

 $I_{pn} = 100A$ 

Representative image only

Features

- Plastic outer case compliant to UL 94-V0

Advantage

- Very good linearity
- Excellent accuracy
- Low temperature drift
- Wide frequency bandwidth
- Optimized response time
- Current overload capability
- No insertion losses

Applications

- Battery supplied applications
- Uninterruptible power supplies (UPS)
- Switched mode power supplies (SMPS)
- AC, DC pulsed in electrical & electronic equipment

Application domain

- Industrial

Standards

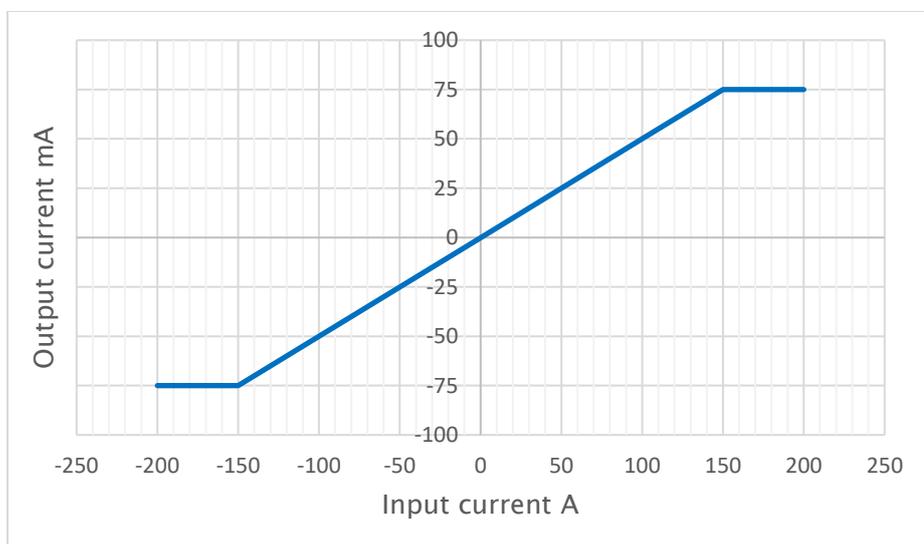
- UL508*
- EN50178 (IEC 62477)

Insulation Characteristics

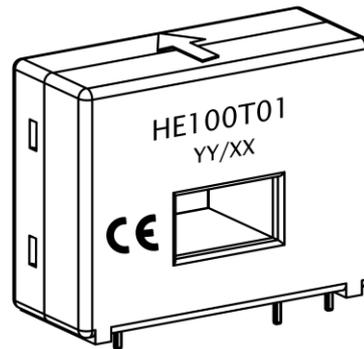
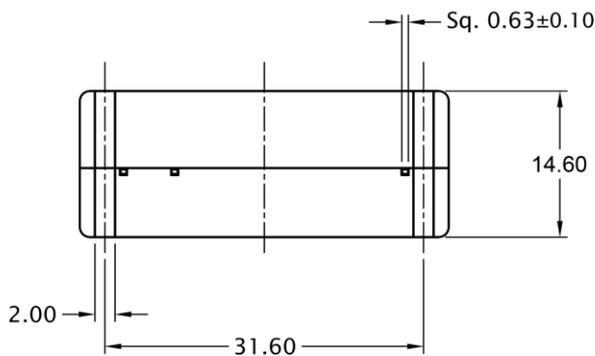
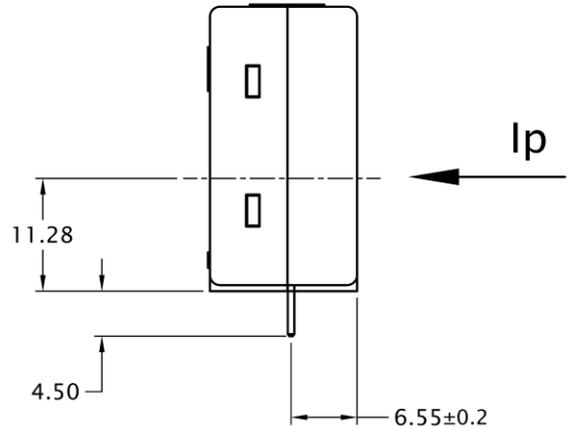
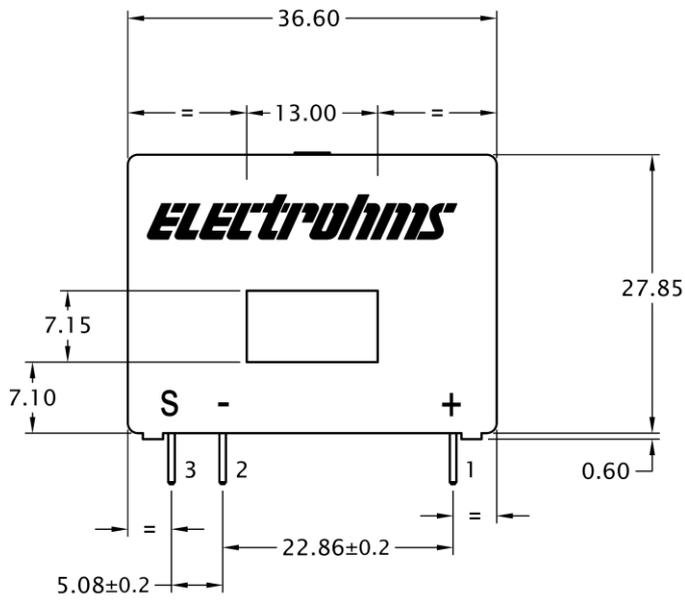
Parameters	Symbol	Value	Units
Dielectric strength between primary and secondary terminals, 50Hz, 60 seconds	V_d	2.5	kVrms
Comparative tracking index	CTI	>250	V
Insulation resistance at 500 VDC	R_{is}	>100	M Ω
Creepage distance		15.00	mm
Clearance distance		11.00	mm

Specifications (Unless otherwise specified temperature is 25°C)

Parameters	Symbol	Condition	Min	Typ	Max	Units
Input current nominal	I_{pn}			100		Arms
Input current measuring range	I_p		-150		150	A
Burden resistance	R_b	with $\pm 12V$ at $\pm 100A$		50		Ω
		with $\pm 15V$ at $\pm 150A$		33		Ω
Resistance of secondary winding	R_s			98		Ω
Current output at I_{pn}	I_{out}			50		mA
Number of secondary turns	N_s			2000		
Theoretical sensitivity	G_{th}			0.5		mA/A
Supply voltage	V_s	$\pm 5\%$	± 12		± 15	V
Current consumption	I_c	$V_s = \pm 15 V$		$11 + I_{out}$		mA
Offset current	I_{off}		-0.1		-0.1	mA
Variation of I_{off} wrt temperature	I_{ot}	-40 to 85 °C	-0.2		+0.2	mA
Linearity error	Σ_l		-0.1		+0.1	% of I_{pn}
Overall accuracy at I_{pn}			-0.65		+0.65	% of I_{pn}
Reaction time 10% I_{pn}				<0.5		μs
Response time 90% of I_{pn}	t_{ra}	di/dt of 200 A/ μs		<1.0		μs
Frequency bandwidth	BW	-1dB, small signal bw	0		200	kHz
di/dt accurately followed	di/dt			>200		A/ μs
Ambient operating temperature	T_A		-40		+85	°C
Ambient storage temperature	T_s		-40		+85	°C
Mass	m			25		g

Input & Output Characteristics

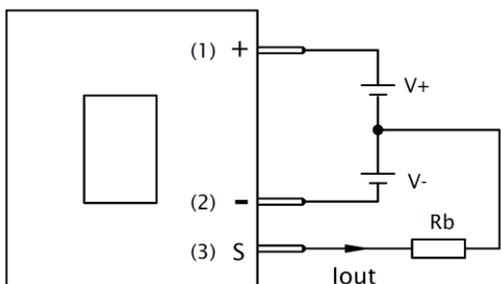
Mechanical dimensions



Tolerance unless otherwise specified

0.5 up to 6 in mm	>6 up to 30 in mm	>30 up to 120 in mm	>120 up to 400 in mm	>400 up to 1000 in mm	ALL DIMENSIONS ARE IN 'mm'	
± 0.20	± 0.50	± 0.80	± 1.20	± 2.0	SCALE -NTS	

Connection Diagram



General information

- Sensor mounting: PCB mountable.
- It is recommended to centrally locate the current carrying conductor or completely fill the central opening for optimum performance.
- Output is positive when current (I_p) flows in the direction of arrow.
- Electrohms reserves the right to make modifications on products for improvements without prior notice.
- * Designed to meet UL508

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.
- Over currents ($\gg I_{PN}$) can cause an additional voltage offset due to magnetic remanence.
- The temperature of the primary conductor shall not exceed 100 °C.
- This Sensors must be used in electrical or electronic systems as per the applicable standards.
- 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.