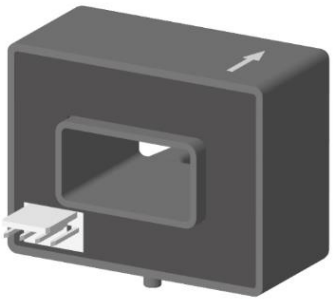
I_{pn} = 50…600A



Features
- Used for measurement of electric AC, DC current
- Open loop current sensor
- Pulsed in electric & electronic equipment
- Voltage output
- Panel mounting type
- Plastic outer case complaint to UL94-V0

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

Application domain
- Commercial
- Industrial

Advantage
- Good linearity
- Low power consumption

Standards
- EN 50178
- UL508

Insulation Characteristics

Parameters	Symbol	Value	Units
Dielectric strength between primary and secondary terminals,50 Hz, 60 seconds	V_d	3.0	kVrms
Comparative tracking index	CTI	250	V
Insulation resistance at 500 VDC	R_{IS}	>100	MΩ
Creepage distance		7.00	mm
Clearance distance		4.50	mm

Product Range

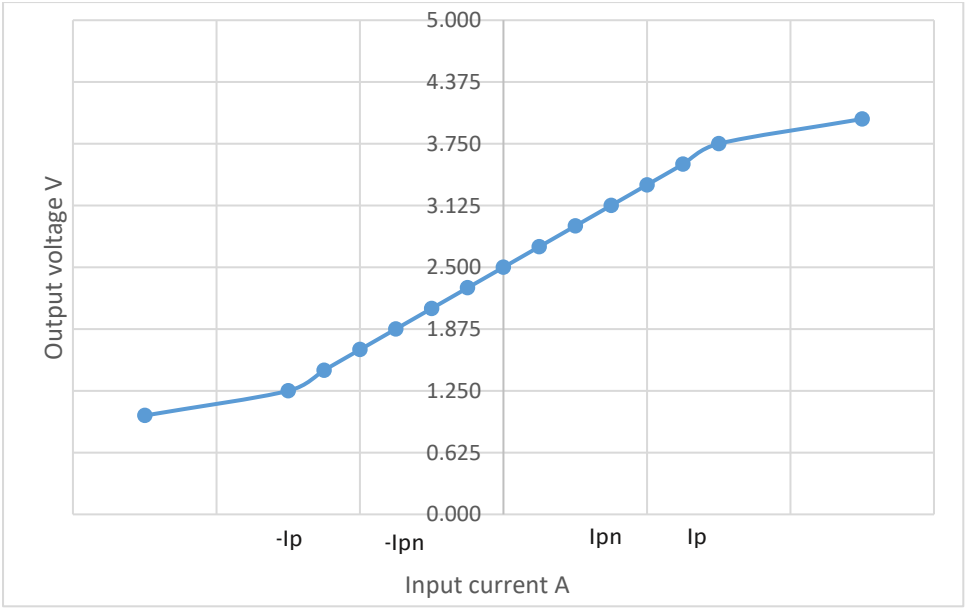
Product Code	Primary Nominal Current (I_{pn})	Primary Measuring Range (I_p)
HL050T05-CB10	50A	±100A
HL100T05-CB10	100A	±200A
HL200T05-CB10	200A	±400A
HL300T05-CB10	300A	±600A
HL600T05-CB10	600A	±1200A

Primary measuring range for momentary only

Specifications (Unless otherwise specified temperature is 25°C)

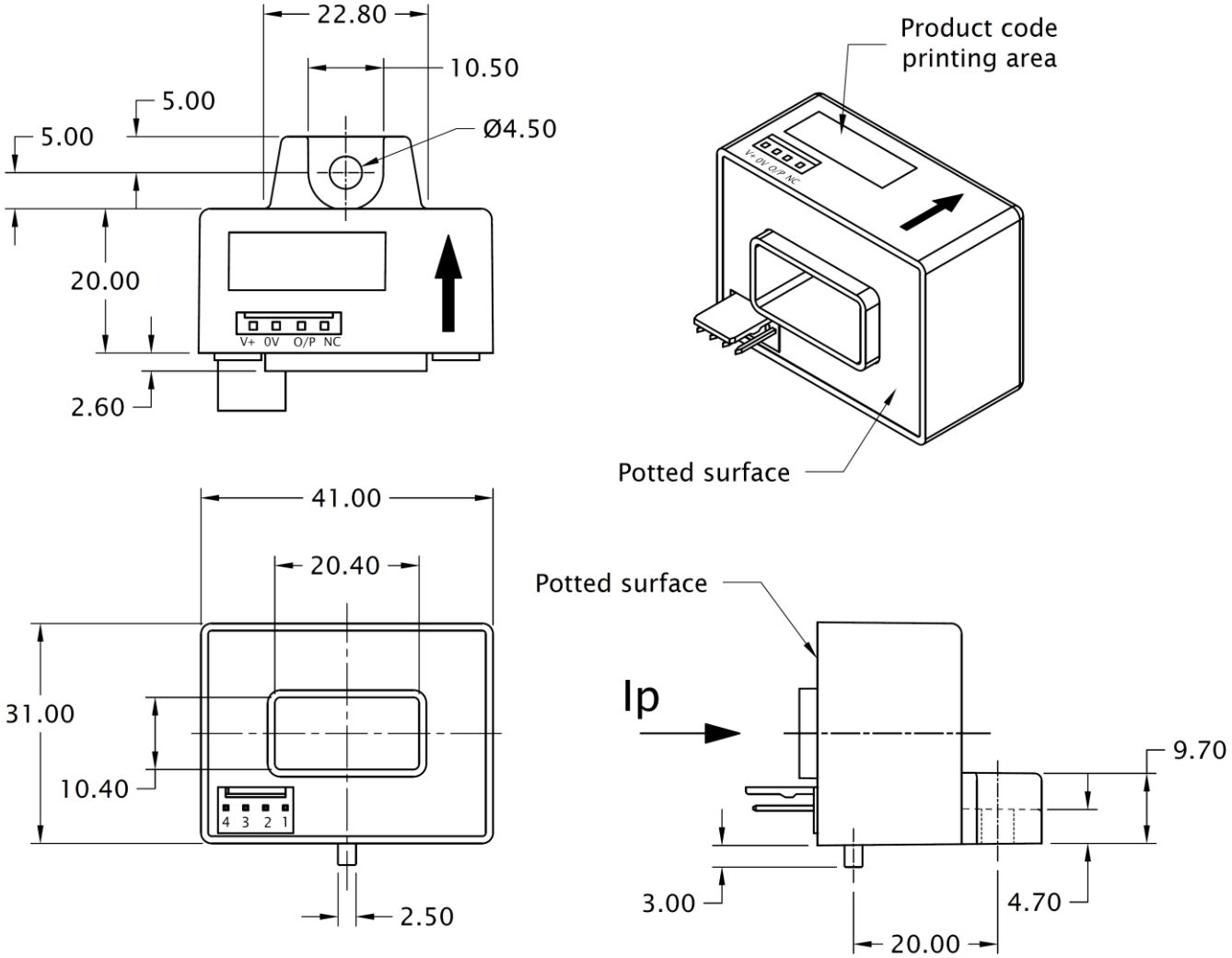
Parameters	Symbol	Condition	Min	Typ	Max	Units
Burden resistance	R_b		10			kΩ
Output offset voltage	V_{off}	at I_p = 0		2.5±0.015		V
Output voltage	V_{out}	at ±I_{pn}, R_b=10kΩ		V_{off} ±0.625		V
Supply voltage	V_s		4.75	5.00	5.25	V
Current consumption at +5V	I_c			18.0		mA
Accuracy at I_{pn} (Excluding offset)	X_G			<1		%
Linearity error	Σ_L			<1		%
Temperature coefficient of V_{off}	TV_{off}	-40 to +85 °C		±0.5		mV/K
Temperature coefficient of V_{out}	TV_{out}	-40 to +85 °C		±0.1		%/K
Response time at 90% of I_{pn}	t_r			10		µs
Frequency bandwidth	BW	-3dB, small signal bw	DC		20	kHz
di/dt accurately followed	di/dt			>50		A/µs
Ambient operating temperature	T_A		-40		+85	°C
Ambient storage temperature	T_S		-40		+85	°C
Mass	m			70		g

Input & Output Characteristics

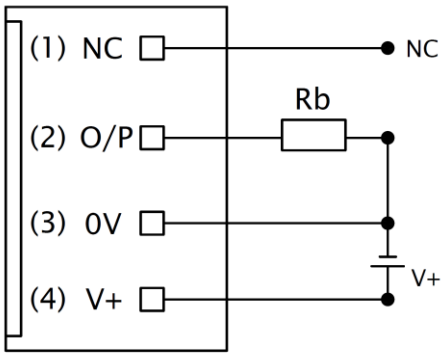


Mechanical dimensions

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



Connection Diagram



- Connector on the product: Connector header, part no-22-04-1041, Molex
- Suggested mating connector: Connector housing, part no-22-01-1042, & corresponding pin part no: 08-50-0114, Molex
- Sensor mounting: Hole 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 increases when current (Ip) 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 (»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)
- 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