



Features

- Plastic outer case compliant to UL 94-V0

Advantage

- Very good linearity
- Excellent accuracy
- Low temperature drift
- Wide frequency bandwidth
- Optimized response time
- Current overload capability
- No insertion losses

Applications

- AC variable speed drives and servo motor drives
- Static converters for DC motor drives
- Battery supplied applications
- Uninterruptible power supplies (UPS)
- Switched mode power supplies (SMPS)
- Power suppliers for welding applications

Application domain

- Industrial
- Traction

Standards

- EN 50178
- UL508

Insulation characteristics

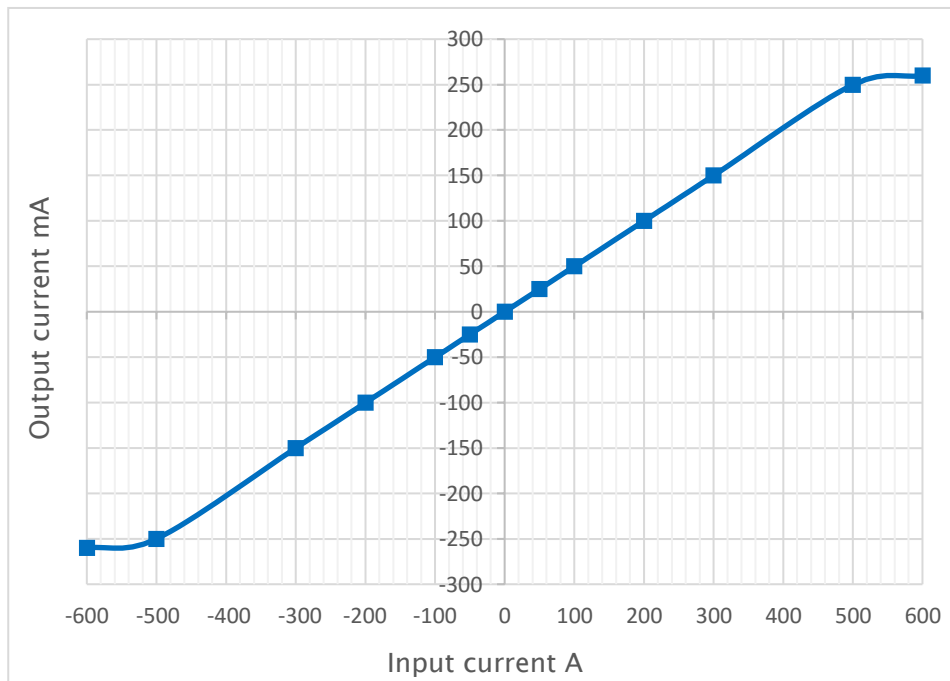
Parameters	Symbol	Value	Units
Dielectric strength between primary and secondary terminals, 50Hz 60 seconds	V_d	3.5	kVrms
Comparative tracking index	CTI	250	V
Insulation resistance	R_{is}	>100	M Ω
Creepage distance		5.00	mm
Clearance distance		3.40	mm

Specifications (Unless otherwise specified temperature is 25°C)

Product code	Input current nominal I_{pn} A	Output current at I_{pn} mA	Max Burden resistance R_b at I_{pn} , Ω		Input current measuring range I_p A	Max Burden resistance R_b at I_p , Ω	
			$\pm 12V$	$\pm 15V$		$\pm 12V$	$\pm 15V$
HE050T04	50	25	240	330	75	220	180
HE100T04	100	50	120	160	150	100	90
HE200T04	200	100	45	70	420	14	28
HE300T04	300	150	24	40	500	10	21

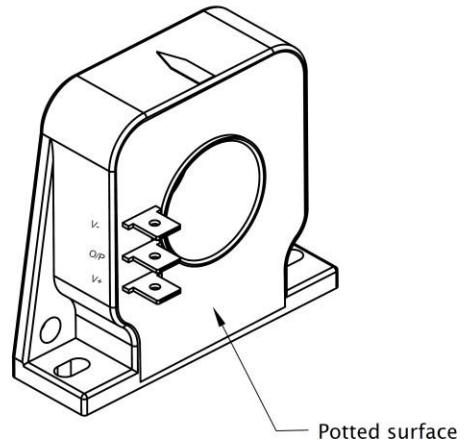
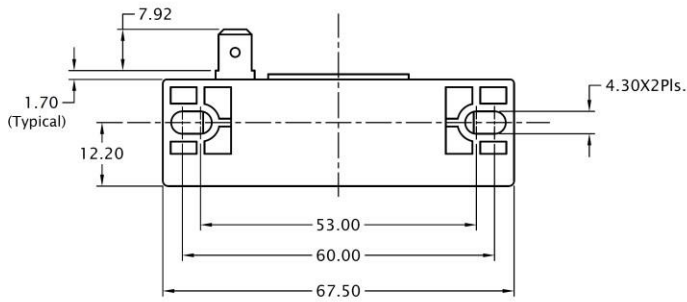
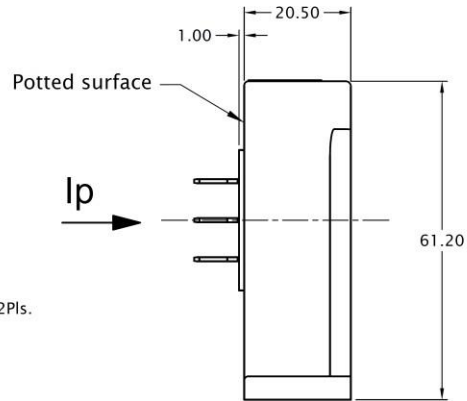
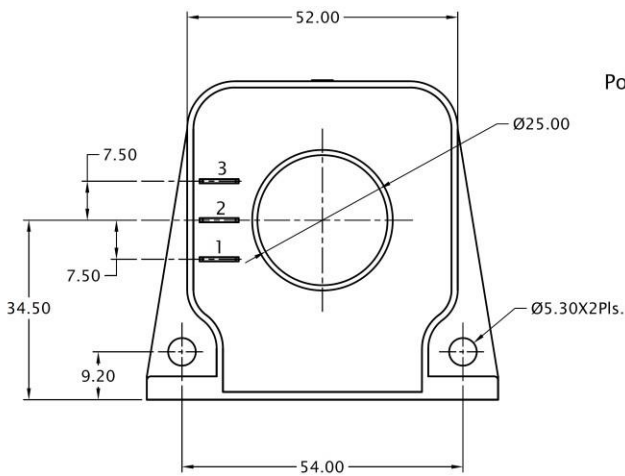
Parameters	Symbol	Condition	Min	Typ	Max	Units
Resistance of secondary winding	R_s			25		Ω
Number of secondary turns	N_s			2000		
Theoretical sensitivity	G_{th}			0.5		mA/A
Supply voltage	V_s	$\pm 5\%$	± 12		± 15	V
Current consumption	I_c	$V_s = \pm 15V$		$20 + I_{out}$		mA
Offset current	I_{off}		-0.15		+0.15	mA
Temperature variation of I_{off}	I_{ot}	-40 to +85°C	-0.25		+0.25	mA
Linearity error	Σ_L			< 0.1		% of I_{pn}
Overall accuracy at I_{pn}	X_G		-0.8		+0.8	% of I_{pn}
Response time @ 90% of I_{pn}	t_r	>100A/ μs		<1.0		μs
Frequency bandwidth	BW	-3dB, small signal bw	0		100	kHz
di/dt accurately followed	di/dt			>100		A/ μs
Ambient operating temperature	T_A		-40		+85	°C
Ambient storage temperature	T_S		-40		+90	°C
Mass	m			120		g

Input & Output Characteristics

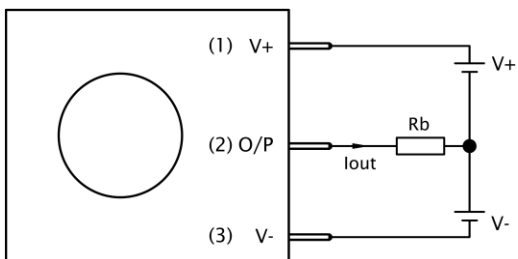


Mechanical dimensions

GENERAL TOL. ±0.5 mm	
ALL DIMENSIONS ARE IN 'mm'	SCALE -NTS



Connection Diagram



Hall Effect Current Sensor HE050...300T04

- Connector on the product: Faston tab part no.- 62409-1, TE Connectivity AMP Connectors
- Suggested mating connector: Faston receptacle terminal part no.- 63609-2, TE Connectivity AMP Connectors
- Sensor mounting: Base mounting, 2 holes X Ø 4.30mm, M4 steel screws, recommended fastening torque 3 N-m
Vertical mounting, 2 holes X 5.30mm, M5 steel screws, recommended fastening torque 4 N-m
- It is recommended to centrally locate the current carrying conductor or completely fill the central opening for optimum performance
- Output increases when current (I_p) flows in the direction of arrow

Safety



- This Sensor must be used in electric/electronic equipment with respect to applicable standards and safety requirements in accordance with the manufacturer's operating instructions.



- Caution, risk of electrical shock
- When operating the Sensor, certain parts of the module can carry hazardous voltage (eg. primary busbar, power supply).
- Ignoring this warning can lead to injury and/or cause serious damage.
- A protective housing or additional shield could be used.
- Over currents ($\gg I_{pn}$) can cause an additional voltage offset due to magnetic remanence.
- The temperature of the primary conductor shall not exceed 100 °C.
- This Sensors must be used in electrical or electronic systems as per the applicable standards.
- Protect non-isolated high-voltage current carrying parts against direct contact (e.g. with a protective housing)
- When installing the sensor, ensure that the safe separation (between primary circuit and secondary circuit) is maintained over the whole circuits and their connections.

General information:

Electrohms reserves the right to make modifications on products for improvements without prior notice.