

Topstek Current Transducer TMB100A..TMB1000A

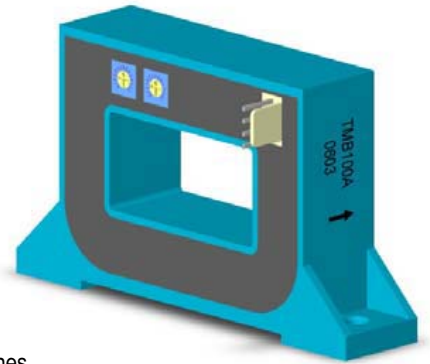
TMB 100A~1000A

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



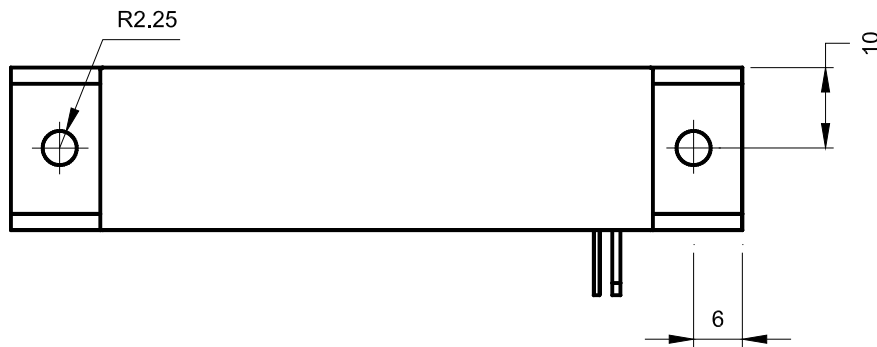
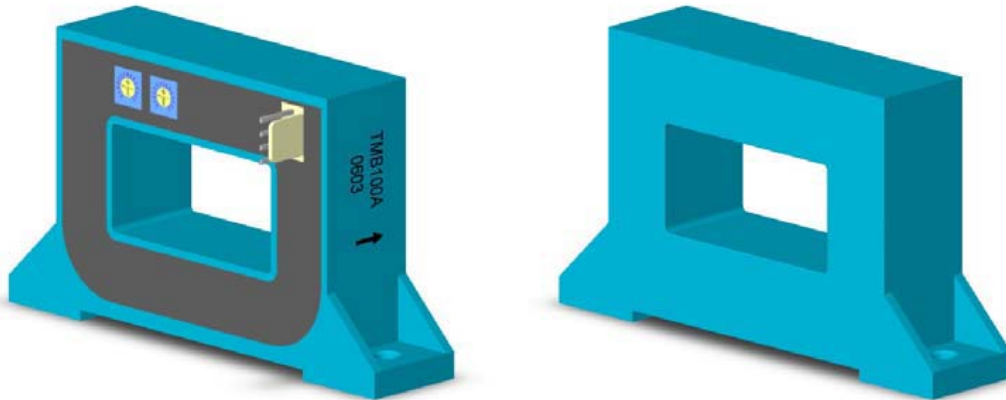
Specifications

Parameter	Symbol	Unit	TMB 100A	TMB 200A	TMB 300A	TMB 400A	TMB 500A	TMB 600A	TMB 800A	TMB 1000A
Nominal Input Current	I_{fn}	A DC	±100	±200	±300	±400	±500	±600	±800	±1000
Linear Range	I_{fs}	A DC	±300	±600	±900	±1200	±1500	±1800	±2000	±2000
Nominal Output Voltage	V_{hn}	V	4.0 V ±1% at $I_f = I_{fn}$ ($R_L = 10k\Omega$)							
Offset Voltage	V_{os}	mV	Within ±40 mV @ $I_f = 0$, $T_a = 25^\circ\text{C}$							
Output Resistance	R_{OUT}	Ω	<100 Ω							
Hysteresis Error	V_{oh}	mV	Within ±20 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	±15 mA max							
Response Time (90% V_{hn})	T_r	μsec	5 μsec @ $d I_f / dt = I_{fn} / \mu\text{sec}$							
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/ $^\circ\text{C}$	< ±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 80 $^\circ\text{C}$							
Storage Temperature	T_s	$^\circ\text{C}$	-20 $^\circ\text{C}$ to 85 $^\circ\text{C}$							
Mass	W	g	250 g							

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Appearance, dimensions and pin identification

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



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

