

Topstek Current Transducer TMA25A .. TMA600A

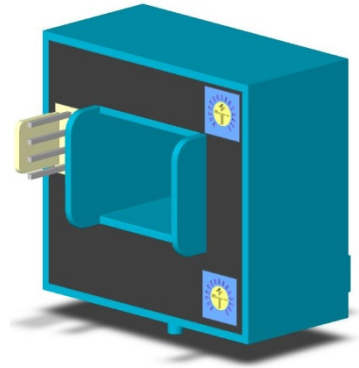
TMA 25A~600A

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



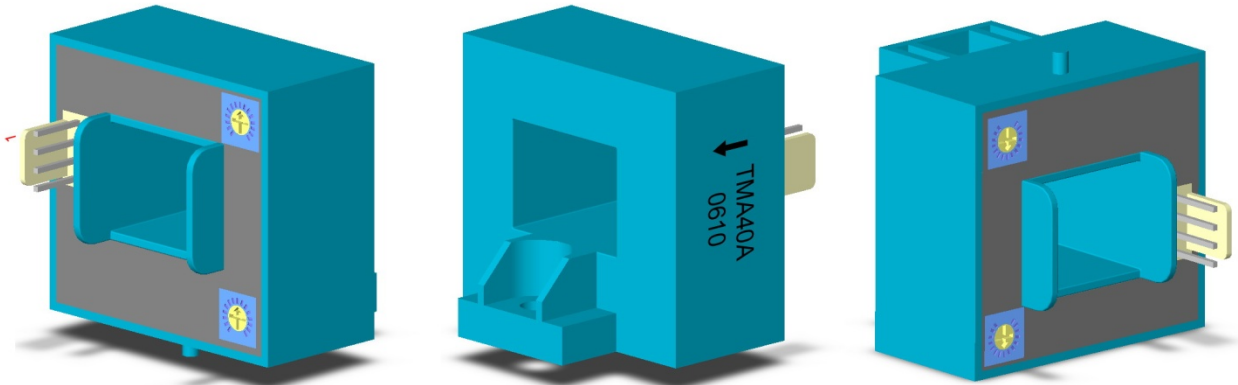
Specifications

Parameter	Symbol	Unit	TMA25A	TMA50A	TMA100A	TMA150A	TMA200A	TMA300A	TMA400A	TMA600A
Nominal Input Current	I_{fn}	A DC	±25	±50	±100	±150	±200	±300	±400	±600
Linear Range	I_{fs}	A DC	±75	±150	±300	±450	±600	±900	±900	±900
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	10 μsec @ $dI_f/dt = I_{fn}/\mu\text{sec}$							
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/ $^\circ\text{C}$	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	65 g							

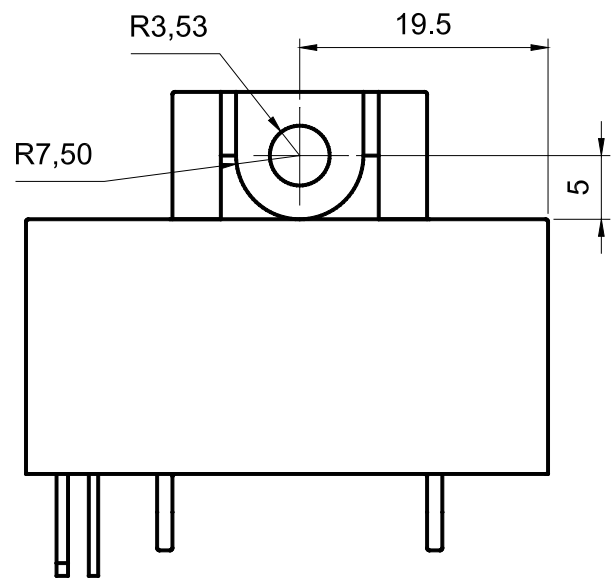
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Appearance, dimensions and pin identification

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



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



Positive current flow direction

