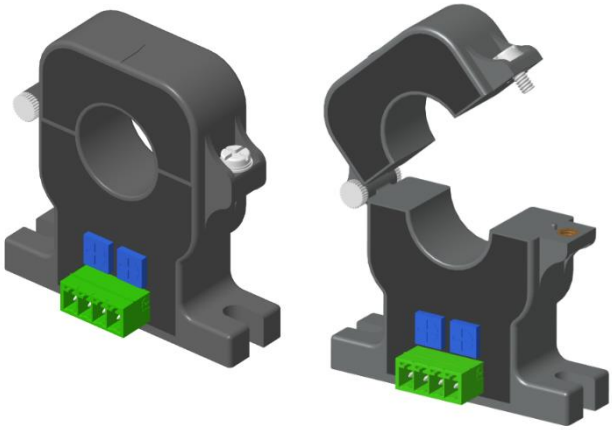
I_{pn} = 50A…500A



Representative image only

Features

- Split core type
- Open loop current sensor
- Voltage output
- Panel mounting type

Advantage

- Good linearity
- No insertion losses
- Low power consumption

Applications

- Used for measurement of electric AC, DC current
- Pulsed in electric & electronic equipment

Application domain

- Industrial

Standards

- UL508*
- EN50178 (IEC 62477)

Insulation Characteristics

Parameters	Symbol	Value	Units
Dielectric strength between primary and secondary terminals,50Hz, 60 seconds	V_d	3.0	kVrms
Comparative tracking index	CTI	>250	V
Insulation resistance at 500 VDC	R_{IS}	>100	MΩ
Creepage distance		34.00	mm
Clearance distance		23.00	mm

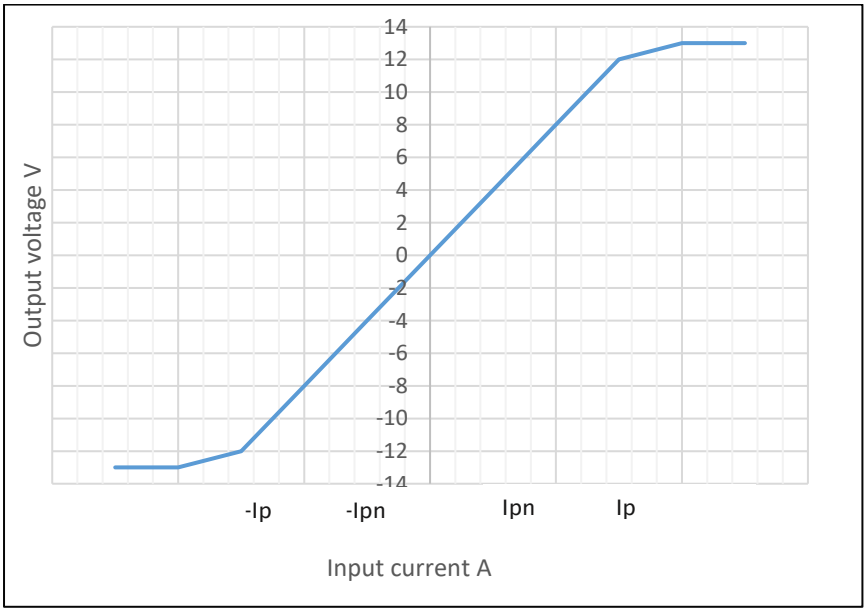
Product Range

Product Code	Primary Nominal Current (I_{pn})	Primary Measuring Range (I_p)
HK050T09	50A	±100A
HK100T09	100A	±200A
HK200T09	200A	±400A
HK300T09	300A	±600A
HK400T09	400A	±800A
HK500T09	500A	±800A

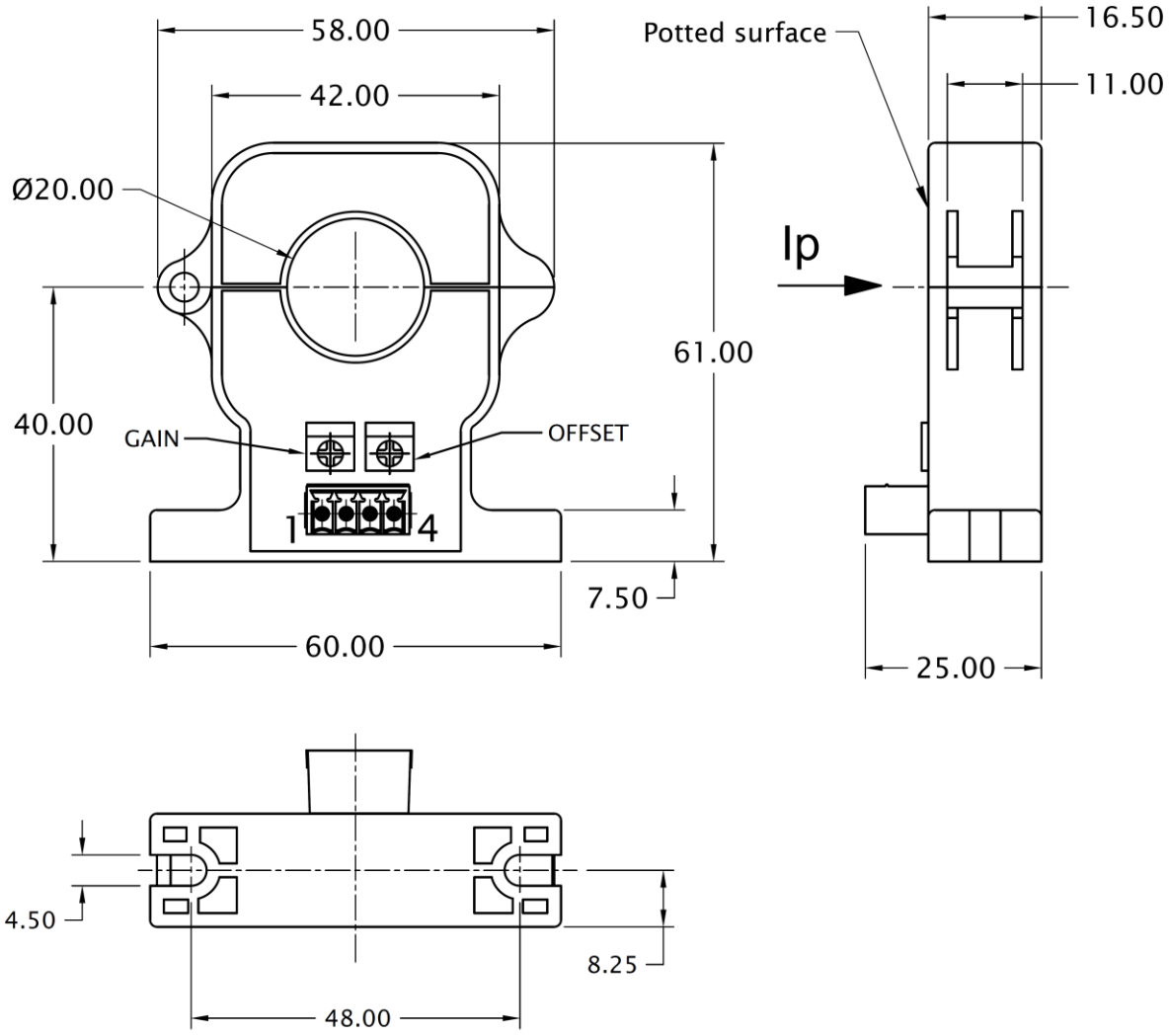
Specifications (Unless otherwise specified temperature is 25°C)

Parameters	Symbol	Condition	Min	Typ	Max	Units
Burden resistance	R_b		10			kΩ
Output offset voltage	V_{off}	at I_p=0		±25.0		mV
Output voltage	V_{out}	at ±I_{pn}, Rb=10KΩ,		±4.0		V
Supply voltage	V_S	±5%		±15		V
Current consumption	I_C	V_s = ±15V		25.0		mA
Overall accuracy at I_{pn} (Excluding offset)	X_G		-2.0		+2.0	%
Linearity error	Σ_L	-25 to +85 °C	-1.0		+1.0	%
Temperature coefficient of V_{out}	TV_{out}	-25 to +85 °C	-0.1		+0.1	% /K
Reaction time at 90% Of I_{pn}	t_{ra}			3.0		µs
Frequency bandwidth	BW	-3dB		- - -		- - -
di/dt accurately followed	di/dt			50		A/ µs
Ambient operating temperature	T_A		-25		+85	°C
Ambient storage temperature	T_S		-25		+85	°C
Mass	m			80		g

Input & Output Characteristics



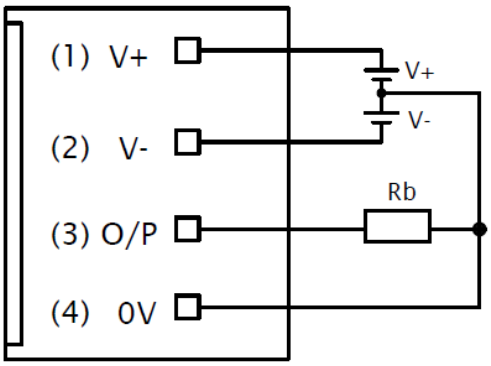
Mechanical dimensions



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: Connector header, Part no-5441294, Phoenix contact
- Suggested mating connector: Connector housing, Part no- 5441223, Phoenix contact
- Sensor mounting: 2 Slots X Ø 4.5mm, M4 steel screws, recommended fastening torque 2 N-m
- It is recommended to centrally locate the current carrying conductor or completely fill the central opening for optimum performance
- Output is positive when current (Ip) flows in the direction of arrow
- Ensure proper connection of Power supply to avoid damage to the Sensor
- 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.
● Disconnecting the main power must be possible
● Over currents (»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 may only be used in electrical or electronic systems which fulfil the relevant regulations (Standards, EMC Requirements)
● Pay attention to 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.