

# Topstek Current Transducer TQPV50A .. TQPV350A

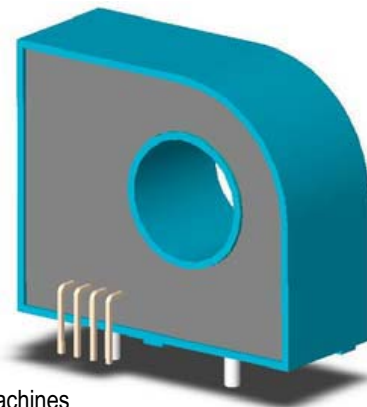
## TQPV50A ~350A

### Features

- ◆ Highly reliable Closed Loop Hall Effect device
- ◆ Open Loop CT voltage output format: 4V out at nominal input
- ◆ Compact and light weight
- ◆ Fast response time
- ◆ Excellent linearity of the output voltage over a wide input range
- ◆ Excellent frequency response (> 125 kHz)
- ◆ Low power consumption at quiescent state (10 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 encapsulated, 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



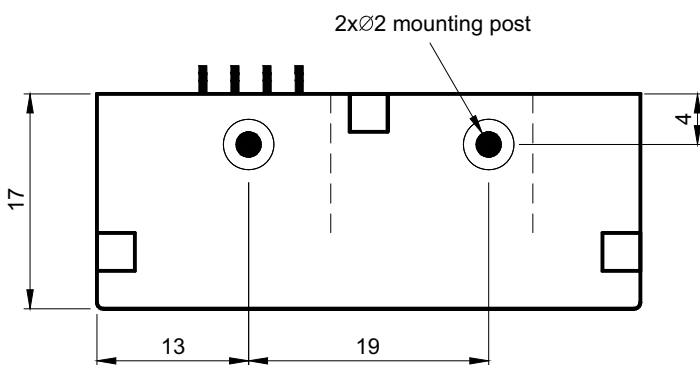
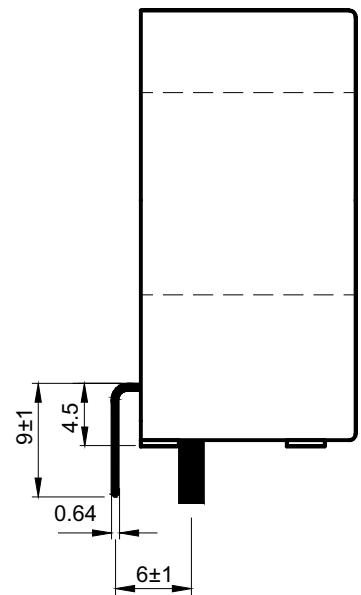
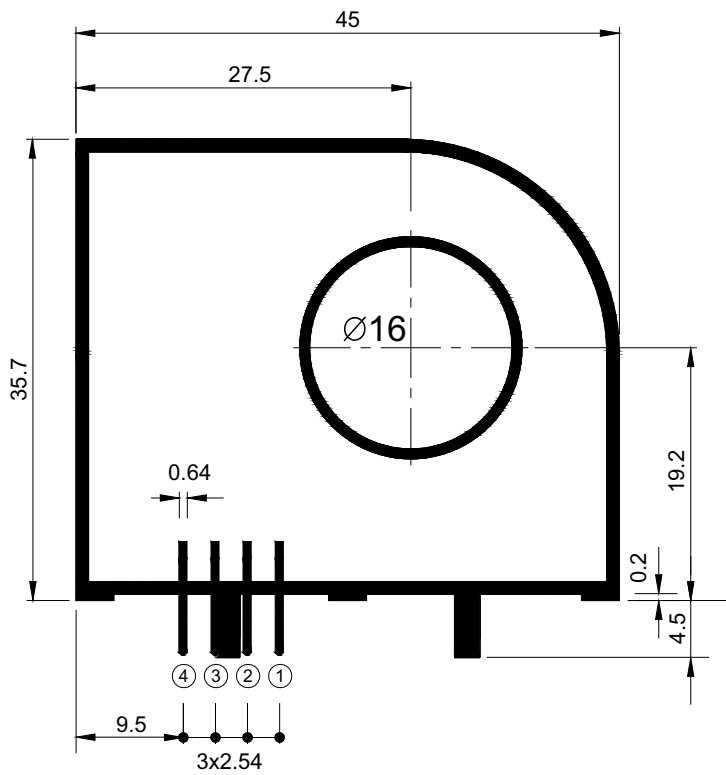
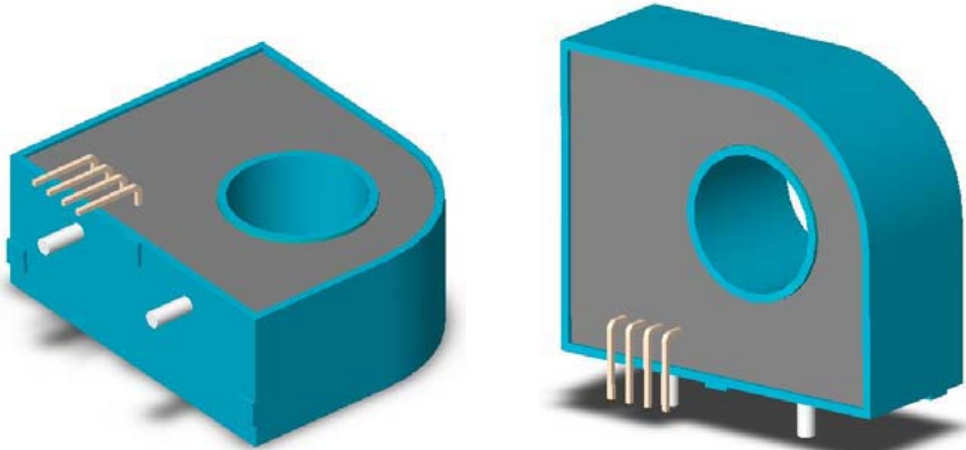
### Specifications

Parameter	Symbol	Unit	TQPV 50A	TQPV 75A	TQPV 100A	TQPV 125A	TQPV 150A	TQPV 200A	TQPV 250A	TQPV 300A	TQPV 350A
Nominal Input Current	$I_{fn}$	A DC	±50	±75	±100	±125	±150	±200	±250	±300	±350
Linear Range	$I_{fs}$	A DC	±150	±225	±300	±375	±450	±600	±750	±750	±750
Secondary Coil Current	$I_s$	A	$I_f/1500$			$I_f/2500$			$I_f/3200$		
Consumption Current@ $I_f=I_{fn}$	$I_{CC}$	mA	47	63	80	63	73	75	91	106	120
Nominal Output Voltage	$V_{hn}$	V	±4 V±1% at $I_f=I_{fn}$ ( $R_L=10k\Omega$ ), $T_a=25^\circ\text{C}$								
Supply Voltage	$V_{CC}/V_{EE}$	V	±15V±5%								
Offset Voltage	$V_{os}$	mV	Within ±40 mV @ $I_f=0$ , $T_a=25^\circ\text{C}$								
Output Resistance	$R_{OUT}$	$\Omega$	<100 $\Omega$ (50 $\Omega$ nominal)								
Hysteresis Error	$V_{oh}$	mV	Within ±25 mV @ $I_f=I_{fn} \rightarrow 0$								
Linearity	$\rho$	%	Within ±0.2% of $I_{fn}$								
Response Time (90% $V_{hn}$ )	$T_r$	$\mu\text{sec}$	3 $\mu\text{sec}$ max. @ $d I_f / dt = I_{pn} / \mu\text{sec}$								
Frequency Bandwidth (-3dB)	$f_{BW}$	Hz	DC to 125kHz								
Thermal Drift of Output	-	%/ $^\circ\text{C}$	Within ±0.02 %/ $^\circ\text{C}$ @ $I_{fn}$								
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 $\Omega$	>1000 M $\Omega$								
Operating Temperature	$T_a$	$^\circ\text{C}$	-40 $^\circ\text{C}$ to 80 $^\circ\text{C}$								
Storage Temperature	$T_s$	$^\circ\text{C}$	-40 $^\circ\text{C}$ to 85 $^\circ\text{C}$								
Mass	W	g	<40 g								

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## Appearance, dimensions and pin identification

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



Pin Assignment	
①	+15V
②	-15V
③	V <sub>out</sub>
④	0V