

$I_{pn} = 50 \dots 300A$ 

Representative image only

## 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
- Railways

## Standards

- UL508\*
- EN 50155
- EN 50178 (IEC 62477)

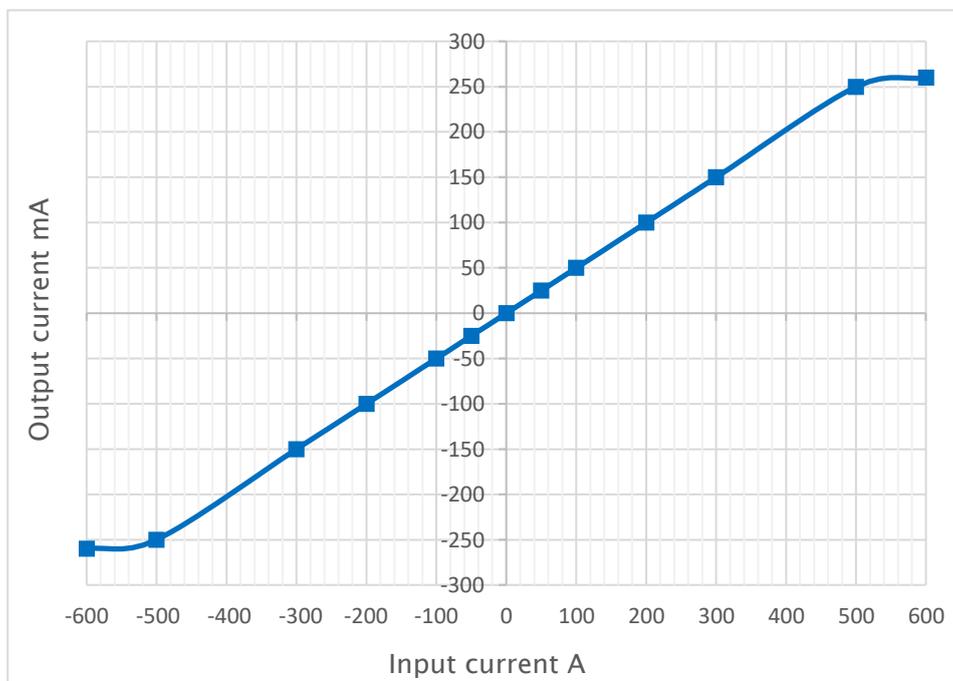
## Insulation characteristics

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 $\Omega$
Creepage distance		5.00	mm
Clearance distance		3.40	mm

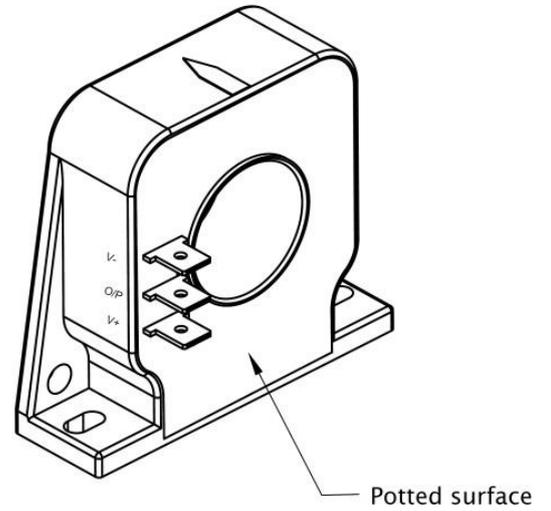
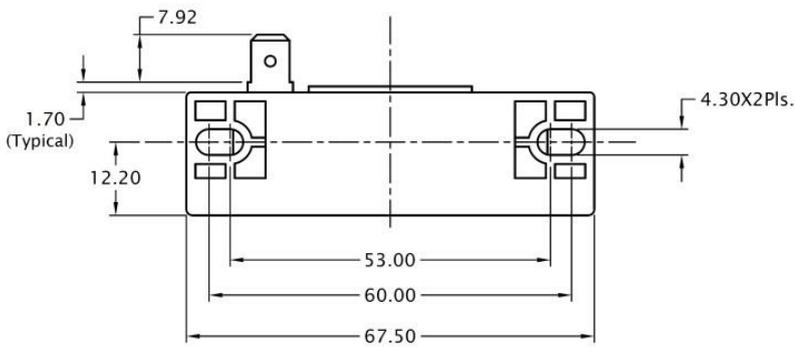
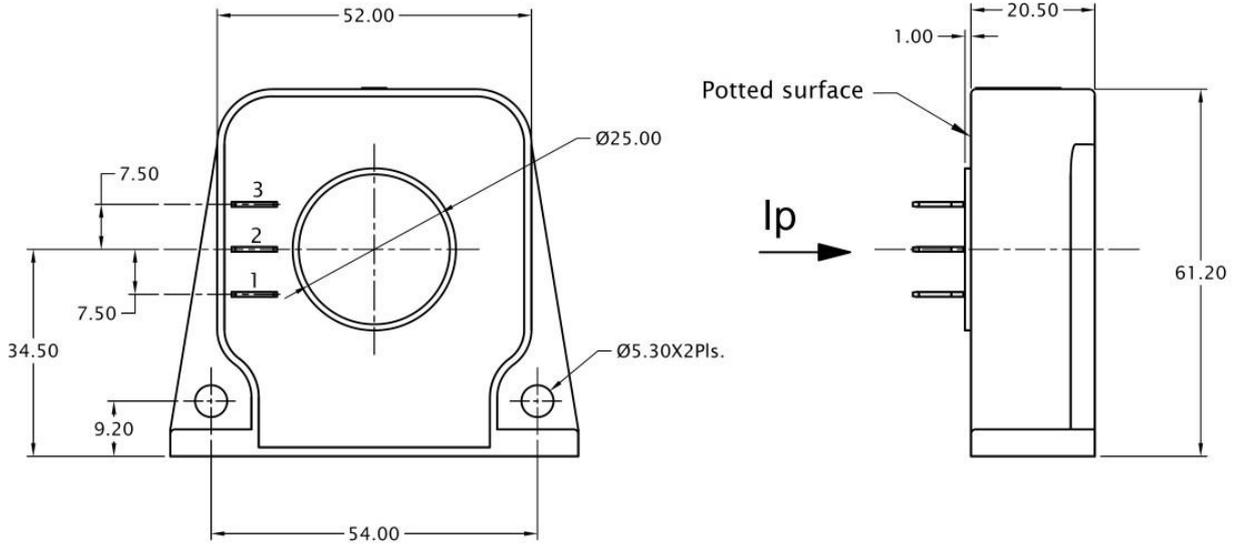
**Specifications** (Unless otherwise specified temperature is 25°C)

Product code	Input current nominal $I_{pn}$ A	Output current at $I_{pn}$ mA	Max Burden resistance $R_b$ at $I_{pn}$ , $\Omega$		Input current measuring range $I_p$ A	Max Burden resistance $R_b$ at $I_p$ , $\Omega$	
			$\pm 12V$	$\pm 15V$		$\pm 12V$	$\pm 15V$
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		$\Omega$
Number of secondary turns	$N_s$			2000		- - -
Theoretical sensitivity	$G_{th}$			0.5		mA/A
Supply voltage	$V_s$	$\pm 5\%$	$\pm 12$		$\pm 15$	V
Current consumption	$I_c$	$V_s = \pm 15V$		$20 + I_{out}$		mA
Offset current	$I_{off}$		-0.15		+0.15	mA
Variation of $I_{off}$ wrt temperature	$I_{ot}$	-40 to +85°C	-0.25		+0.25	mA
Linearity error	$\Sigma_L$		-0.1		+0.1	% of $I_{pn}$
Overall accuracy at $I_{pn}$	$X_G$		-0.8		+0.8	% of $I_{pn}$
Response time @ 90% of $I_{pn}$	$t_r$	$>100A/\mu s$		$<1.0$		$\mu s$
Frequency bandwidth	BW	-3dB, small signal bw	0		100	kHz
di/dt accurately followed	di/dt			$>100$		A/ $\mu s$
Ambient operating temperature	$T_A$		-40		+85	°C
Ambient storage temperature	$T_S$		-40		+90	°C
Mass	m			120		g

**Input & Output Characteristics**


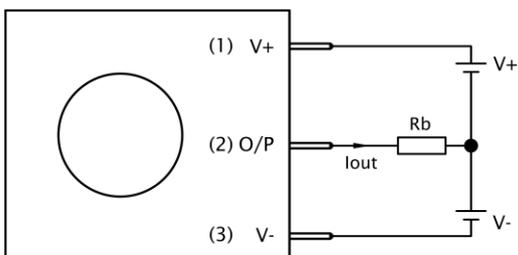
**Mechanical dimensions**



Tolerance unless otherwise specified

0.5 up to 3 in mm	>3 up to 6 in mm	>6 up to 30 in mm	>30 up to 120 in mm	>120 up to 400 in mm	>400 up to 1000 in mm	ALL DIMENSIONS ARE IN 'mm'	
± 0.20	± 0.30	± 0.50	± 0.80	± 1.20	± 2.0	SCALE -NTS	

**Connection Diagram**



## General information

- 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  $\varnothing$  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
- Electrohms reserves the right to make modifications on products for improvements without prior notice
- \* Designed to meet UL508

## 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 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.