I_{pn} = 50...600A

Representative image only

Features

- Low amplitude error & phase error
- Isolated plastic case recognized according to UL 94-V0

Advantage

- Very good linearity
- Low temperature drift
- Optimized response time
- Current overload capability

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

Standards

- UL508*
- EN50178 (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 at 500 VDC	R_{IS}	>1000	MΩ
Creepage distance		7.00	mm
Clearance distance		4.50	mm

Product Range

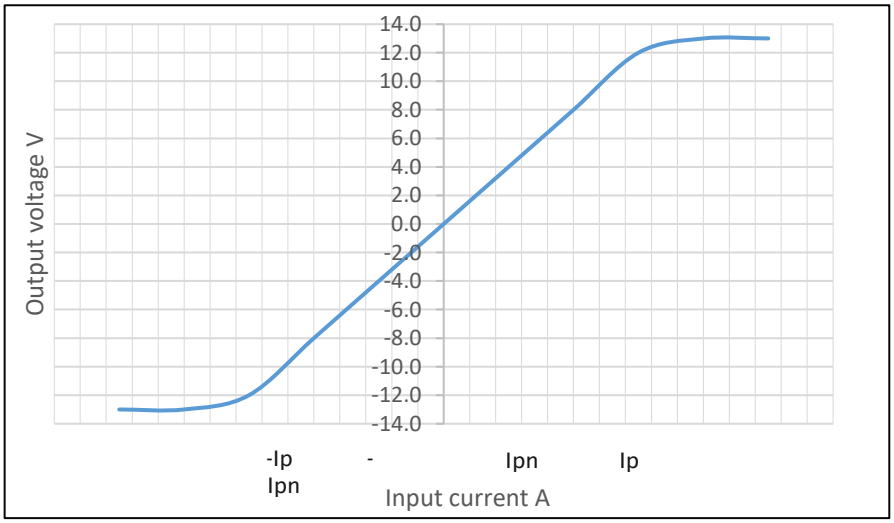
Product Code	Primary Nominal Current (I_{pn})	Primary Measuring Range (I_p)
HS050T01	50A	±150A
HS100T01	100A	±300A
HS200T01	200A	±600A
HS300T01	300A	±900A
HS400T01	400A	±900A
HS500T01	500A	±900A
HS600T01	600A	±900A

Primary measuring range for momentary only

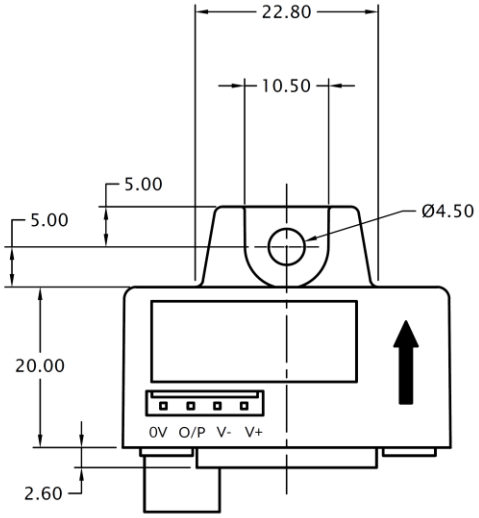
Specifications (Unless otherwise specified temperature is 25°C)

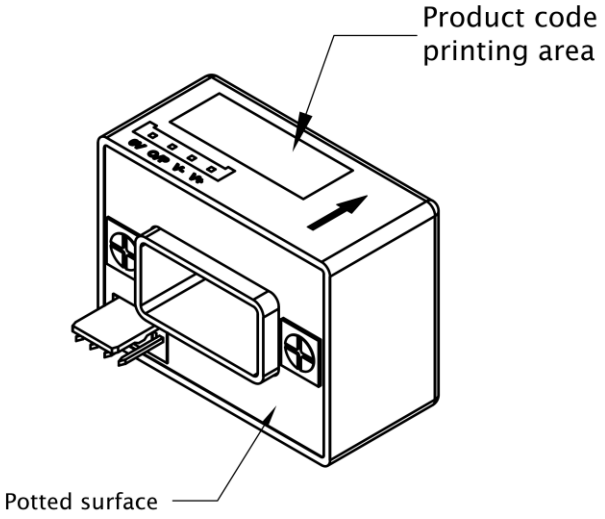
Parameters	Symbol	Condition	Min	Typ	Max	Units
Burden resistance	R_b		10			kΩ
Output voltage	V_{out}	at $\pm I_{pn}$, R_b = 10KΩ,		±4.0		V
Supply voltage (±5%)	V_s	operating at12V reduces the measuring range		±15		V
Current consumption at I_{pn}	I_c			15		mA
Overall accuracy) at I_{pn} (Excluding offset)	X_G		-1		+1	%
Linearity error (Excluding offset)	Σ_L	-10 to +80 °C	-1		+1	%
Output offset voltage	V_{off}		-20		+20	mV
Hysteresis offset voltage	V_{OH}	at I_P = 0 after a primary current of I_p	-20		±20	mV
Temperature coefficient of V_{out} (HS050T01)	TV_{OE}	-10 to +80 °C	-2.0		+2.0	mV/K
Temperature coefficient of V_{out} (HS100…600T01)			-1.0		+1.0	
Response time at 90% of I_{pn}	t_{ra}			3		µs
Frequency bandwidth	BW	-3dB, small signal bw	DC		50	kHz
di/dt accurately followed	di/dt		50			A/ µs
Ambient operating temperature	T_A		-10		+80	°C
Ambient storage temperature	T_S		-25		+80	°C
Mass	m			70		g

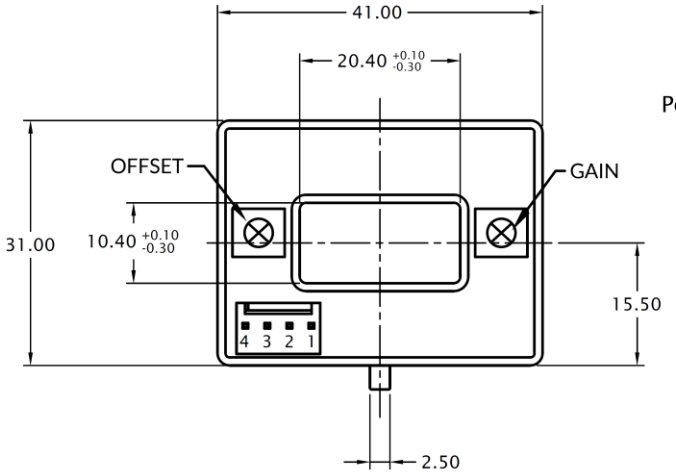
Input & Output Characteristics

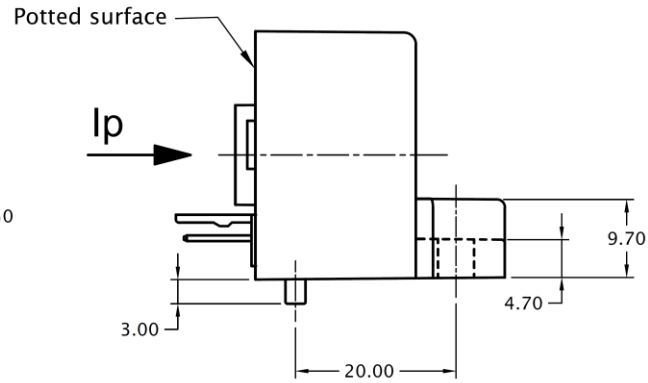


Mechanical dimensions





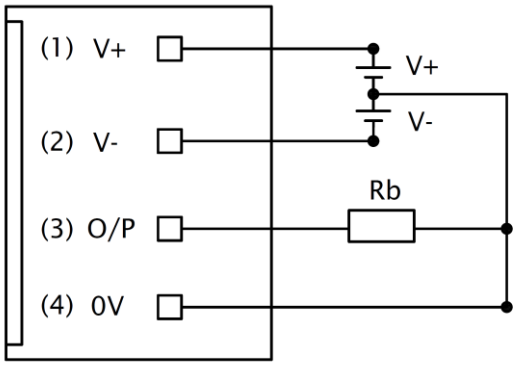




Tolerance unless otherwise specified

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 315 in mm	> 315 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-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 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 UL 508

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.