

# Topstek Current Transducer TFC30P2V-S05-100A..1500A

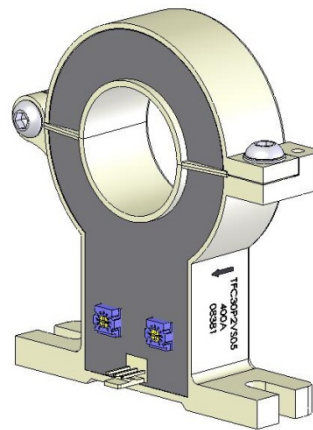
## TFC30P2V-S05 100A~1500A

### 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 (8 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	TFC30P 2V-S05 100A	TFC30P 2V-S05 150A	TFC30P 2V-S05 200A	TFC30P 2V-S05 300A	TFC30P 2V-S05 400A	TFC30P 2V-S05 500A	TFC30P 2V-S05 750A	TFC30P 2V-S05 1000A	TFC30P 2V-S05 1500A
Nominal Input Current	I <sub>fn</sub>	A DC	+100	+150	+200	+300	+400	+500	+750	+1000	+1500
Linear Range (±5%)	I <sub>fs</sub>	A DC	0~+250	0~+375	0~+500	0~+750	0~+1000	0~+1250	0~+1875	0~+2500	0~+3750
Nominal Output Voltage	V <sub>hn</sub>	V	2.0 V±1% at If=I <sub>fn</sub> ( R <sub>L</sub> =10kΩ)								
Offset Voltage	V <sub>os</sub>	mV	Within ±40 mV @ I <sub>f</sub> =0, T <sub>a</sub> =25°C								
Output Resistance	R <sub>OUT</sub>	Ω	<100Ω								
Hysteresis Error	V <sub>oh</sub>	mV	Within ±20 mV @ I <sub>f</sub> =I <sub>fn</sub> →0								
Supply Voltage	V <sub>CC</sub>	V	+5V ±5%								
Linearity	ρ	%	Within ±1% of I <sub>fn</sub>								
Consumption Current	I <sub>CC</sub>	mA	+10 mA max								
Response Time (90%V <sub>hn</sub> )	T <sub>r</sub>	μsec	5 μsec @ d I <sub>f</sub> / dt = I <sub>fn</sub> / μsec								
Frequency bandwidth (-3dB)	f <sub>BW</sub>	Hz	DC to 50kHz								
Thermal Drift of Output	-	%/°C	Within ±0.1 %/°C @ I <sub>fn</sub>								
Thermal Drift of Zero Current Offset	-	mV/°C	< ±3.0	< ±1.5 mV/°C		< ±1.0 mV/°C					
Dielectric Strength	-	V	AC2.5KV X 60 sec								
Isolation Resistance @ 1000 VDC	R <sub>IS</sub>	MΩ	>1000 MΩ								
Operating Temperature	T <sub>a</sub>	°C	-15°C to 80°C								
Storage Temperature	T <sub>s</sub>	°C	-20°C to 85°C								
Mass	W	g	250 g								

# Topstek Current Transducer TFC30P2V-S05-100A..1500A

## Appearance, dimensions and pin identification

All dimensions in mm  $\pm 0.5$ , holes  $-0$ ,  $+0.5$  except otherwise noted.

