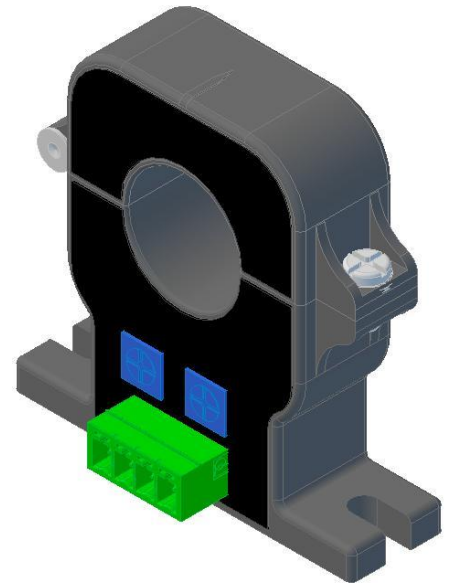


Hall Effect Current Sensor HJ050...500T09

$I_{PN} = 50A...500A$



Features

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

Advantage

- . Excellent accuracy
- . Very good linearity
- . Low temperature drift
- . Optimized response time
- . Wide frequency bandwidth
- . No insertion losses
- . High immunity to external interference
- . Current overload capability.

Applications

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

Application domain

- . Commercial
- . Industrial

Maximum ratings

Parameter	Symbol	Value	Unit
Maximum supply voltage (working) -40 to 85°C	$\pm U_c$	+5.0	V
Primary conductor temperature	T_s	85	°C
maximum steady state primary current) -40 to 85°C	I_{PN}	50 to 500A	A
Impulse withstand voltage 1.2/50µS	V_w	7.5	KV
RMS Voltage for AC Insulation Test,50hz,1 Min	U_d	3.0	KV
Comparative Tracking Index (CTI)		275	
Insulation Resistance	R_{is}	>1000	MΩ

Product Range

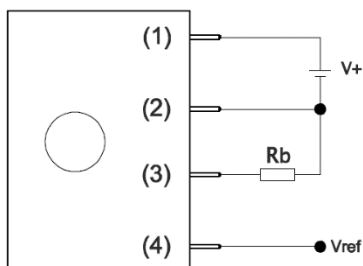
HJ050...500T09

Product Code	Primary Nominal Current	Primary Measuring Range
HJ050T09	50A	±100A
HJ100T09	100A	±200A
HJ200T09	200A	±400A
HJ300T09	300A	±600A
HJ400T09	400A	±800A
HJ500T09	500A	±800A

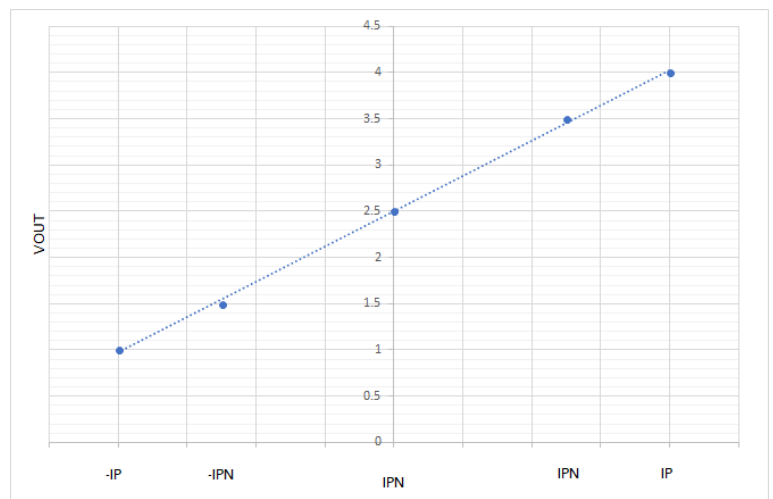
Electrical data

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Burden Resistance	R_b			2000(min.)		Ω
Output Voltage @ I_{PN} (V_{out})	V_{out}	@ $\pm I_{PN}, R_b = 10K\Omega$, @25°C		2.5 ± 1.0		V
Supply Voltage ($\pm 5\%$)	$\pm U_C$	Operating @12V reduces the measuring Range		+5.0		V
Current Consumption at @ +5v(Ic)	I_{out}			18Typical		mA
Overall Accuracy At I_{PN}	X_G	@25°C		<2		%
Linearity Error	Σ_L	-40 to 85 °C		<1.0		%
Output offset Voltage @ $I_p = 0$ (V_{off})	V_{off}			$V_{ref} \pm 0.025$		mV
Hysteresis offset Voltage	V_{OH}	@ $I_p = 0$ after a primary current of I_{PN}	<-1		<+1	mV
Temperature coefficient of V_{out}	TV_{OE}	-40 to +85 °C		± 0.1		% of rdg/K
Reaction Time @ 90% Of I_{PN}	t_{ra}			<5		μs
Frequency Bandwidth @ -3db (fbw)	BW	-3dB, small signal bw	0	DC to 20	25	KHz
di/dt accurately followed	di/dt			>50		A/ μs
Ambient Operating Temperature	T_A		-40	-25 to +85	+10 5	°C
Ambient Storage Temperature	T_s		-50	-40 to +100	+10 5	°C
Mass	m			77		g

Connection Diagram

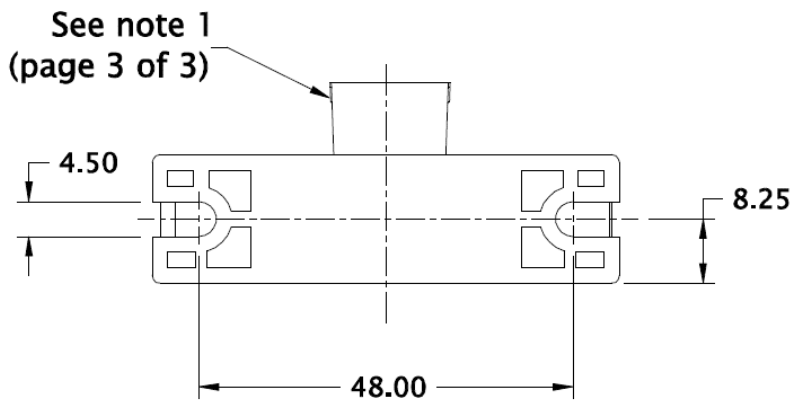
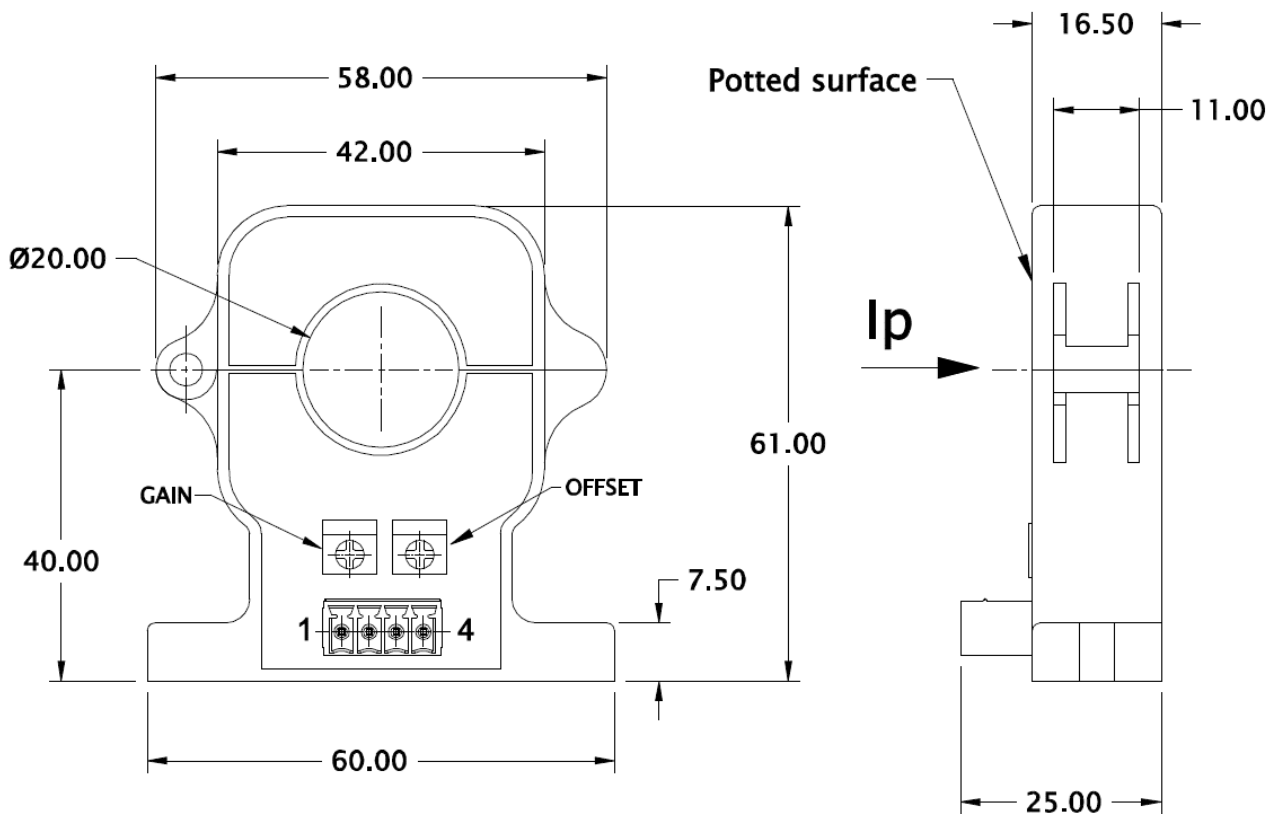


Input & Output Characteristics HJ050T09



Mechanical dimensions in mm

Tolerance: $\pm 0.5\text{mm}$



Pin Out Details	
Pin 1	+VCC (+V)
Pin 2	GND
Pin 3	Output (O/P)
Pin 4	V_{REF} (IN/OUT)

Safety

- This Current Transformer 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 Current Transformer, 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.
- Main supply must be to be disconnected.
- If IP flows in the direction of the Arrow I_{sek} is positive
- Over currents ($\gg I_{PN}$) or the missing of the supply voltage can cause an additional remaining magnetic offset
- The temperature of the primary conductor may 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 this sensor, you must ensure that the safe separation (between primary circuit and secondary circuit) is maintained over the whole circuits and their connections
- Disconnecting the main power must be possible