

Topstek Current Transducers TGN3A ..TGN67.9A

TGN 3A~67.9A

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 (12 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

Specifications

Parameter	Symbol	Unit	4.3A	7.4A	8.5A	11.3A	14.2A	17A	19.8A	25.5A	31.1A	33.9A	49.5A	63A	67.9A
Rated Current	I_{fn}	A DC	4.3	7.4	8.5	11.3	14.2	17.0	19.8	25.5	31.1	33.9	49.5	63	67.9
Saturation Current	I_{fsat}	A DC	±13	±22.2	±26	±34	±43	±51	±60	±77	±94	±102	±149	±150	±150
Linear Range	I_{fs}	A DC	±13	±22	±26	±34	±43	±51	±60	±77	±94	±102	±149	±150	±150
Continuous DC Current	I_{fc}	A DC	±9	±14	±14	±24	±24	±24	±24	±36	±36	±36	±36	±36	±36
Primary Coil Size	d	mm	0.8φ	1.0φ	1.0φ	1.3φ	1.3φ	1.3φ	1.3φ	1.6φ	1.6φ	1.6φ	1.6φ	1.6φ	1.6φ
Primary Coil Turns	N	T	7	4	4	3	2	2	2	1	1	1	1	1	1
Nominal Output Voltage	V_{fn}	V	4 V ±1.5 % @ $I_f = I_{fn}$ ($R_L = 10k\Omega$)												
Offset Voltage	V_{os}	mV	Within ±60 mV @ $I_f = 0$, $T_a = 25^\circ C$												
Output Resistance	R_{OUT}	Ω	<100 Ω												
Hysteresis Error	V_{oh}	mV	Within ±40mV @ $I_f = I_{fn} \rightarrow 0$												
Supply Voltage	V_{CC}/V_{EE}	V	±15V ±5%												
Linearity	ρ	%	Within ±1% of I_{fn}												
Consumption Current	I_{CC}	mA	Within 12mA												
Response Time	t_{CC}	μsec	10 μsec max. @ $dI_f/dt = I_{fn}/\mu sec$												
Overshoot Response	-	%	5% max. @ $dI_f/dt = I_{fn}/\mu sec$												
Frequency bandwidth (-3dB)	f_{BW}	Hz	DC to 50kHz												
Thermal Drift of Output	-	%/°C	Within ±0.1 %/°C @ I_{fn}												
Thermal Drift of Zero Current Offset	-	mV/°C	Within ±3 mV/°C @ I_{fn}												
Dielectric Strength	-	V	AC2.5KV (50/60Hz) X 60 sec												
Isolation Resistance @ 500 VDC	R_{IS}	M Ω	>500 M Ω												
Operating Temperature	T_a	°C	-15°C to + 80°C												
Storage Temperature	T_s	°C	-20°C to + 85°C												
Mass	W	g	8 g												

Applications

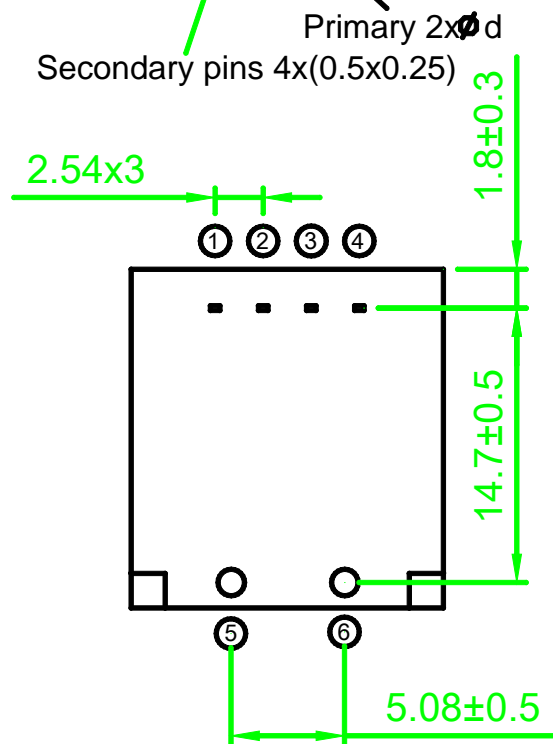
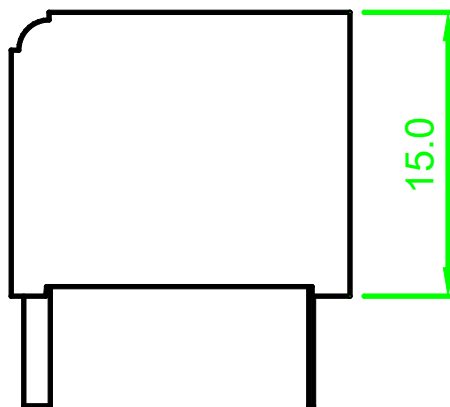
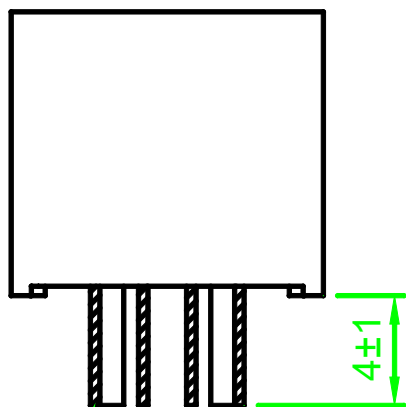
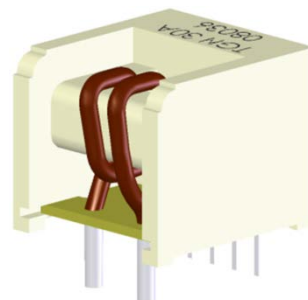
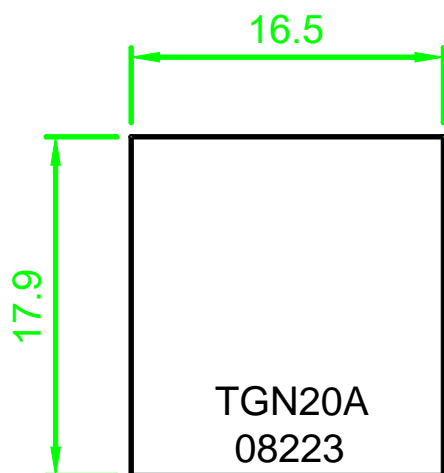
- ◆ UPS systems
- ◆ Industrial robots
- ◆ NC tooling machines
- ◆ Elevator controllers
- ◆ Process control devices
- ◆ AC and DC servo systems
- ◆ Motor speed controller
- ◆ Electrical vehicle controllers
- ◆ Inverter-controlled welding machines
- ◆ General and special purpose inverters
- ◆ Power supply for laser processing machines
- ◆ Controller for traction equipment e.g. electric trains
- ◆ Other automatic control systems



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Appearance, dimensions and pin identification

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



①	-15V
②	0V
③	+15V
④	V _{OUT}
⑤	I ⁺
⑥	I ⁻