

# Topstek Current Transducer TQDV25A .. TQDV200A

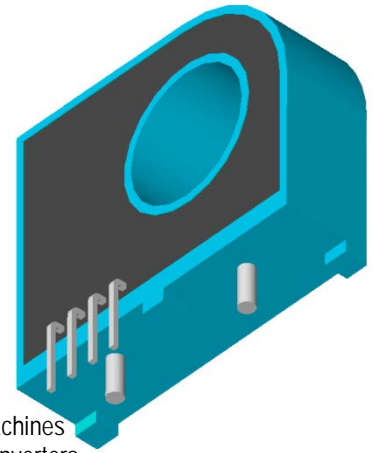
## TQDV25A ~150A

### 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 (> 150 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 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



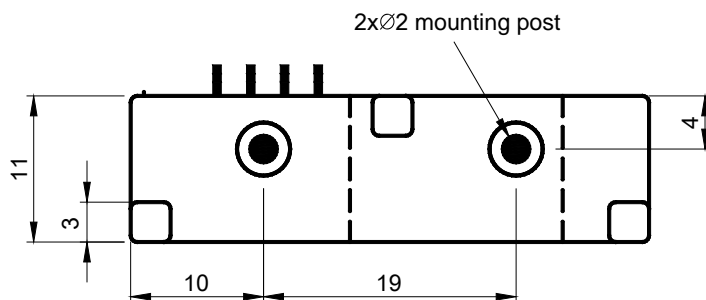
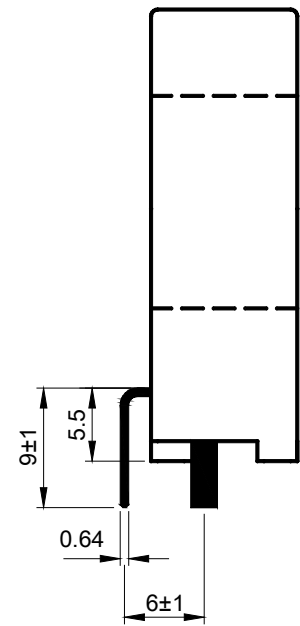
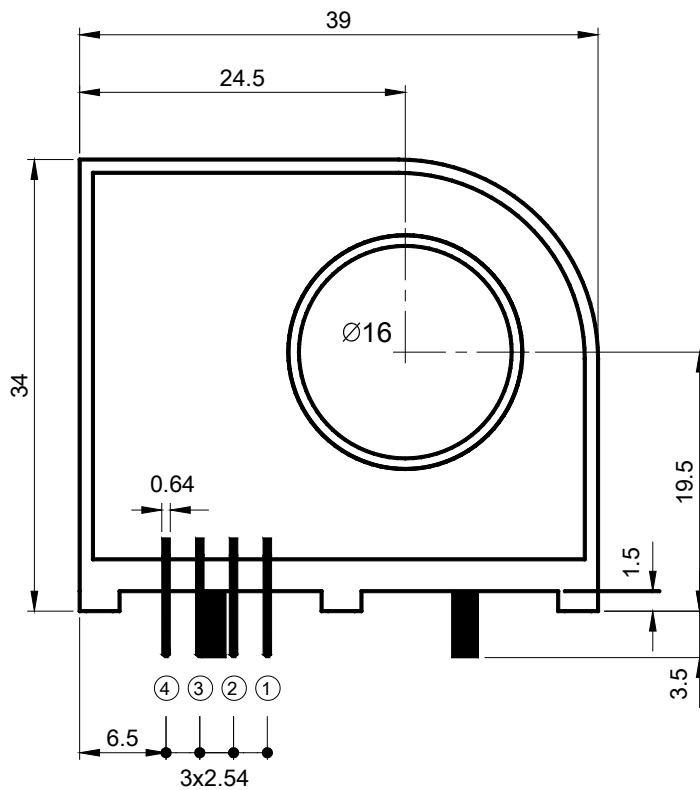
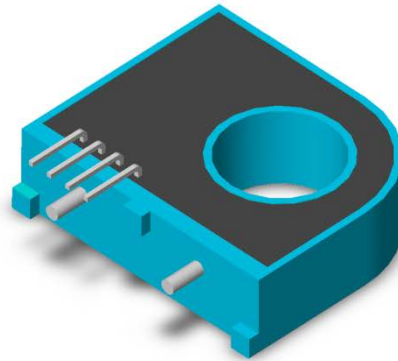
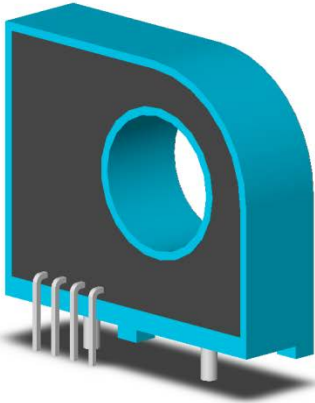
### Specifications

Parameter	Symbol	Unit	TQDV 25A	TQDV 37.5A	TQDV 50A	TQDV 75A	TQDV 100A	TQDV 125A
Nominal Input Current	$I_{fn}$	A DC	±25	±37.5	±50	±75	±100	±125
Linear Range	$I_{fs}$	A DC	±63	±94	±125	±188	±250	±313
Secondary Coil Current	$I_s$	A	$I_f / 1000$			$I_f / 2000$		
Consumption Current@ $I_f = I_{fn}$	$I_{CC}$	mA	35	50	60	48	60	72
Nominal Output Voltage	$V_{hn}$	V	±4 V±1% at $I_f = I_{fn}$ ( $R_L = 10k\Omega$ ) , $T_a = 25^\circ C$					
Supply Voltage Range	$V_{CC}/V_{EE}$	V	±15V ±5%					
Offset Voltage	$V_{os}$	mV	Within ±40 mV @ $I_f = 0$ , $T_a = 25^\circ C$					
Output Resistance	$R_{OUT}$	$\Omega$	<100 $\Omega$ (50 $\Omega$ nominal)					
Hysteresis Error	$V_{oh}$	mV	Within ±35 mV @ $I_f = I_{fn} \rightarrow 0$					
Linearity	$\rho$	%	Within ±0.2% of $I_{fn}$					
Response Time (90% $V_{hn}$ )	$T_r$	$\mu sec$	3 $\mu sec$ max. @ $dI_f/dt = I_{pn}/\mu sec$					
Frequency Bandwidth (-3dB)	$f_{BW}$	Hz	DC to 150kHz					
Thermal Drift of Output	-	%/ $^\circ C$	Within ±0.02 %/ $^\circ C$ @ $I_{fn}$					
Thermal Drift of Zero Current Offset	-	mV/ $^\circ C$	Within ±1.5 mV/ $^\circ C$ @ $I_{fn}$					
Dielectric Strength	-	V	AC2.5KV X 60 sec					
Isolation Resistance @ 1000 VDC	$R_{IS}$	M $\Omega$	>1000 M $\Omega$					
Operating Temperature	$T_a$	$^\circ C$	-40 $^\circ C$ to 80 $^\circ C$					
Storage Temperature	$T_s$	$^\circ C$	-40 $^\circ C$ to 85 $^\circ C$					
Mass	W	g	28 g					

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## Appearance, dimensions and pin identification

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



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