

Topstek Current Transducer TQE500A-T5

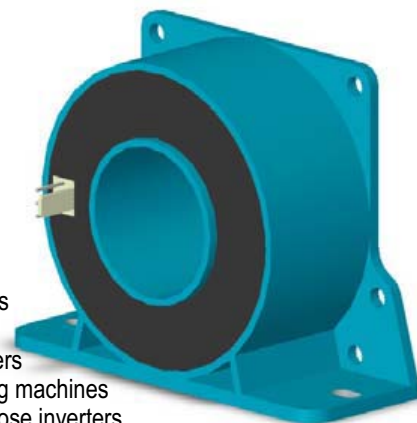
TQE500A-T5

Features

- ◆ Highly reliable Closed Loop 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 (9 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 encapsulant, 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 eg. electric trains
- ◆ Other automatic control systems



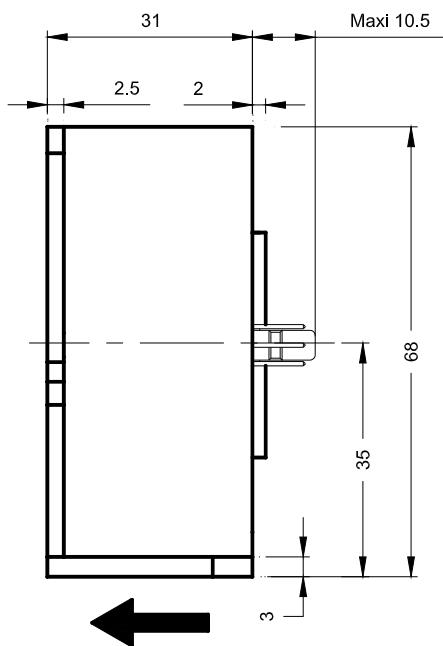
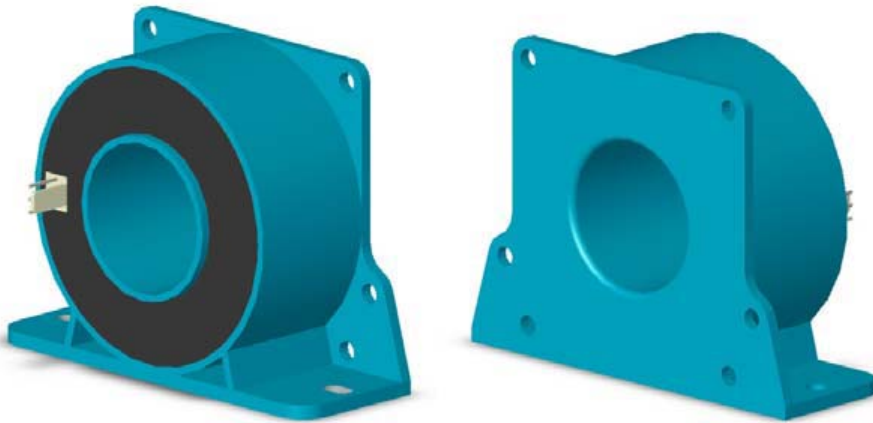
Specifications

Parameter	Symbol	Unit	TQE500A-T5-B24				TQE500A-T5-B15		
Nominal Input Current	I_{pn}	A DC	± 500				± 500		
Supply Voltage Range	V_{CC}/V_{EE}	V	$\pm 12 \text{ --- } \pm 24$				$\pm 12 \text{ --- } \pm 15$		
Supply Voltage $\pm 5\%$	V_{CC}/V_{EE}	V	± 12	± 15	± 24		± 12	± 15	
Consumption Current	I_{CC}	mA	$35 \text{ mA} + I_s$				$15 \text{ mA} + I_s$		
Measuring Range	I_{fs}	A DC	± 500	± 600	± 700	± 800	± 500	± 600	± 700
Maximum Load Resistance	R_{Mmax}	Ω	15	5	10	60	15	5	10
Minimum Load Resistance	R_{Mmin}	Ω	0	0	0	0	0	0	0
Conversion Ratio	K_N		1:5000						
Secondary Current @ I_{pn}	I_s	mA	100						
Secondary Resistance	R_{Mmax}	Ω	76						
Offset Current	I_{os}	mA	Within $\pm 0.25 \text{ mA}$ @ $I_p=0$, $T_a=25^\circ\text{C}$						
Overall Accuracy @ I_{pn}		%	Within $\pm 0.3\%$ of I_{fn}						
Linearity	ρ	%	Within $\pm 0.1\%$ of I_{fn}						
Response Time ($90\%V_{hn}$)	T_r	μsec	$1 \mu\text{sec max.} @ \quad d I_f / dt = I_{pn} / \mu\text{sec}$						
Frequency bandwidth (-3dB)	f_{BW}	Hz	DC to 200kHz						
Thermal Drift of Output	-	$\%/^\circ\text{C}$	Within $\pm 0.05 \%/^\circ\text{C}$ @ I_{fn}						
Dielectric Strength	-	V	AC2.5KV X 60 sec						
Isolation Resistance @ 1000 VDC	R_{IS}	M Ω	$> 1000 \text{ M}\Omega$						
Operating Temperature	T_a	$^\circ\text{C}$	-15°C to 80°C						
Storage Temperature	T_s	$^\circ\text{C}$	-20°C to 85°C						
Mass	W	g	200 g						

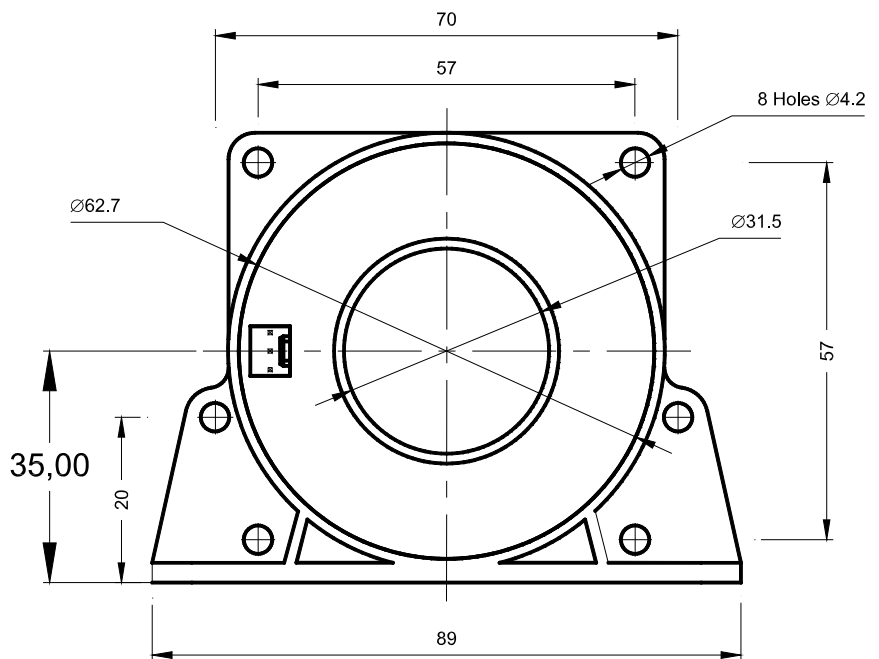
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Appearance, dimensions and pin identification

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



Positive current flow direction



Molex Connector
(with 2.54 mm pitch)



JST Connector
(with 3.81 mm pitch)

