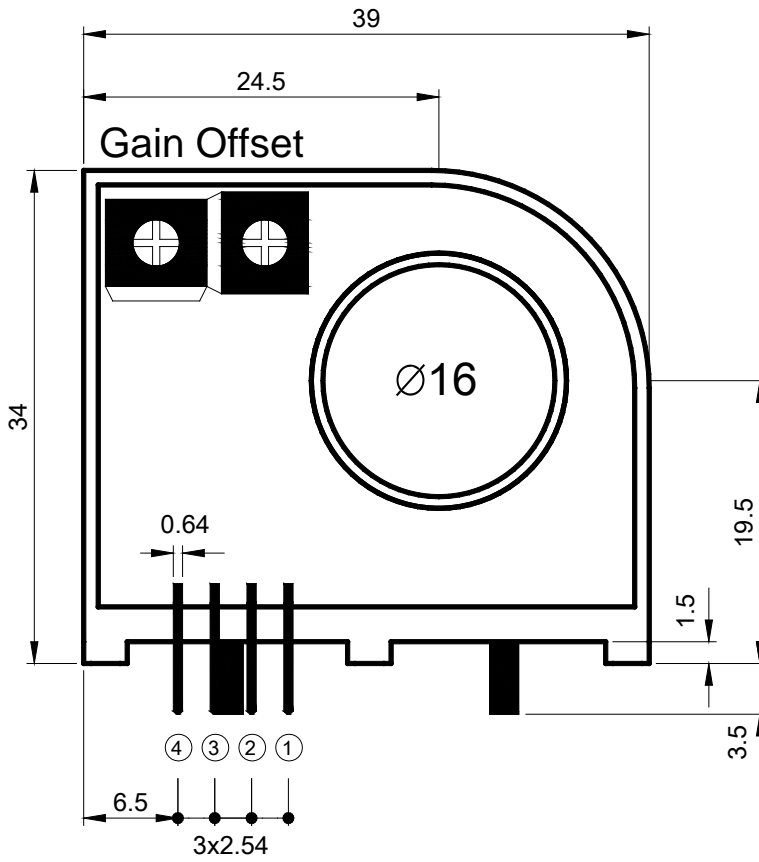
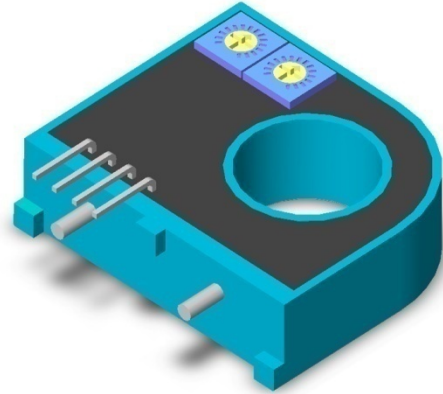
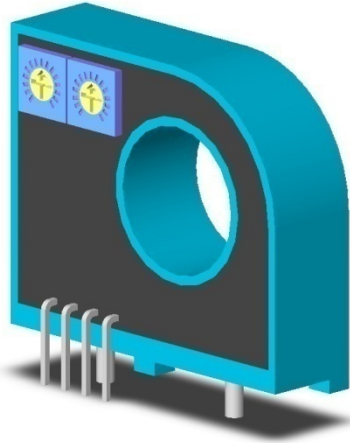
Parameter	Symbol	Unit	4A	5A	7.5A	10A	12.5A	15A	20A	25A
Nominal Input Current	$I_{fn}$	A DC	4	5	7.5	10	12.5	15	20	25
Linear Range	$I_{fs}$	A DC	±12	±15	±22.5	±30	±37.5	±45	±60	±75
Nominal Output Voltage	$V_{fn}$	V	4 V ±1% at $I_f = I_{fn}$ ( $R_L = 10k\Omega$ )							
Offset Voltage	$V_{os}$	mV	Within ±50 mV @ $I_f = 0$ , $T_a = 25^\circ C$							
Output Resistance	$R_{OUT}$	$\Omega$	<100 $\Omega$ (50 $\Omega$ nominal)							
Hysteresis Error	$V_{oh}$	mV	Within ±40 mV @ $I_f = I_{fn} \rightarrow 0$							
Supply Voltage	$V_{CC}/V_{EE}$	V	±15V ±5%							
Linearity	$\rho$	%	Within ±1% of $I_{fn}$							
Consumption Current	$I_{CC}$	mA	±12 mA nominal, ±15 mA max							
Response Time (90% $V_{fn}$ )	$T_r$	$\mu$ sec	25 $\mu$ sec max. @ $dI_f/dt = I_{fn}/\mu$ sec							
Frequency bandwidth (-3dB)	$f_{BW}$	Hz	DC to 25kHz							
Thermal Drift of Output	-	%/ $^\circ C$	Within ±0.05 %/ $^\circ C$ @ $I_{fn}$							
Thermal Drift of Zero Current Offset	-	mV/ $^\circ C$	Within ±1.5 mV/ $^\circ C$ @ $I_{fn}$							
Dielectric Strength	-	V	AC2.5KV X 60 sec							
Isolation Resistance @ 1000 VDC	$R_{IS}$	M $\Omega$	>1000 M $\Omega$							
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	28 g							



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## Appearance, dimensions and pin identification

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



Pin Assignment	
①	+15V
②	-15V
③	V <sub>OUT</sub>
④	0V

