



Speciality Magnetic Components
Qualified to ISO 9001:2008

Open Loop Hall Effect Current Transformer Type HOS-N



The HOS-N series are Open Loop Hall Effect Current Transformers covering the range of 50A to 600A. The product provides a voltage output which is galvanically isolated from the primary conductor. Designed to be PCB mounted, the HOS series is controlled via an industry standard connector.

Features

- ◆ 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)
- ◆ 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	HOS 50N	HOS 75N	HOS 100N	HOS 125N	HOS 150N	HOS 175N	HOS 200N	HOS 250N	HOS 300N	HOS 400N	HOS 600N
Nominal Input Current	I_{fn}	A DC	50	75	100	125	150	175	200	250	300	400	600
Linear Range	I_{fs}	A DC	± 150	± 225	± 300	± 375	± 450	± 525	± 600	± 750	± 900	± 1000	± 1000
Nominal Output Voltage	V_{hn}	V	4 V $\pm 1\%$ at $I_f = I_{fn}$ ($R_L = 10k\Omega$)										
Offset Voltage	V_{os}	mV	Within ± 35 mV @ $I_f = 0, T_a = 25^\circ C$										
Output Resistance	R_{OUT}	Ω	$< 100\Omega$										
Hysteresis Error	V_{oh}	mV	Within ± 15 mV @ $I_f = I_{fn} \rightarrow 0$										
Supply Voltage	V_{CC}/V_{EE}	V	$\pm 15V \pm 5\%$										
Linearity	ρ	%	Within $\pm 1\%$ of I_{fn}										
Consumption Current	I_{CC}	mA	± 12 mA nominal, ± 15 mA max										
Response Time (90% V_{hn})	T_r	μsec	7 μsec max. @ $d I_f / dt = I_{fn} / \mu sec$										
Frequency bandwidth (-3dB)	f_{BW}	Hz	DC to 50 kHz										
Thermal Drift of Output	-	$\%/^\circ C$	Within $\pm 0.05 \%/^\circ C$ @ I_{fn}										
Thermal Drift of Zero Current Offset	-	$mV/^\circ C$	Within ± 10 $mV/^\circ C$ @ I_{fn}										
Dielectric Strength	-	V	AC2.5KV X 60 sec										
Isolation Resistance @ 1000 VDC	R_{IS}	$M\Omega$	> 1000 $M\Omega$										
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	50g										

