

Topstek Current Transducers TPH10A .. TPH75A-LTC

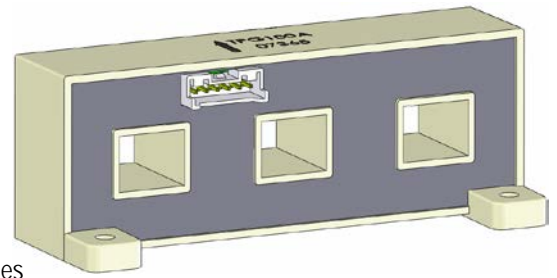
TPH 10A-75A-LTC

Features

- ◆ Highly reliable Hall Effect device
- ◆ Compact and light weight. **Three sensors** in one package
- ◆ Fast response time
- ◆ Excellent linearity of the output voltage over a wide input range
- ◆ Excellent frequency response (> 50 kHz)
- ◆ Low power consumption (+12/-32 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



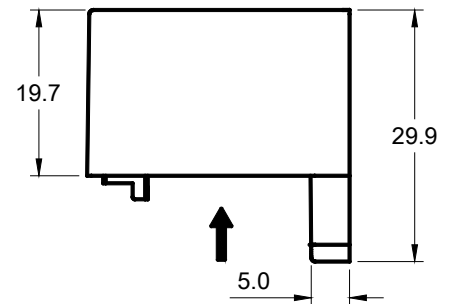
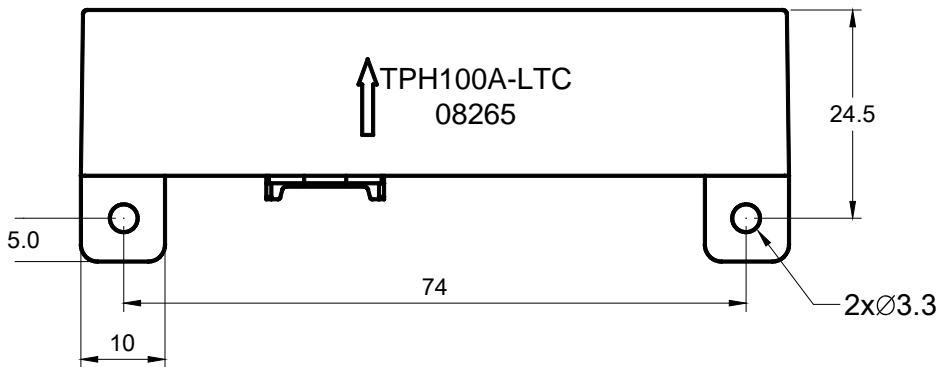
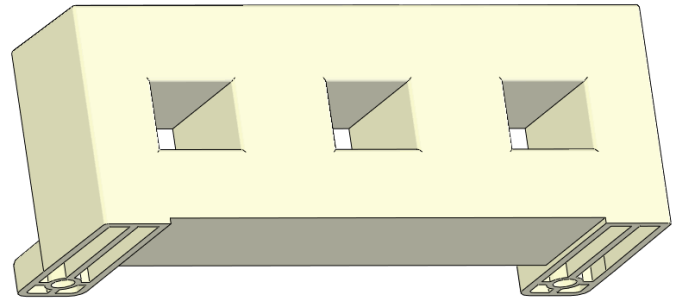
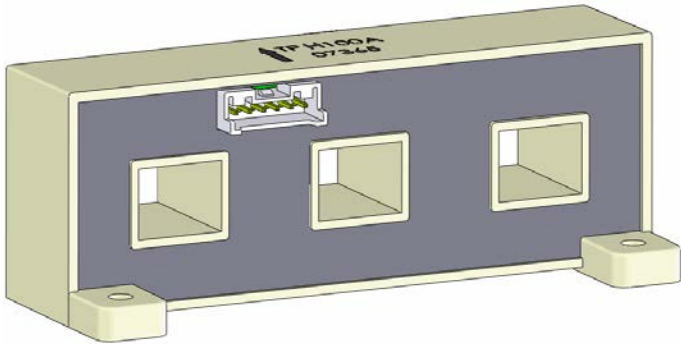
Specifications

Parameter	Symbol	Unit	10A	12.5A	15A	17.5A	18.5A	20A	25A	37.5A	50A	60A	75A
Nominal Input Current	I_{fn}	A DC	10	12.5	15	17.5	18.5	20	25	37.5	50	60	75
Linear Range	I_{fs}	A DC	±30	±37.5	±45	±53	±56	±60	±75	±113	±150	±180	±225
Nominal Output Voltage	V_{hn}	V	4 V ±1% @ $I_f = I_{fn}$ ($R_L = 10k\Omega$)										
Offset Voltage	V_{os}	mV	Within ±40 mV @ $I_f = 0$, $T_a = 25^\circ C$										
Output Resistance	R_{OUT}	Ω	<100 Ω (50 Ω nominal)										
Hysteresis Error	V_{oh}	mV	Within ±25 mV @ $I_f = I_{fn} \rightarrow 0$										
Supply Voltage	V_{CC}/V_{EE}	V	±15V ±5%										
Linearity	ρ	%	Within ±1% of I_{fn}										
Consumption Current	I_{CC}/I_{EE}	mA	+12 mA / -32mA nominal, ±45 mA max										
Response Time (90% V_{hn})	T_r	μ sec	5 μ sec max. @ $dI_f/dt = I_{fn}/\mu$ sec										
Response Performance	-	%	10% Overshoot max.										
Frequency bandwidth (-3dB)	f_{BW}	Hz	DC to 50kHz										
Thermal Drift of Output	-	%/ $^\circ C$	Within ±0.1 %/ $^\circ C$ @ I_{fn}										
Thermal Drift of Zero Current Offset	-	mV/ $^\circ C$	< ±2 mV/ $^\circ C$									< ±1 mV/ $^\circ C$	
Dielectric Strength	-	V	AC2.5KV X 60 sec										
Isolation Resistance @ 1000 VDC	R_{IS}	M Ω	>1000 M Ω										
Operating Temperature	T_a	$^\circ C$	-15 $^\circ C$ to 80 $^\circ C$										
Storage Temperature	T_s	$^\circ C$	-20 $^\circ C$ to 85 $^\circ C$										
Mass	W	g	95 g										

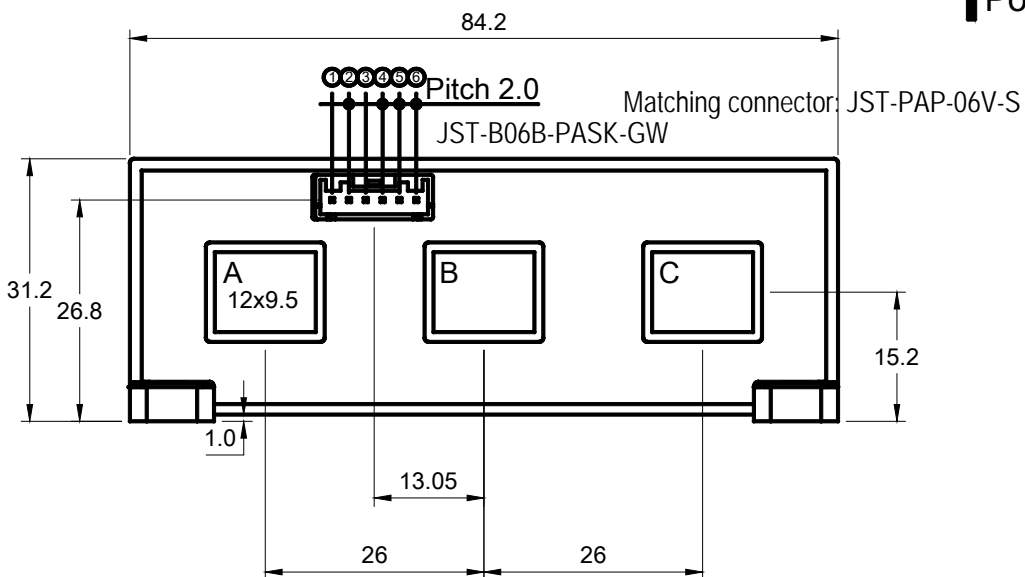
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Appearance, dimensions and pin identification

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



↑ Positive current flow direction



Pin Assignment	
①	+15V
②	GND
③	-15V
④	Output A
⑤	Output B
⑥	Output C