

# Topstek Current Transducer TMQ100A .. TMQ1000A

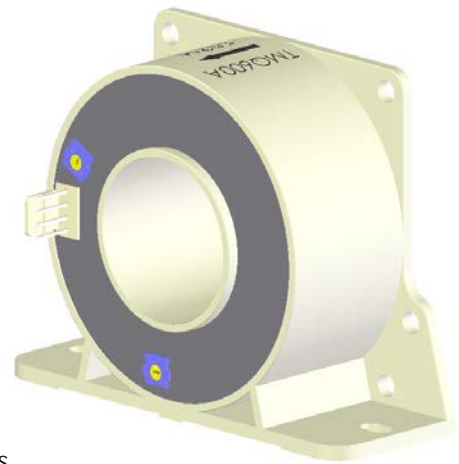
## TMQ 100A~1000A

### 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 (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	TMQ 100A	TMQ 200A	TMQ 300A	TMQ 400A	TMQ 500A	TMQ 600A	TMQ 800A	TMQ 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	±2400	±3000
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	$R_{OUT}$	$\Omega$	<10 $\Omega$							
Hysteresis Error	$V_{oh}$	mV	Within ±10 mV @ $I_f = I_{fn} \rightarrow 0$							
Supply Voltage	$V_{CC}/V_{EE}$	V	±15V ±5%							
Linearity	$\rho$	%	Within ±0.5% of $I_{fn}$							
Consumption Current	$I_{CC}$	mA	±16 mA nominal							
Response Time (90% $V_{hn}$ )	$T_r$	$\mu\text{sec}$	3 $\mu\text{sec}$ 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 ±0.05 %/ $^\circ\text{C}$ @ $I_{fn}$							
Thermal Drift of Zero Current Offset	-	mV/ $^\circ\text{C}$	Within ±1 mV/ $^\circ\text{C}$ @ $I_{fn}$							
Dielectric Strength	-	V	AC2.5KV X 60 sec							
Isolation Resistance @ 1000 VDC	$R_{IS}$	M $\Omega$	>500 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	240 g							

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## Appearance, dimensions and pin identification

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

