

Hall Effect Current Sensor HE055T01

$I_{pn} = 55 \text{ A}$



Features

- . Closed loop current sensor
- . Panel mountable
- . current output

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 the measurement of electric current, AC, DC
- . Pulsed in Electrical & Electronic equipment.

Application domain

- . Commercial
- . Industrial

Maximum ratings

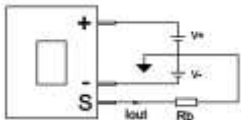
Parameter	Symbol	Value	Unit
Maximum supply voltage (working) -40 to 85°C	$\pm U_c$	$\pm 15V$	V
Primary conductor temperature	T_s	85	°C
maximum steady state primary current -40 to 85°C	I_{PN}	50	A
Rms Voltage For Ac Insulation Test,50hz,1 Min	U_d	2.5	KV
Insulation Resistance	R_{is}	>100	MΩ

Electrical data

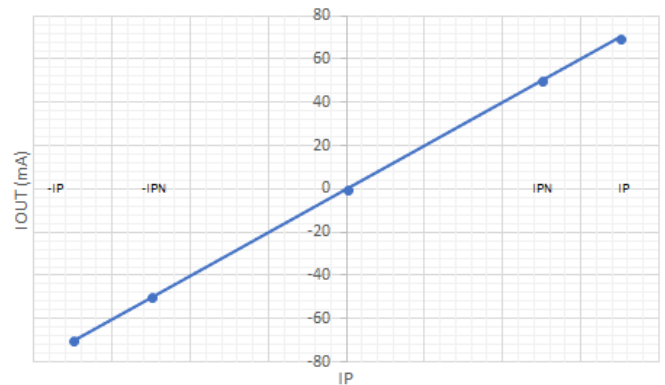
HE055T01

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Primary Current, Measuring Range	I_P			± 70		A
Burden Resistance	R_b	with $\pm 12V @ \pm 50A$ (max)	70@70°C		90@85°C	Ω
		With $\pm 12V @ \pm 70A$ (max)	60@70°C		70@85°C	Ω
		with $\pm 15V @ \pm 50A$ (max)	130@70°C		150@85°C	Ω
		with $\pm 15V @ \pm 70A$ (max)	102@70°C		112@85°C	Ω
Current Output @ I_{PN}	I_{SN}			50		mA
Resistance Of Secondary Winding	R_s			43		Ω
Conversion Ratio	K			1000:1		K
Current Consumption at I_{PN}	I_{out}			$11 + I_{OUT}$		mA
Theoretical Sensitivity	G_{th}			0.050		A
Supply Voltage	$\pm U_C$		± 12		± 15	V
Offset Current, Referred To Primery	I_o			± 0.20		mA
Temperature Variation Of I_o , Referred To Primary	I_{OT}			$\leq \pm 0.6$		mA
Linearity Error	Σ_L	25 to 70 to 85 °C -40 to 85 °C		≤ 0.15		% of I_{PN}
Overall Accuracy At I_{PN}	X_G	1Hz to 20KHz fig 4		± 0.65		% of I_{PN}
Reaction Time @ 90% Of I_{PN}	t_{ra}	0 to 1KA, 200A/ μ s		<1.0		μ s
Frequency Bandwidth	BW	-3dB, small signal bw	0		200	KHz
di/dt accurately followed	di/dt			>200		A/ μ s
Ambient Operating Temperature	T_A		-40		+85	°C
Ambient Storage Temperature	T_S		-40		+85	°C
Mass	m			22		g
Standards: EN55011 / CISPR11 EN61000-4-2/IEC61000-4-2 EN61000-4-3/IEC61000-4-3 EN61000-4-8/IEC61000-4-8						

Connection Diagram

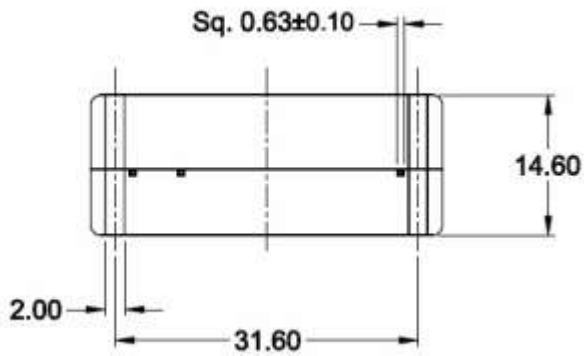
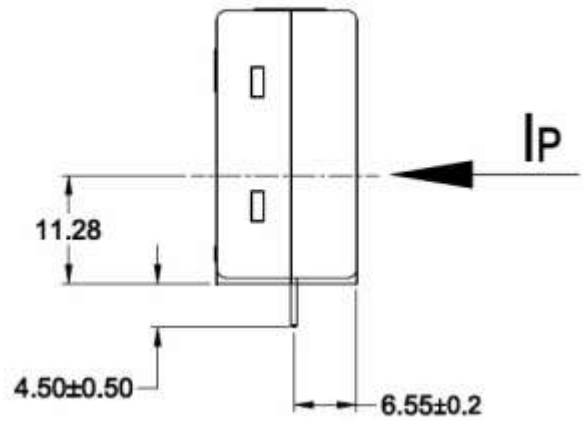
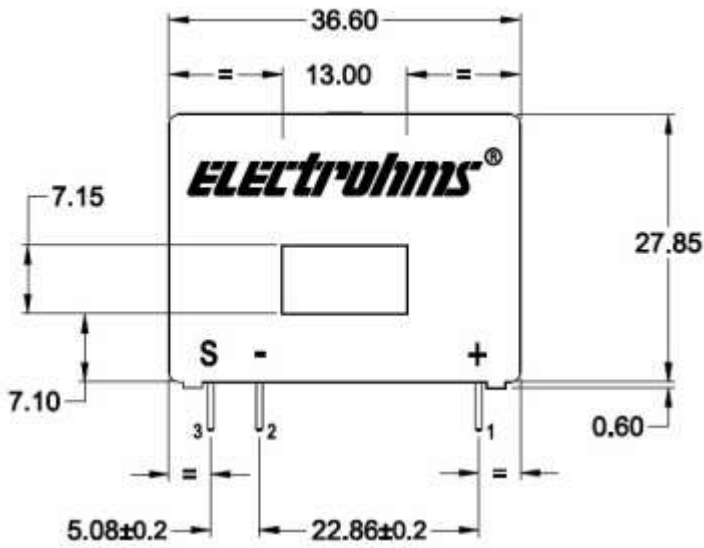


Input Output Characteristics

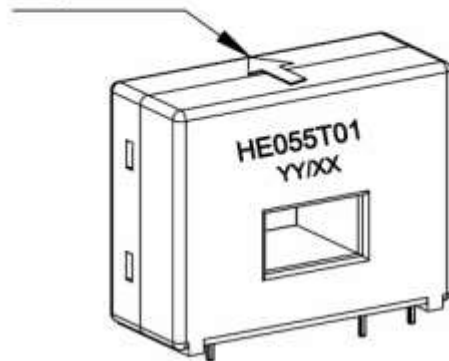


Mechanical dimensions are in mm

Tolerance: ± 0.5 mm



Primary current direction



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