



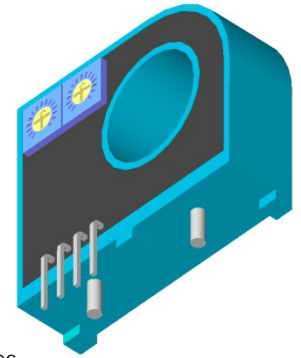
TD 25A~400A-SP1

Features

- ◆ High reliability Hall effect device
- ◆ Compact and light weight
- ◆ Quick response speed (7  $\mu$ sec)
- ◆ Excellent linearity of the output voltage over a wide input range
- ◆ Excellent frequency response (> 50 kHz)
- ◆ Low power consumption (12 mA nominal)
- ◆ Capability of measuring both DC, AC, 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 encapsulant, using UL classified materials, protect against environmental contaminants and vibration over a wide temperature and humidity range

Applications

- ◆ UPS systems
- ◆ Industrial robots
- ◆ NC tooling machines
- ◆ Controller of elevators
- ◆ Process control devices
- ◆ AC and DC servo systems
- ◆ Speed controller of motors
- ◆ Controller of electrical vehicles
- ◆ Inverter-controlled welding machines
- ◆ General and special purpose inverters
- ◆ Power supply of laser processing machines
- ◆ Controller of traction equipment such as electric trains
- ◆ Other automatic control systems



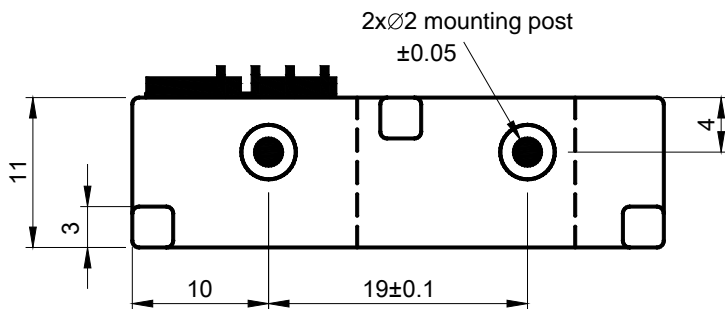
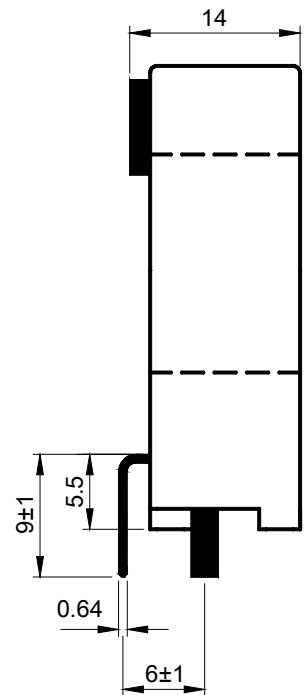
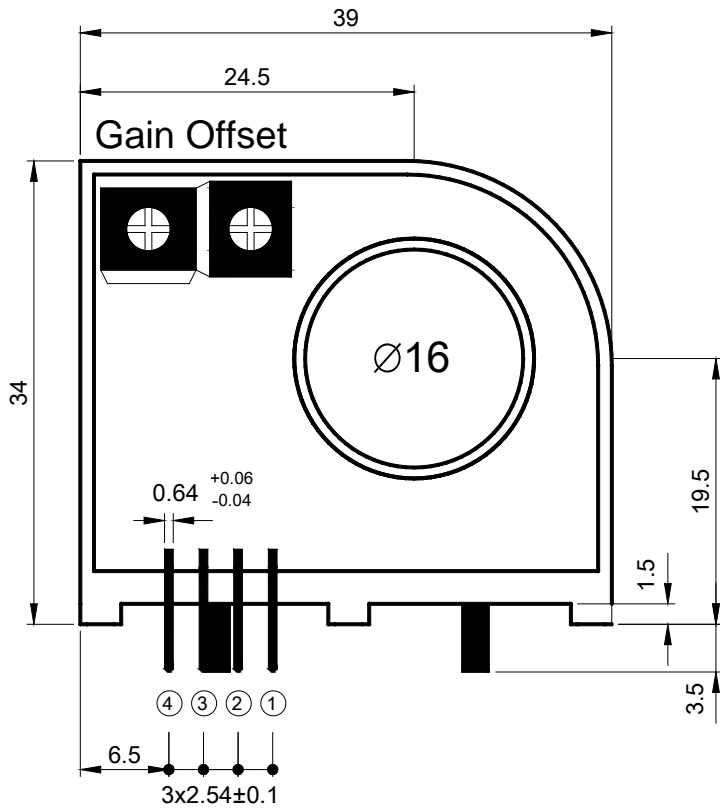
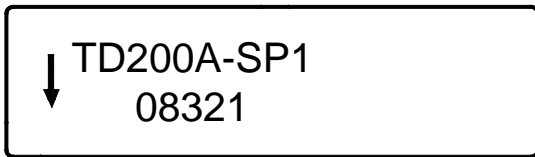
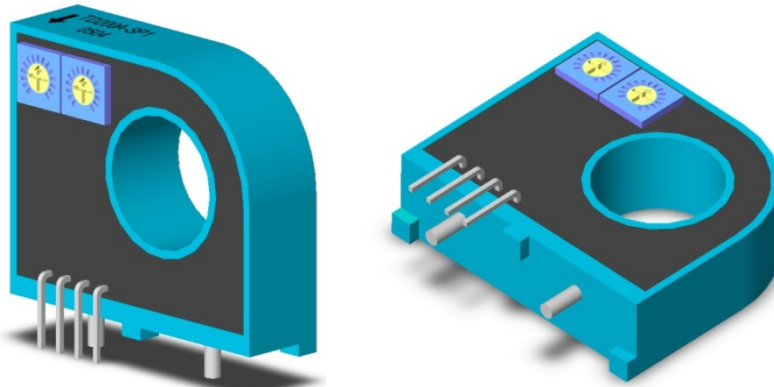
Specifications

Parameter	Symbol	Unit	25A	50A	75A	100A	125A	150A	175A	200A	250A	300A	400A
Nominal Input Current	$I_{fn}$	A DC	25	50	75	100	125	150	175	200	250	300	400
Linear Range	$I_{fs}$	A DC	$\pm 75$	$\pm 150$	$\pm 225$	$\pm 300$	$\pm 375$	$\pm 450$	$\pm 525$	$\pm 600$	$\pm 750$	$\pm 900$	$\pm 1000$
Nominal Output Voltage	$V_{fn}$	V	4 V $\pm$ 2% at $I_f=I_{fn}$ ( $R_L=10k\Omega$ )										
Offset Voltage	$V_{os}$	mV	Within $\pm 35$ mV @ $I_f=0$ , $T_a=25^\circ\text{C}$										
Output Resistance	$R_{OUT}$	$\Omega$	<100 $\Omega$ (50 $\Omega$ nominal)										
Hysteresis Error	$V_{oh}$	mV	Within $\pm 35$ mV @ $I_f=I_{fn}\rightarrow 0$										
Supply Voltage	$V_{CC}/V_{EE}$	V	$\pm 15$ V $\pm 5\%$										
Linearity	$\rho$	%	Within $\pm 1\%$ of $I_{fn}$										
Consumption Current	$I_{CC}$	mA	$\pm 12$ mA nominal, $\pm 15$ mA max										
Response Time (90% $V_{fn}$ )	$T_r$	$\mu$ sec	7 $\mu$ sec max. @ $dI_f/dt = I_{fn}/\mu$ sec										
Frequency bandwidth (-3dB)	$f_{BW}$	Hz	DC to 50kHz										
Thermal Drift of Output	-	%/ $^\circ\text{C}$	Within $\pm 0.05$ %/ $^\circ\text{C}$ @ $I_{fn}$										
Thermal Drift of Zero Current Offset	-	mV/ $^\circ\text{C}$	Within $\pm 1.5$ mV/ $^\circ\text{C}$ @ $I_{fn}$										
Dielectric Strength	-	V	AC2.5KV X 60 sec										
Isolation Resistance @ 1000 VDC	$R_{IS}$	M $\Omega$	>1000 M $\Omega$										
Operating Temperature	$T_a$	$^\circ\text{C}$	-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										

# Topstek Current Transducers TD25A-SP1 .. TD400A-SP1

## 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