

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

- Commercial
- Industrial

Standards

- EN 50178
- UL508

Insulation Characteristics

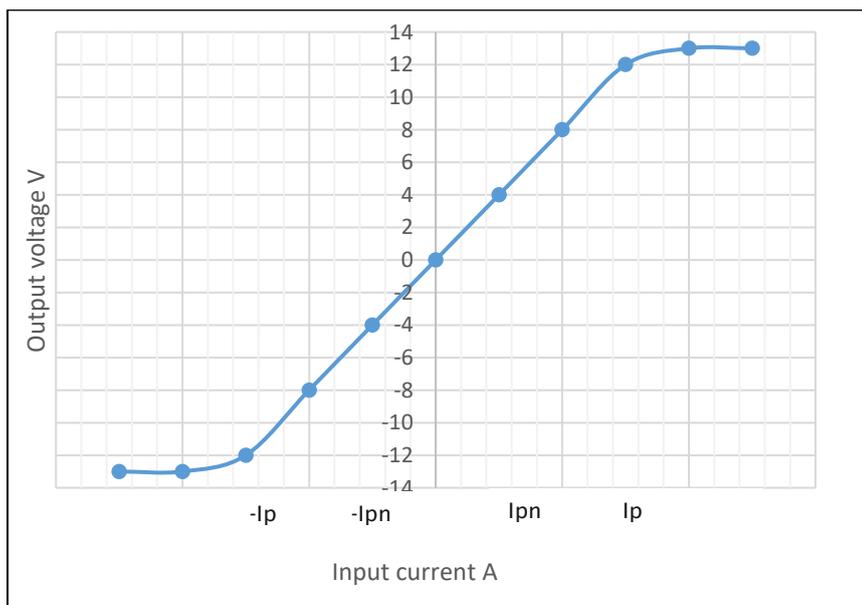
| Parameters | Symbol | Value | Units |
|---|----------|-------|------------|
| Dielectric strength between primary and secondary terminals, 50Hz, 60 seconds | V_d | 3.0 | kV |
| Comparative tracking index | CTI | 250 | V |
| Insulation resistance at 500 VDC | R_{IS} | >100 | M Ω |
| Creepage distance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

Product Range

| Product Code | Primary Nominal Current (I_{pn}) | Primary Measuring Range (I_p) |
|--------------|--------------------------------------|-----------------------------------|
| HK050T03 | 50A | $\pm 100A$ |
| HK100T03 | 100A | $\pm 200A$ |
| HK200T03 | 200A | $\pm 400A$ |
| HK300T03 | 300A | $\pm 600A$ |
| HK400T03 | 400A | $\pm 800A$ |
| HK500T03 | 500A | $\pm 800A$ |

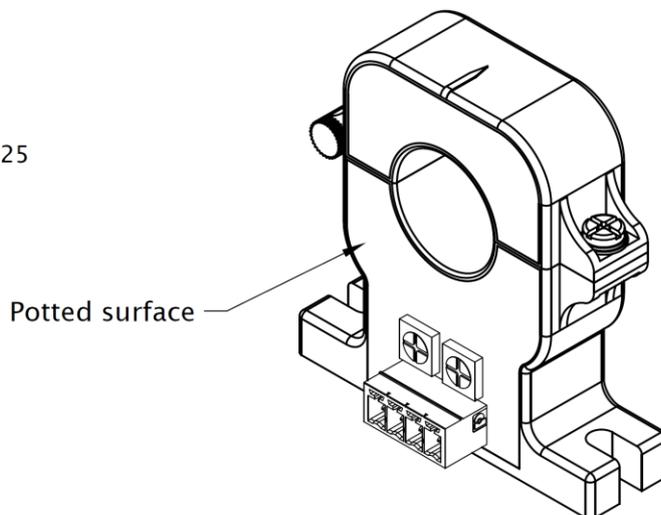
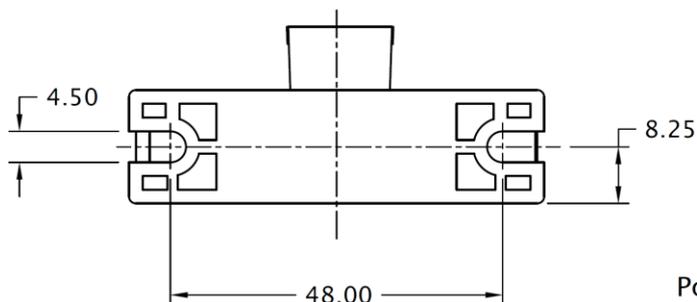
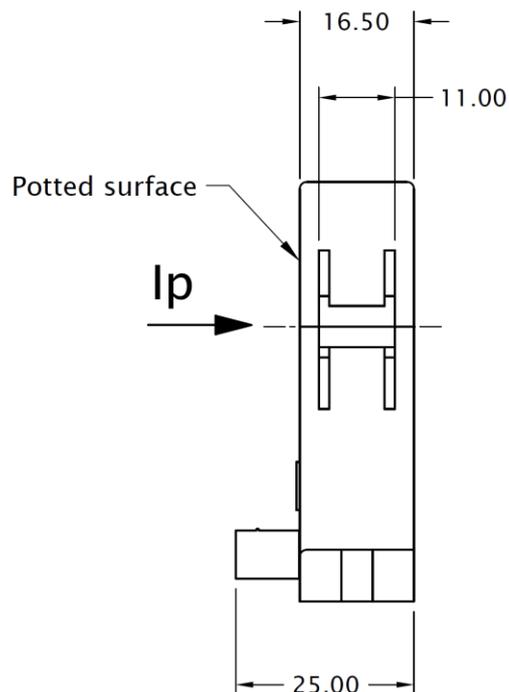
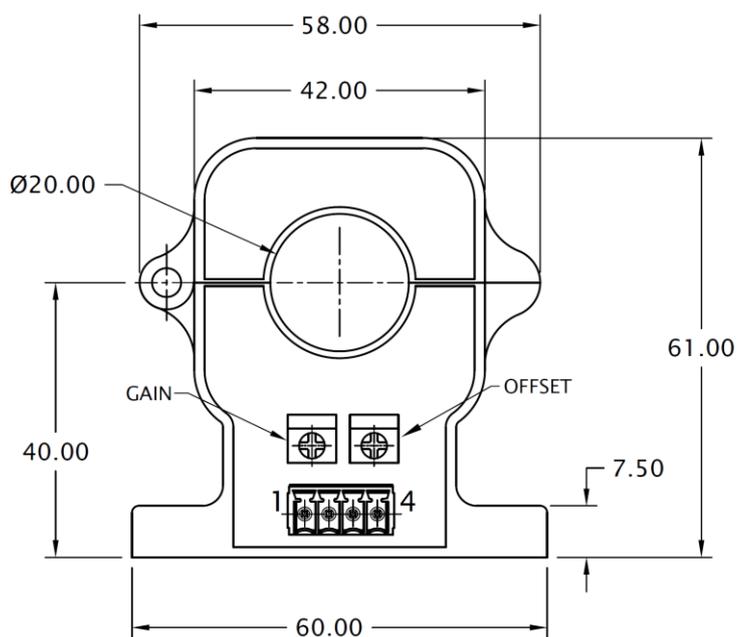
Specifications (Unless otherwise specified temperature is 25°C)

| Parameters | Symbol | Condition | Min | Typ | Max | Units |
|--|-------------|-------------------------------------|-----|------------|-----|-------------------|
| Burden resistance | R_b | | 10 | | | k Ω |
| Output offset voltage | V_{off} | at $I_p=0$ | | ± 25.0 | | mV |
| Output voltage | V_{out} | at $\pm I_{pn}$, $R_b=10K\Omega$, | | ± 4.0 | | V |
| Supply voltage ($\pm 5\%$) | V_S | | | ± 15 | | V |
| Current consumption | I_C | at $\pm 15V$ | | 25.0 | | mA |
| Overall accuracy at I_{pn} (Excluding offset) | X_G | | | ± 2.0 | | % |
| Linearity error | Σ_L | -25 to +85 °C | | <1.0 | | % |
| Temperature coefficient of V_{out} | TV_{out} | -25 to +85 °C | | ± 0.1 | | % /K |
| Reaction time at 90% Of I_{pn} | t_{ra} | | | 3.0 | | μs |
| Frequency bandwidth at -3db di/dt accurately followed | BW di/dt | -3dB, small signal bw | DC | | 20 | kHz A/ μs |
| Ambient operating temperature | T_A | | | -25 to +85 | | °C |
| Ambient storage temperature | T_S | | | -25 to +85 | | °C |
| Mass | m | | | 80 | | g |

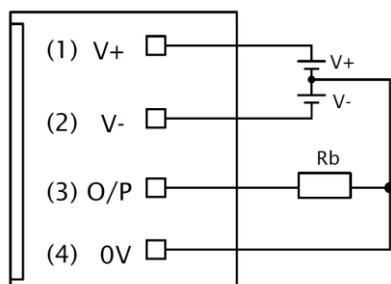
Input & Output Characteristics

Mechanical dimensions

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



Connection Diagram



- 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 3 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 (I_p) flows in the direction of arrow
- Ensure proper connection of Power supply to avoid damage to the Sensor

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 ($\gg I_{PN}$) can cause an additional voltage offset due to magnetic remanence.
- The temperature of the primary conductor shall not exceed 100 °C.
- This Sensors 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.

General information:

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