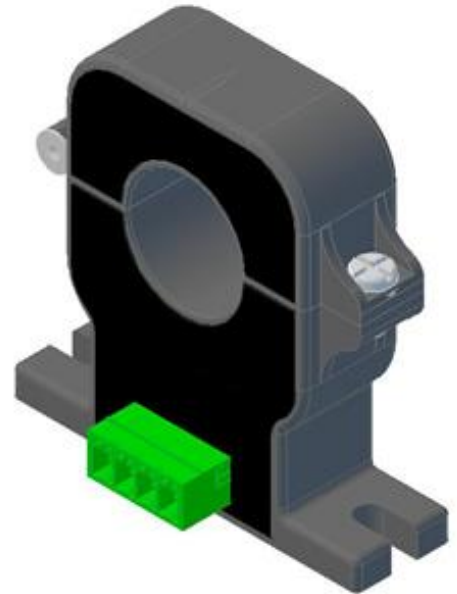


Hall Effect Current Sensor HFB010...050T01

$I_{PN} = 10A...50A$



Features

- . Split core type
- . Voltage output
- . Panel mounting type

Applications

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

Advantage

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

Application domain

- . Commercial
- . Industrial

Maximum ratings

Parameter	Symbol	Value	Unit
Maximum supply voltage (working) +20 to+60°C	$\pm U_c$	+5.0	V
Primary conductor temperature	T_s	85	°C
maximum steady state primary current) +20 to +60°C	I_{PN}	10 to 50A	A
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

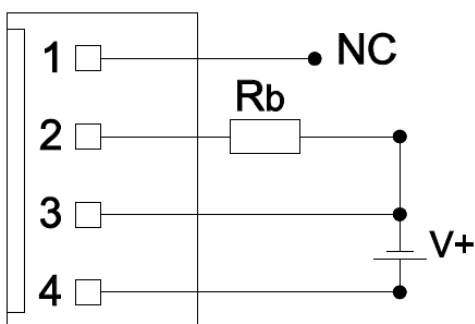
HFB010...050T01

Product Code	Primary Nominal Current
HFB010T01	10A
HFB025T01	25A
HFB050T01	50A

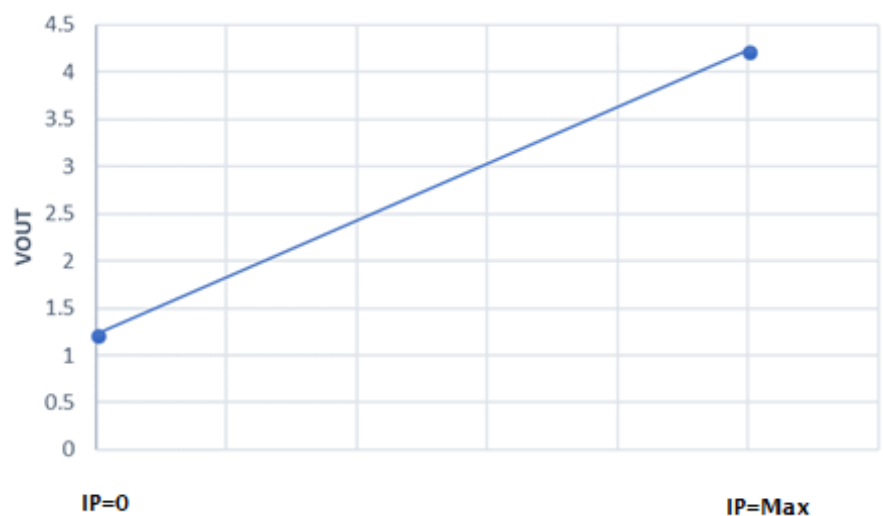
Electrical data

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Burden Resistance	R_b			10000(min.)		Ω
Output Voltage @ I_{PN} (V_{out})	V_{out}	@ $\pm I_{PN}, R_b = 10K\Omega,$ @25°C		1.225 ± 3.0		V
Supply Voltage ($\pm 5\%$)	$\pm U_C$			+5.0		V
Current Consumption at @ +5v(Ic)	I_{out}			13 Typical		mA
Overall Accuracy At I_{PN}	X_G	@25°C		<1		%
Linearity Error	Σ_L	-40 to 85 °C		<1.0		%
Output offset Voltage @ $I_P = 0$ (V_{off})	V_{off}			1.225 ± 0.062		mV
Hysteresis offset Voltage	V_{OH}	@ $I_P = 0$ after a primary current of I_{PN}		± 1		mV
Temperature coefficient of V_{out}	TV_{OE}	-40 to +85 °C		TBD		% of rdg/K
Reaction Time @ 90% Of I_{PN}	t_{ra}			TBD		μs
Frequency Bandwidth @ -3db (fbw)	BW	-3dB, small signal bw		DC		KHz
di/dt accurately followed	di/dt			>50		A/ μs
Ambient Operating Temperature	T_A			+20 to +60		°C
Ambient Storage Temperature	T_S			-40 to +85		°C
Mass	m			70		g

Connection Diagram

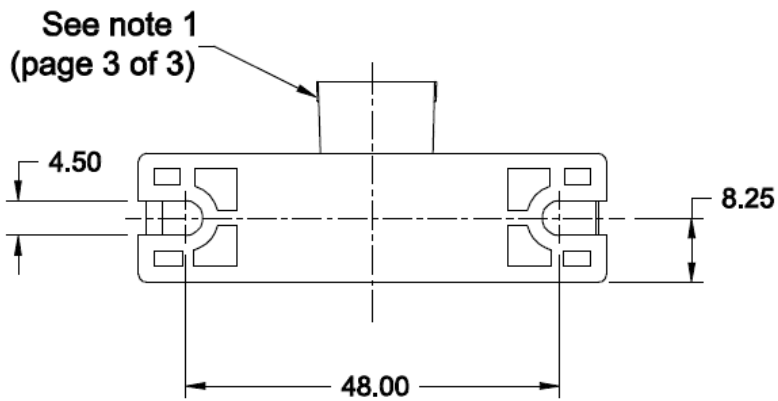
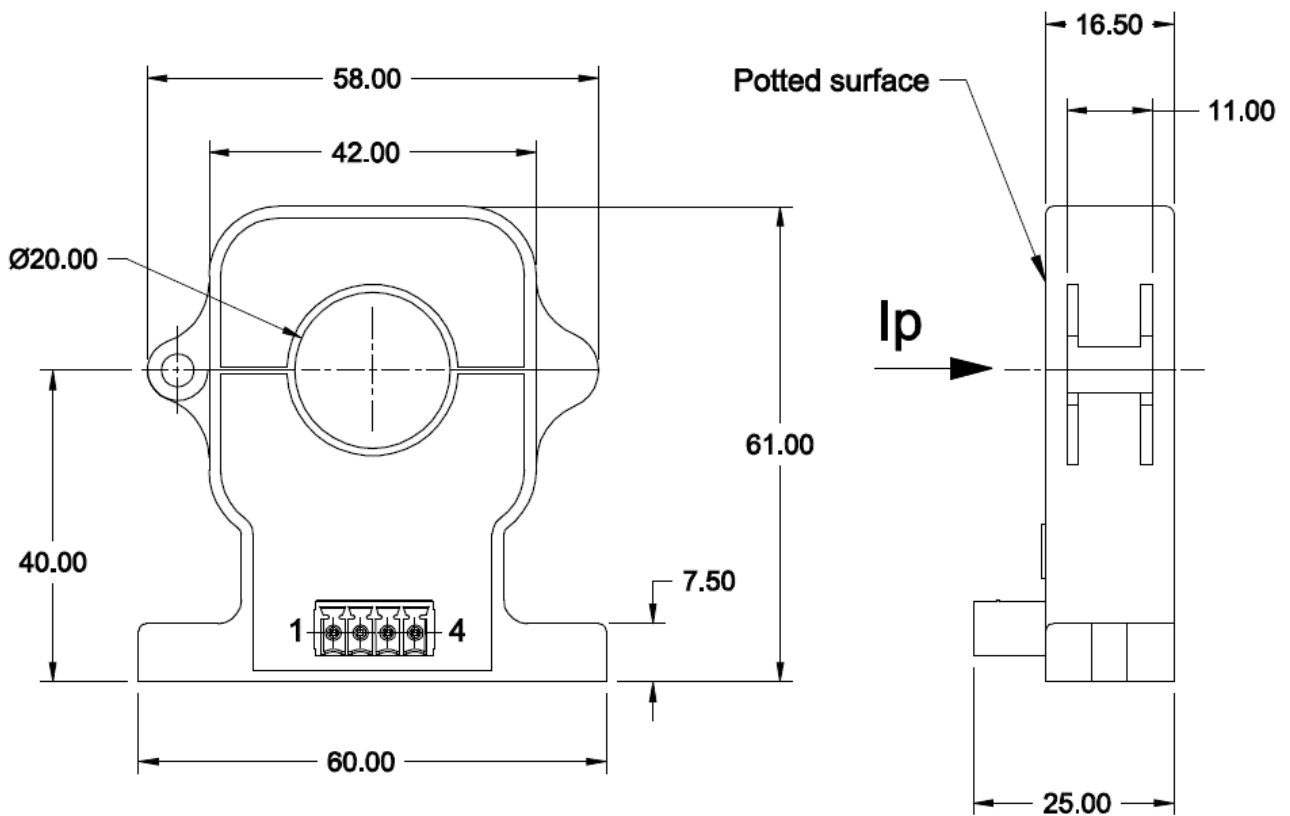


Input & Output Characteristics



Mechanical dimensions in mm

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



Pin Out Details	
Pin 1	NC
Pin 2	Output (O/P)
Pin 3	GND (0V)
Pin 4	VCC (+V)

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