

Topstek Current Transducers TD4A..TD25A-LTC

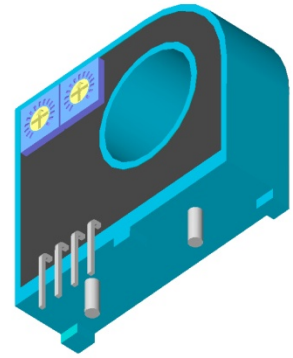
TD 4A~25A-LTC

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

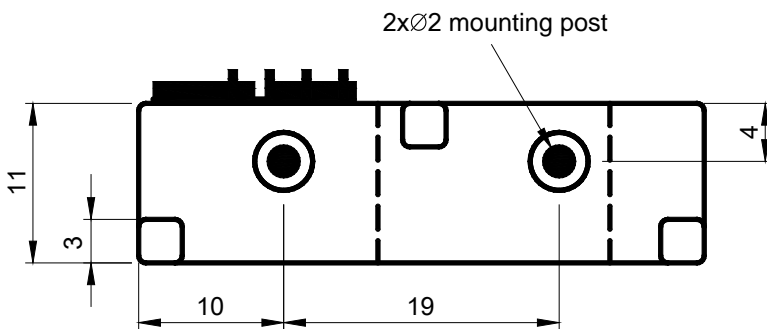
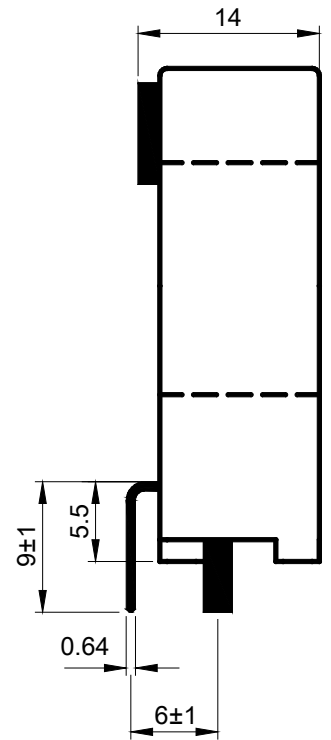
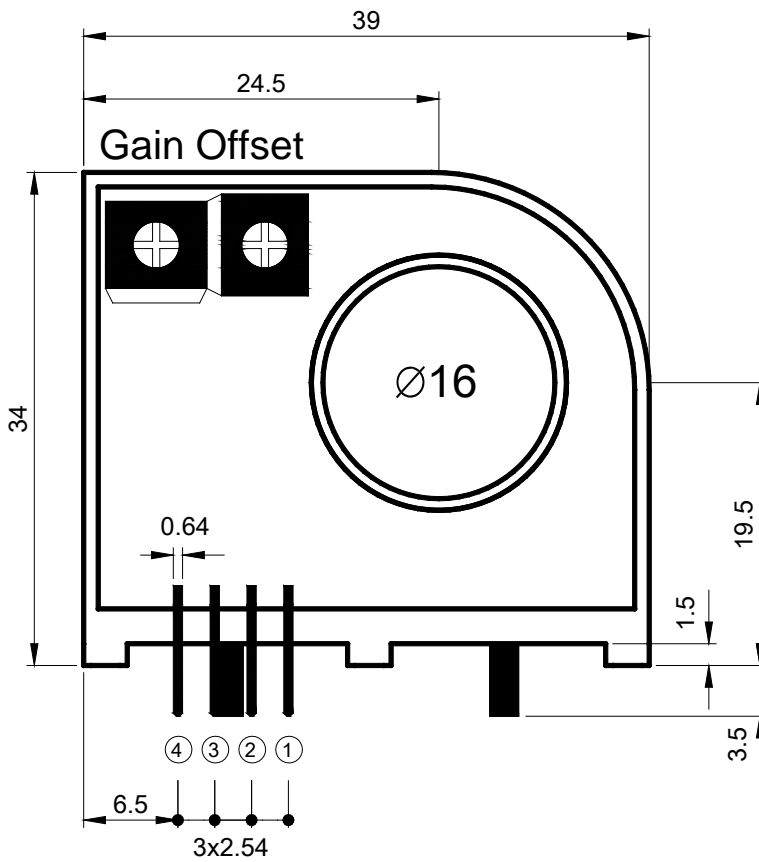
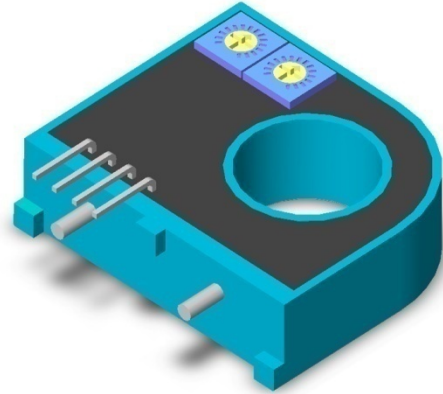
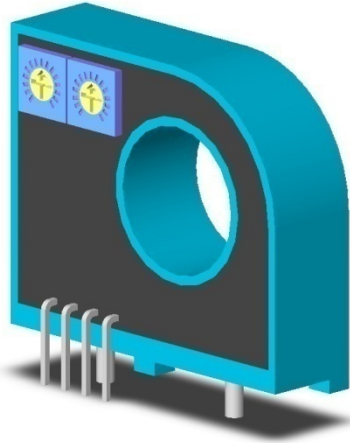
Parameter	Symbol	Unit	4A	5A	7.5A	10A	12.5A	15A	20A	25A
Nominal Input Current	I_{fn}	A DC	4	5	7.5	10	12.5	15	20	25
Linear Range	I_{fs}	A DC	±12	±15	±22.5	±30	±37.5	±45	±60	±75
Nominal Output Voltage	V_{fn}	V	4 V ±1% at $I_f=I_{fn}$ ($R_L=10k\Omega$)							
Offset Voltage	V_{os}	mV	Within ±50 mV @ $I_f=0$, $T_a=25^\circ\text{C}$							
Output Resistance	R_{OUT}	Ω	<100 Ω (50 Ω 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	ρ	%	Within ±1% of I_{fn}							
Consumption Current	I_{CC}	mA	±12 mA nominal, ±15 mA max							
Response Time (90% V_{fn})	T_r	μsec	25 μsec max. @ $dI_f/dt = I_{fn}/\mu\text{sec}$							
Frequency bandwidth (-3dB)	f_{BW}	Hz	DC to 25kHz							
Thermal Drift of Output	-	%/ $^\circ\text{C}$	Within ±0.05 %/ $^\circ\text{C}$ @ I_{fn}							
Thermal Drift of Zero Current Offset	-	mV/ $^\circ\text{C}$	Within ±1.5 mV/ $^\circ\text{C}$ @ 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	$^\circ\text{C}$	-15 $^\circ\text{C}$ to 80 $^\circ\text{C}$							
Storage Temperature	T_s	$^\circ\text{C}$	-20 $^\circ\text{C}$ to 85 $^\circ\text{C}$							
Mass	W	g	28 g							



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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	+15V
②	-15V
③	V _{OUT}
④	0V