

Topstek Current Transducer TMF500A .. TMF3000A

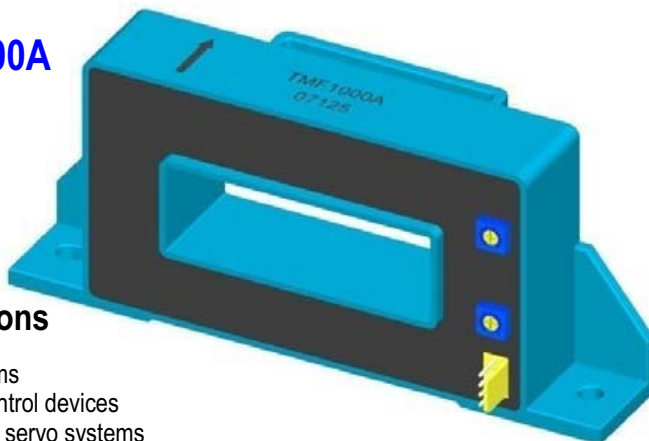
TMF500A~3000A

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 (16 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
- ◆ Process control devices
- ◆ AC and DC servo systems
- ◆ Motor speed controller
- ◆ Electrical vehicle controllers
- ◆ Inverter-controlled welding machines
- ◆ General and special purpose inverters
- ◆ Controller for traction equipment e.g. electric trains



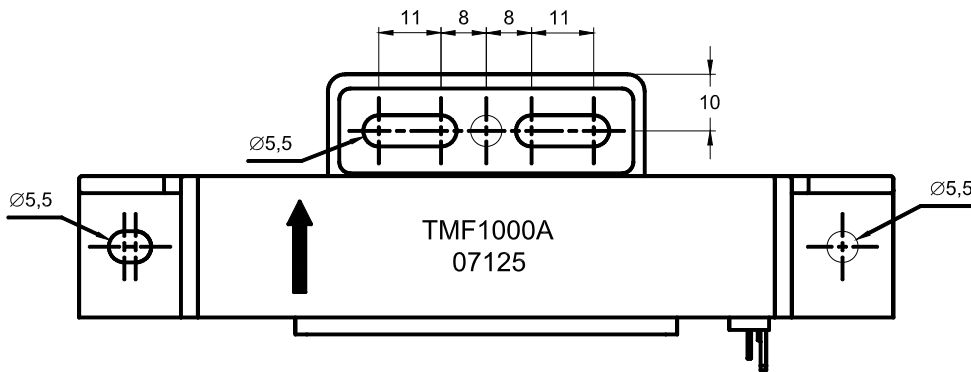
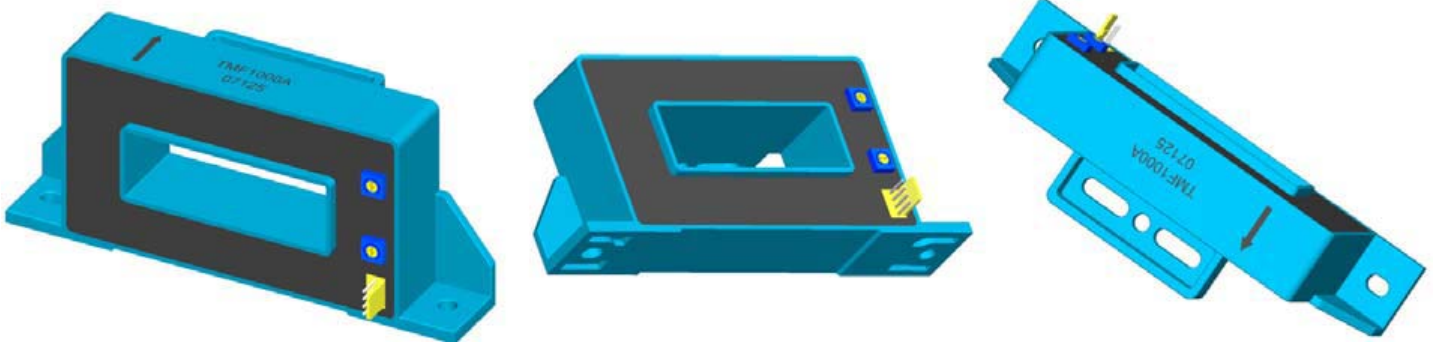
Specifications

Parameter	Symbol	Unit	TMF 500A	TMF 800A	TMF 1000A	TMF 1200A	TMF 1500A	TMF 2000A	TMF 2500A	TMF 3000A
Nominal Input Current	I_{fn}	A DC	500	800	1000	1200	1500	2000	2500	3000
Linear Range	I_{fs}	A DC	±1500	±2400	±3000	±3600	±4500	±6000	±7000	±7500
Nominal Output Voltage	V_{hn}	V	4 V±1% at $I_f=I_{fn}$ ($R_L=10k\Omega$)							
Offset Voltage	V_{os}	mV	Within ±15 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	ρ	%	Within ±1% of I_{fn}							
Consumption Current	I_{CC}	mA	±16 mA nominal							
Response Time (90% V_{hn})	T_r	μsec	5 μsec max. @ $d I_f / dt = I_{fn} / \mu\text{sec}$							
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/ $^\circ\text{C}$	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	>500 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	470 g							

Topstek Current Transducers TMF500A .. TMF3000A

Appearance, dimensions and pin identification

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



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

→
Positive current flow direction

