

Topstek Current Transducer TGU3A .. TGU51.6A

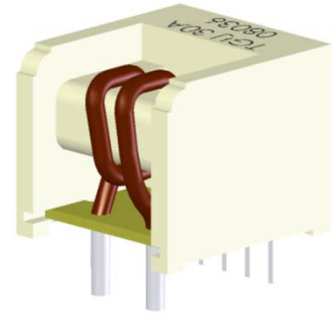
TGU 3A~51.6A

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

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



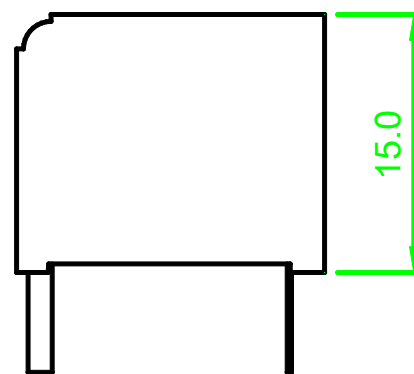
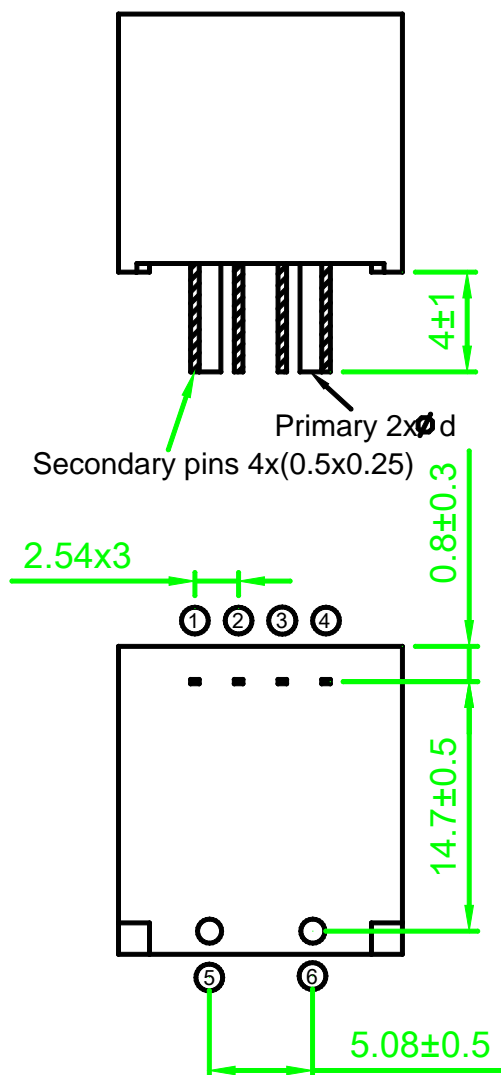
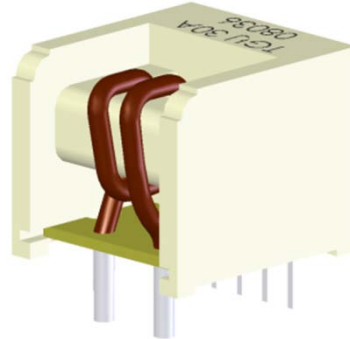
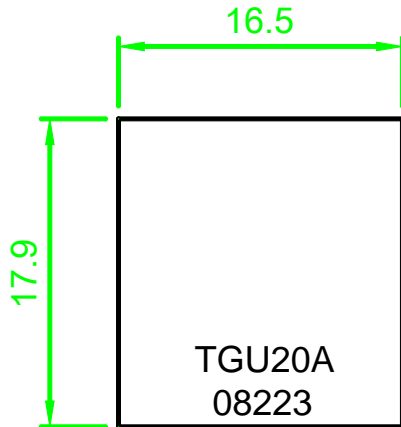
Specifications

Parameter	Symbol	Unit	TGU17.5A	TGU19A	TGU27A	TGU27.8A	TGU30.3A	TGU33.4A	TGU34.1A	TGU51.6A
Rated Current	I_{fn}	A DC	17.5	19.0	27.0	27.8	30.3	33.4	34.1	51.6
Saturation Current	I_{fsat}	A DC	±44	±48	±68	±70	±76	±84	±86	±129
Linear Range	I_{fs}	A DC	0~±44	0~±48	0~±68	0~±70	0~±76	0~±84	0~±86	0~±129
Continuous DC Current	I_{fc}	A DC	±24	±24	±36	±36	±36	±36	±36	±36
Primary Coil Size	d	mm	1.3φ	1.3φ	1.6φ	1.6φ	1.6φ	1.6φ	1.6φ	1.6φ
Primary Coil Turns	N	T	2	2	1	1	1	1	1	1
Nominal Output Voltage	V_{fn}	V	2 V±1.5 % @ $I_f=I_{fn}$ ($R_L=10k\Omega$)							
Offset Voltage	V_{os}	mV	Within ±40 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	+(7.5 -0.1/+0.5)V, -10V±1V							
Linearity	ρ	%	Within ±1% of I_{fn}							
Consumption Current	I_{CC}	mA	Within 12mA							
Response Time	t_{CC}	μsec	10 μsec max. @ $d I_f / dt = I_{fn} / \mu sec$							
Overshoot Response	-	%	5% max. @ $d I_f / dt = I_{fn} / \mu sec$							
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							

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Appearance, dimensions and pin identification

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



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