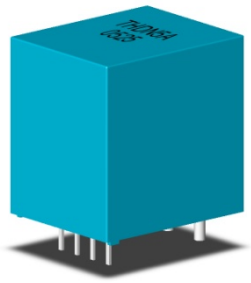
Topstek Current Transducers THDN3A ..THDN67.9A

THDN 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

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

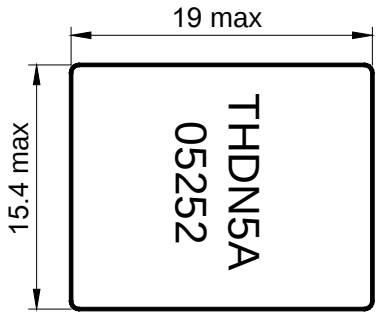
Specifications

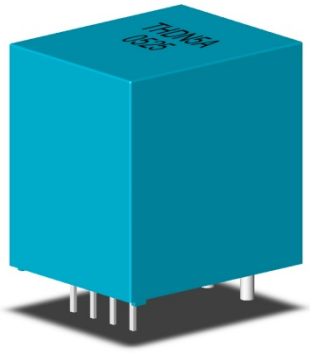
Parameter	Symbol	Unit	4.3A	7.4A	8.5A	11.3A	14.2A	17A	19.8A	25.5A	31.1A	33.9A	49.5A	63A	67.9A
Rated Current	I_{fn}	A DC	4.3	7.4	8.5	11.3	14.2	17.0	19.8	25.5	31.1	33.9	49.5	63	67.9
Saturation Current	I_{fsat}	A DC	±13	±22.2	±26	±34	±43	±51	±60	±77	±94	±102	±149	±150	±150
Linear Range	I_{fs}	A DC	±13	±22	±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_{hn}	V	4 V±1.5 % @ If=I_{fn} (R_L=10kΩ)												
Offset Voltage	V_{os}	mV	Within ±60 mV @ I_f=0, T_a=25°C												
Output Resistance	R_{OUT}	Ω	<100Ω												
Hysteresis Error	V_{oh}	mV	Within ±40mV @ I_f=I_{fn}→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	I_{CC}	μsec	10μsec max. @ $d I_f/dt = I_{fn}$/ μsec												
Overshoot Response	-	%	5% max. @ $d I_f/dt = I_{fn}$/ μsec												
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}	MΩ	>500 MΩ												
Operating Temperature	T_a	°C	-15°C to + 80°C												
Storage Temperature	T_s	°C	-20°C to + 85°C												
Mass	W	g	10 g												

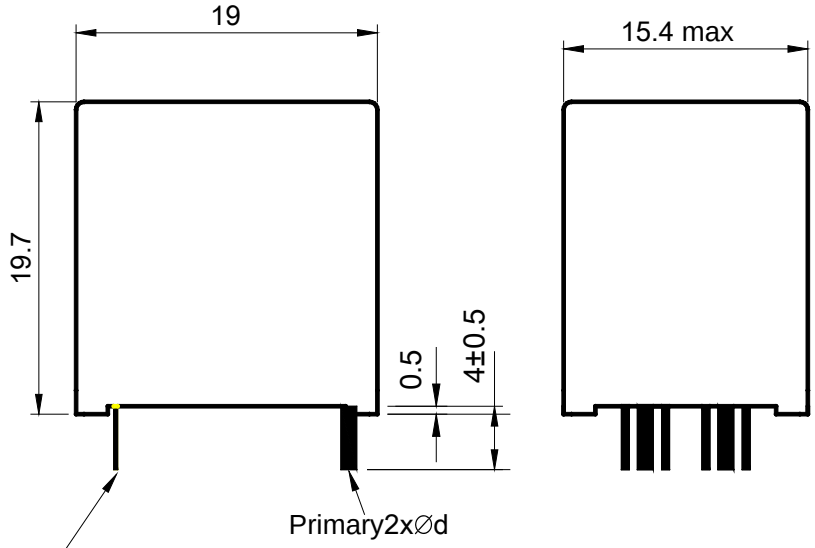
Appearance, dimensions and pin identification

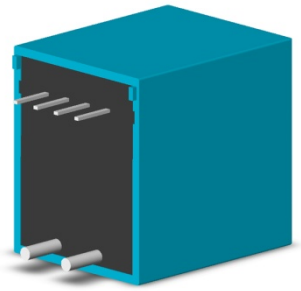
All dimensions in mm ±0.5, holes –0, +0.2 except otherwise noted.

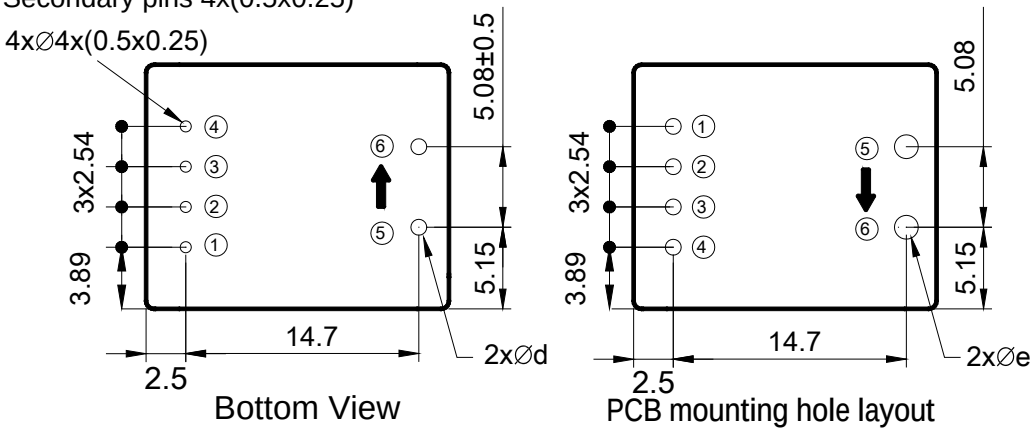
→ Positive current flow direction











Pin Assignment	
1	-15V
2	0V
3	+15V
4	VOUT
5	I +
6	I -

Part Number	THDN3A	THDN4A	THDN5A	THDN6A	THDN7.5A	THDN10A	THDN12.5A	THDN15A	THDN18.5A	THDN20A	THDN25A	THDN30A
d(mm)	0.6	0.8	0.8	0.8	1.0	1.2	1.2	1.3	1.3	1.3	1.6	1.6
e(mm)	1.2	1.2	1.2	1.2	1.6	1.8	1.8	2.0	2.0	2.0	2.4	2.4

Part Number	THDN4.3A	THDN7.4A	THDN8.5A	THDN11.3A	THDN14.2A	THDN17A	THDN19.8A	THDN25.5A	THDN31.1A	THDN33.9A	THDN49.5A	THDN63A THDN67.9A
d(mm)	0.8	1.0	1.0	1.3	1.3	1.3	1.3	1.6	1.6	1.6	1.6	1.6
e(mm)	1.2	1.6	1.6	2.0	2.0	2.0	2.0	2.4	2.4	2.4	2.4	2.4