

Topstek Current Transducers TN40A .. TN800A

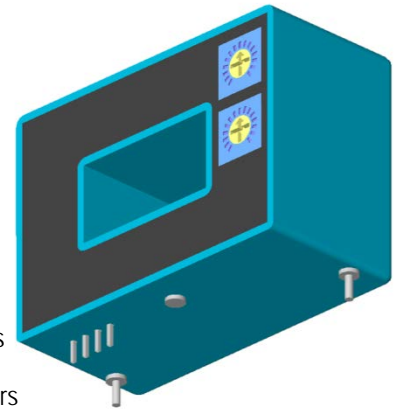
TN 40A~800A

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



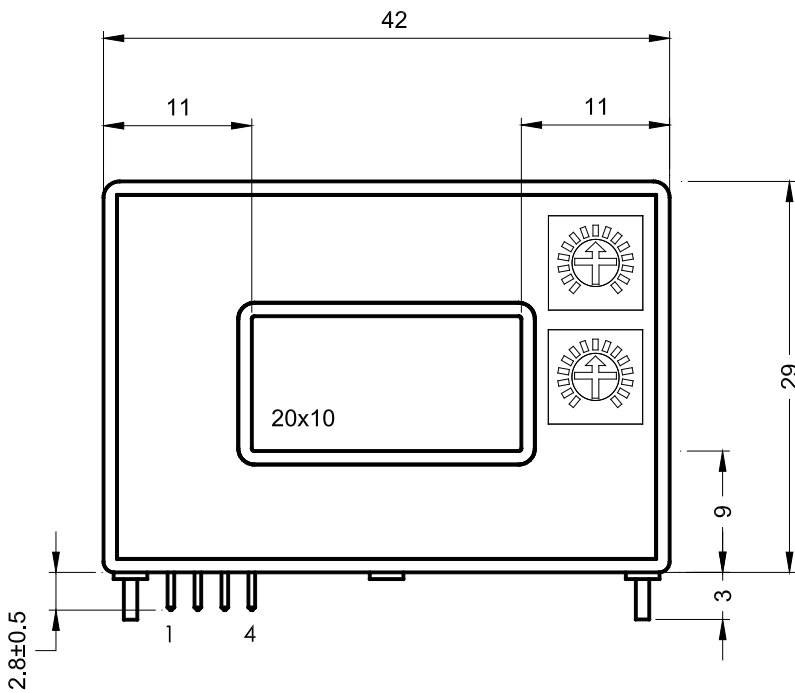
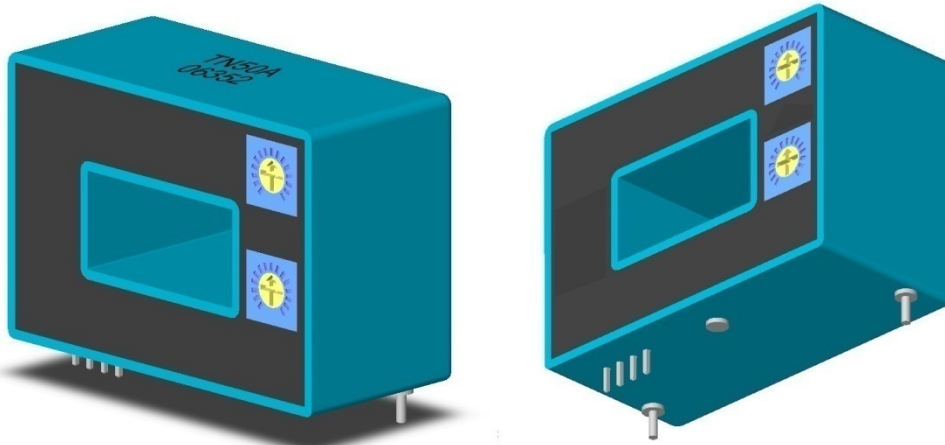
Specifications

Parameter	Symbol	Unit	TN 40A	TN 50A	TN 75A	TN 100A	TN 150A	TN 200A	TN 300A	TN 400A	TN 600A	TN 800A
Nominal Input Current	I_{fn}	A DC	40	50	75	100	150	200	300	400	600	800
Linear Range	I_{fs}	A DC	±120	±150	±225	±300	±450	±600	±900	±900	±1000	±1000
Nominal Output Voltage	V_{fn}	V	4 V ±1% at $I_f=I_{fn}$ ($R_L=10k\Omega$)									
Offset Voltage	V_{os}	mV	Within ±35 mV @ $I_f=0$, $T_a=25^\circ\text{C}$									
Output Resistance	R_{OUT}	Ω	<100 Ω									
Hysteresis Error	V_{oh}	mV	Within ±30 mV @ $I_f=I_{fn} \rightarrow 0$									
Supply Voltage	V_{CC}/V_{EE}	V	±15V ±5%									
Linearity (0 -- ± I_{fn})	ρ	%	Within ±1% of I_{fn}									
Consumption Current	I_{CC}	mA	±15 mA max									
Response Time (90% V_{fn})	T_r	μsec	7 μsec max. @ $dI_f/dt = I_{fn}/\mu\text{sec}$									
Frequency bandwidth (-3dB)	f_{BW}	Hz	DC to 50kHz									
Thermal Drift of Output	-	%/ $^\circ\text{C}$	Within ±0.1 %/ $^\circ\text{C}$ @ I_{fn}									
Thermal Drift of Zero Current Offset	-	mV/ $^\circ\text{C}$	< ±2.5 mV/ $^\circ\text{C}$	< ±1.5 mV/ $^\circ\text{C}$	< ±1.0 mV/ $^\circ\text{C}$							
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 85 $^\circ\text{C}$									
Storage Temperature	T_s	$^\circ\text{C}$	-20 $^\circ\text{C}$ to 85 $^\circ\text{C}$									
Mass	W	g	66g									

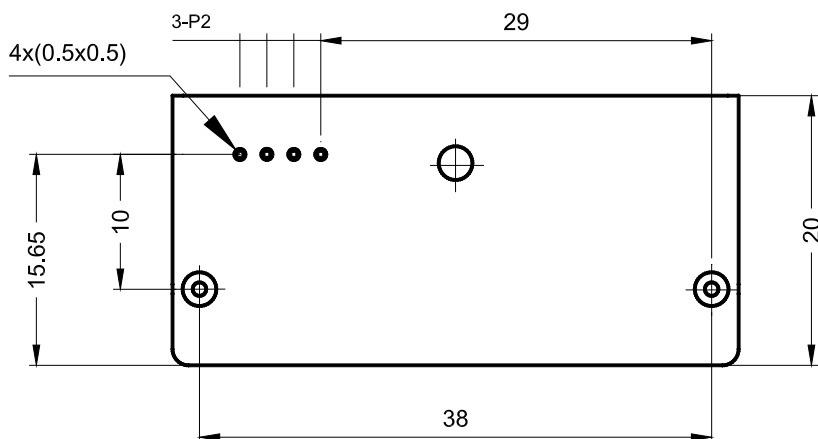
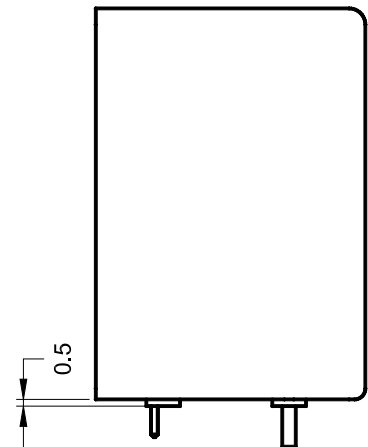
Topstek Current Transducers TN40A .. TN800A

Appearance, dimensions and pin identification

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



← Positive current flow direction



Pin Assignment	
1	+15V
2	-15V
3	V _{OUT}
4	0V