

Topstek Current Transducer TQPV50A .. TQPV350A

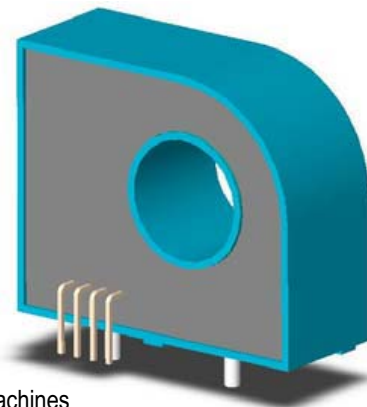
TQPV50A ~350A

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



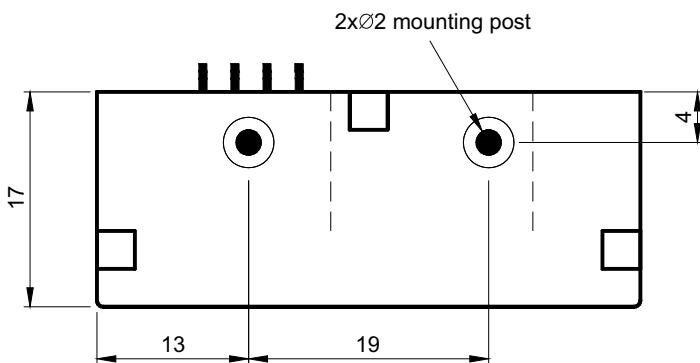
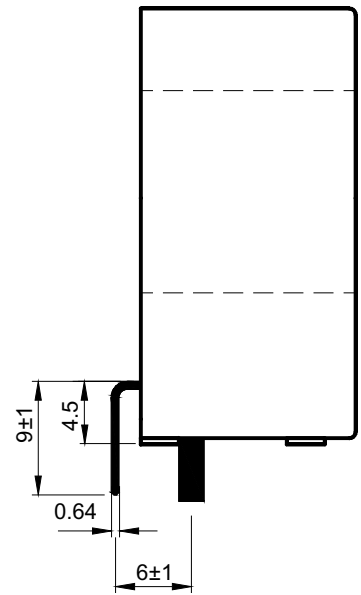
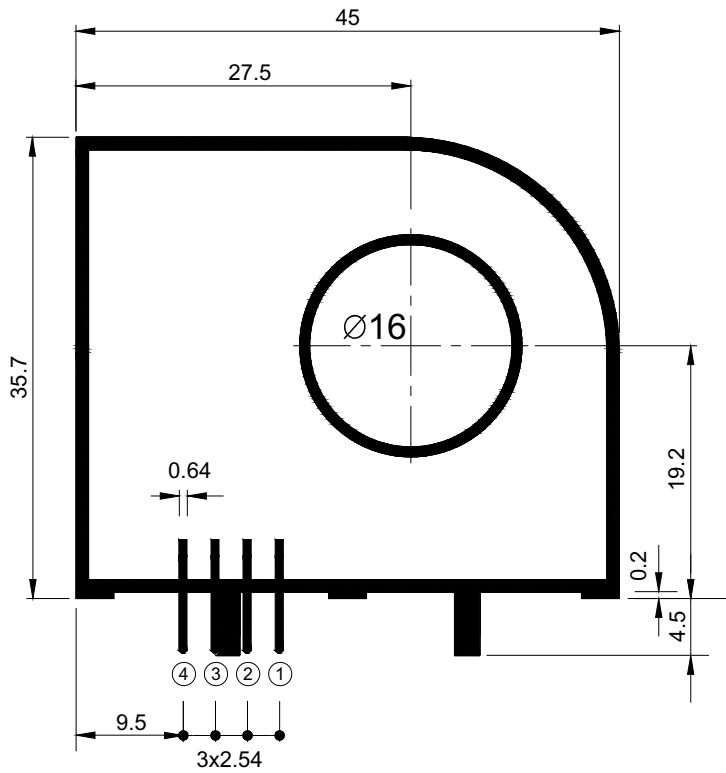
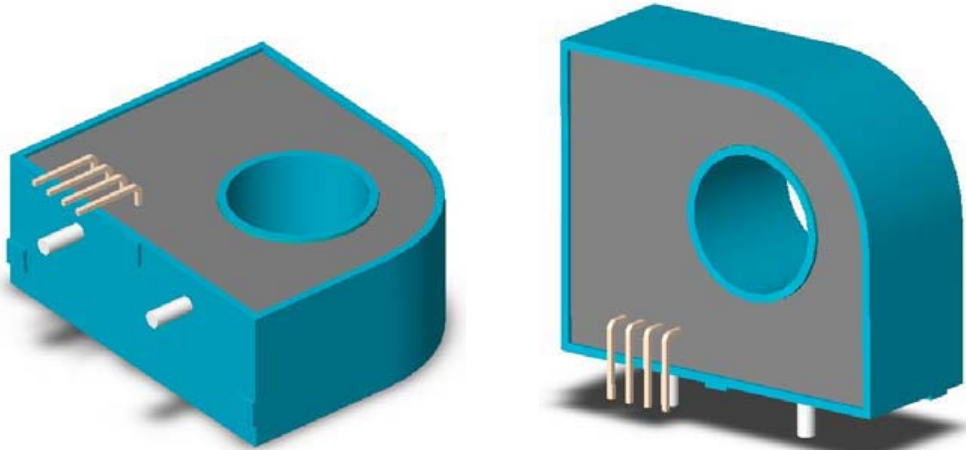
Specifications

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}	Ω	<100 Ω (50 Ω nominal)								
Hysteresis Error	V_{oh}	mV	Within ±25 mV @ $I_f=I_{fn} \rightarrow 0$								
Linearity	ρ	%	Within ±0.2% of I_{fn}								
Response Time (90% V_{hn})	T_r	μsec	3 μsec 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 Ω	>1000 M Ω								
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 ± 0.2 , holes $-0, +0.2$ except otherwise noted.



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