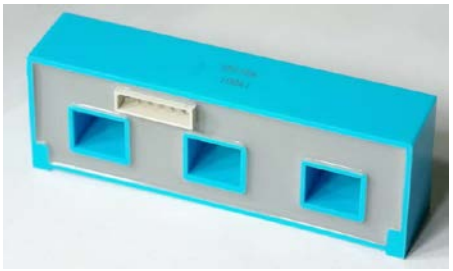
TPJ 25A~300A



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 (33 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

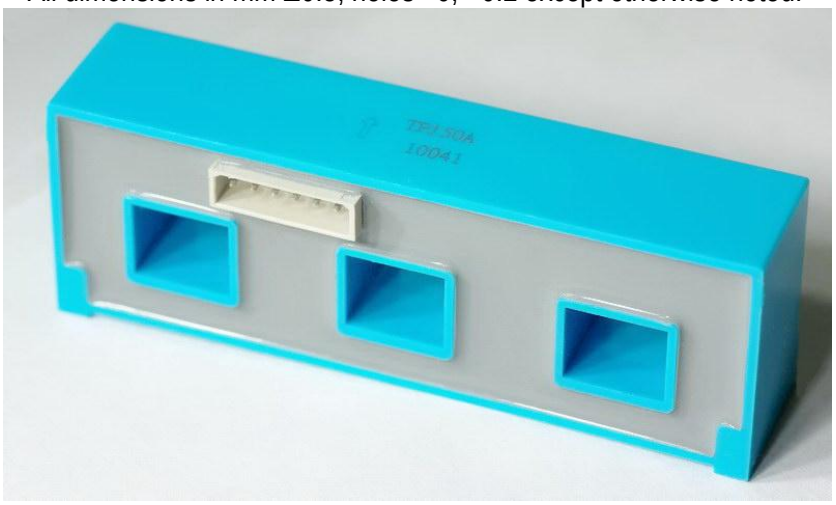
- ♦ UPS systems
- ♦ Industrial robots
- ♦ NC tooling machines
- ♦ Elevator controllers
- ♦ Process control devices
- ♦ AC and DC servo systems
- ♦ Motor speed controller
- ♦ Electrical vehicle controllers
- ♦ Inverter-controlled welding machines
- ♦ General and special purpose inverters
- ♦ Power supply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

Specifications

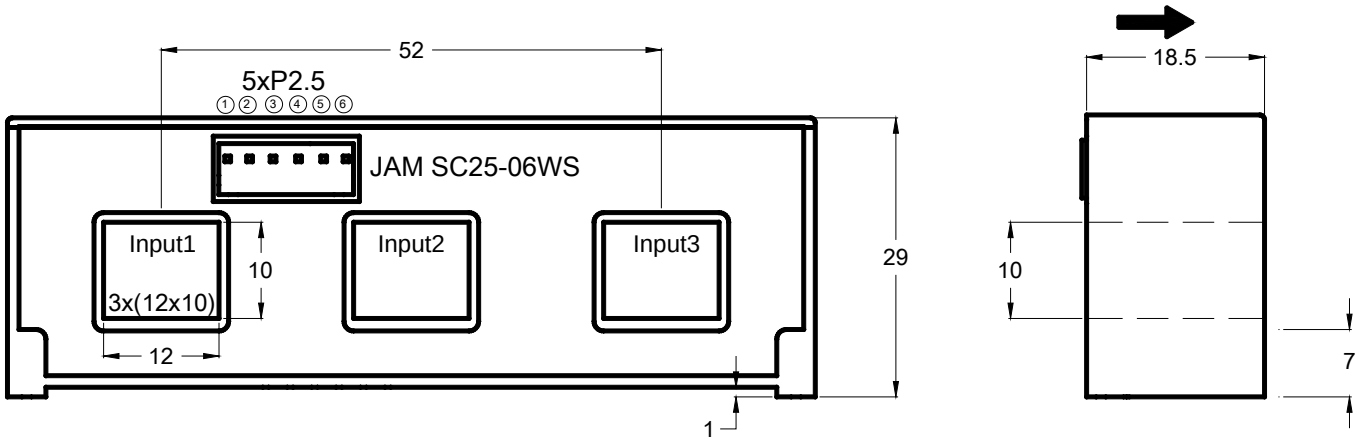
Parameter	Symbol	Unit	TPJ 25A	TPJ 37.5A	TPJ 50A	TPJ 75A	TPJ 100A	TPJ 125A	TPJ 150A	TPJ 175A	TPJ 200A	TPJ 250A	TPJ 300A
Nominal Input Current	I_{fn}	A DC	25	37.5	50	75	100	125	150	175	200	250	300
Saturation Current	I_{fs}	A DC	±75	±112.5	±150	±225	±300	±375	±450	±525	±600	±600	±600
Linear Range	I_{fs}	A DC	±75	±112.5	±150	±225	±300	±375	±450	±450	±450	±450	±450
Nominal Output Voltage	V_{hn}	V	4 V±1% @ If=I_{fn} (R_L=10kΩ)										
Offset Voltage	V_{os}	mV	Within ±30 mV @ I_f=0, T_a=25℃										
Output Resistance	R_{OUT}	Ω	<100Ω(50Ωnominal)										
Hysteresis Error	V_{oh}	mV	< ±40 mV		< ±30 mV		Within ±20 mV @ 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	±33 mA nominal, ±45 mA max										
Response Time (90%V_{hn})	T_r	μsec	5 μsec max. @ $d\,I_f/dt = I_{fn}$/ μsec										
Response Performance	-	%	5% Overshoot max.										
Frequency bandwidth (-3dB)	f_{BW}	Hz	DC to 50kHz										
Thermal Drift of Output	-	%/℃	Within ±0.1 %/℃ @ I_{fn}										
Thermal Drift of Zero Current Offset	-	mV/℃	< ±3	<±2.5	< ±2	< ±1.5	< ±1 mV/℃						
Dielectric Strength	-	V	AC2.5KV X 60 sec										
Isolation Resistance @ 1000 VDC	R_{IS}	MΩ	>1000 MΩ										
Operating Temperature	T_a	℃	-15 ℃ to 80 ℃										
Storage Temperature	T_s	℃	-20 ℃ to 85 ℃										
Mass	W	g	90 g										

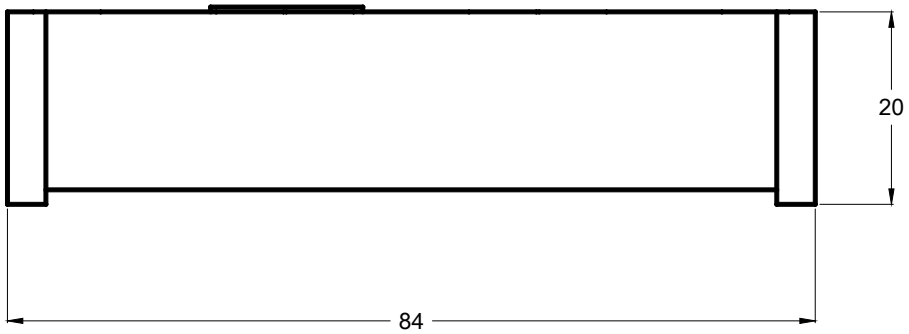
Appearance, dimensions and pin identification

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



Positive current flow direction





Pin Assignment	
1	+15V
2	-15V
3	GND
4	Output1
5	Output2
6	Output3