



I_{pn} = 3000A



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

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
- Traction

Standards

- UL508*
- EN 50178

Insulation Characteristics

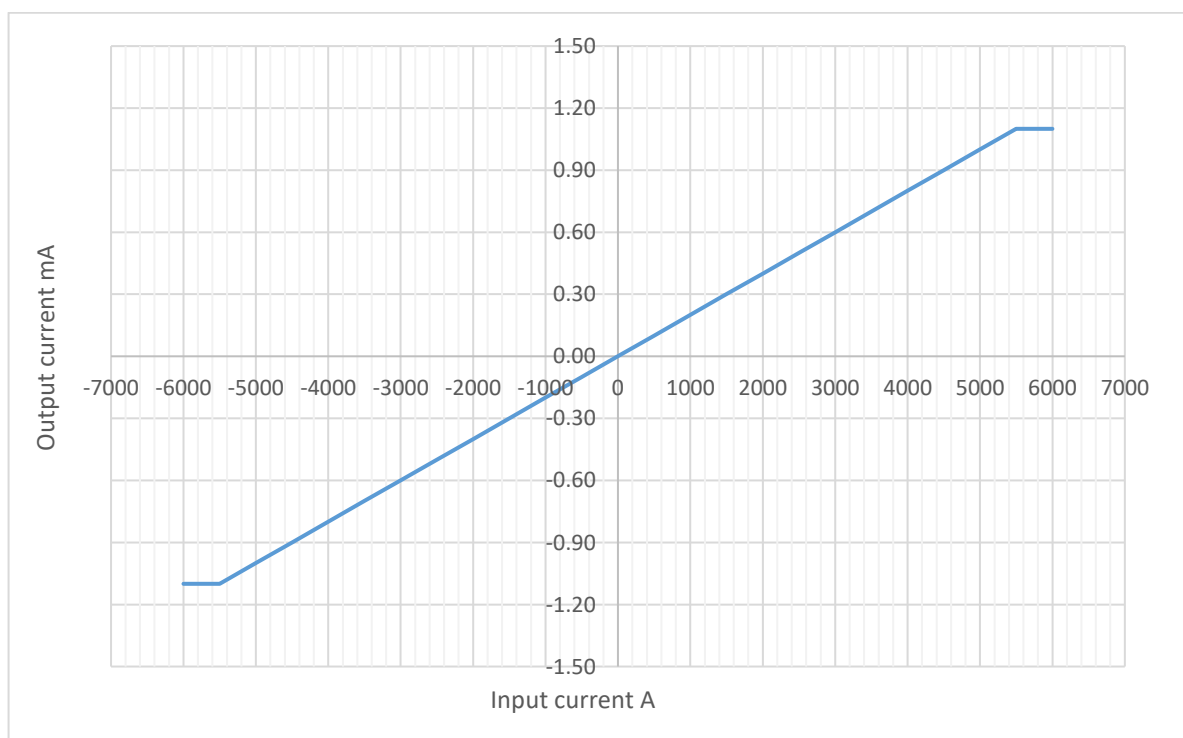
Parameters	Symbol	Value	Units
Dielectric strength between primary and secondary terminals,50Hz, 60 seconds	V _d	6.0	kVrms
Comparative tracking index	CTI	600	V
Insulation resistance at 500 VDC	R _{IS}	>100	MΩ
Creepage distance		73.0	mm
Clearance distance		67.0	mm

Specifications (Unless otherwise specified temperature is 25°C)

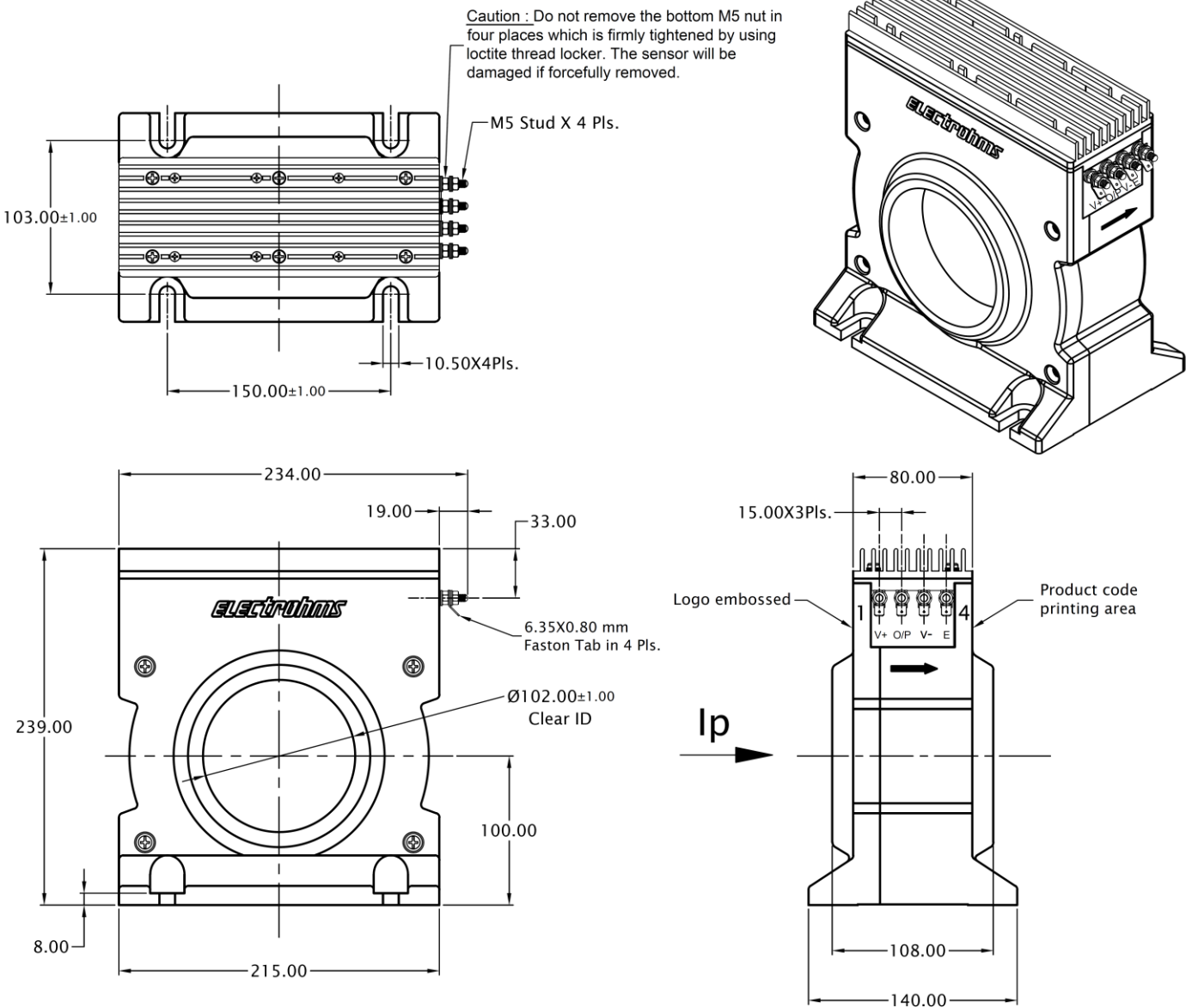
Parameters	Symbol	Condition	Min	Typ	Max	Units
Input current nominal	I_{pn}			3000		Arms
Input current measuring range	I_p		-5000		+5000	A
Burden resistance	R_b	with $\pm 24V$ at $\pm 3300A$ max	0		17	Ω
		with $\pm 24V$ at $\pm 5000A$ max	0		6	Ω
Secondary winding resistance	R_s	at +70°C		15		Ω
Output current at I_{pn}	I_{out}			600		mA
Number of secondary turns	N_s			5000		
Theoretical sensitivity	G_{th}			0.20		mA/A
Supply voltage	V_s	$\pm 5\%$		± 24		V
Current consumption	I_c	$V_s = \pm 24 V$		$35 + I_{out}$		mA
Offset current	I_o		-0.8		+0.8	mA
Magnetic offset current	I_{om}	After passing 3 times I_{pn}	-0.2		+0.2	mA
Variation of I_o wrt temperature	I_{OT}	-25 to +70°C	-0.8		+0.8	mA
Linearity error	e_L		-0.1		+0.1	%
Sensitivity error	e_s	-25 to +70°C	-0.3		+0.3	%
Total error at I_{pn} (Note1)	X_G	-25 to +70°C	-0.8		+0.8	%
Response time at 90% of I_{pn}	t_r			< 1		μs
Frequency bandwidth	BW	-3dB, small signal bw	DC		100	kHz
di/dt accurately followed	di/dt			>50		A/ μs
Ambient operating temperature	T_A		-25		+70	°C
Ambient storage temperature	T_s		-40		+85	°C
Mass	m			6		kg

Note

1: The maximum total error of 0.8% is a calculated composite value based on the worst-case combination of individual errors. In practice, the actual total error will be lower.

Input & Output Characteristics

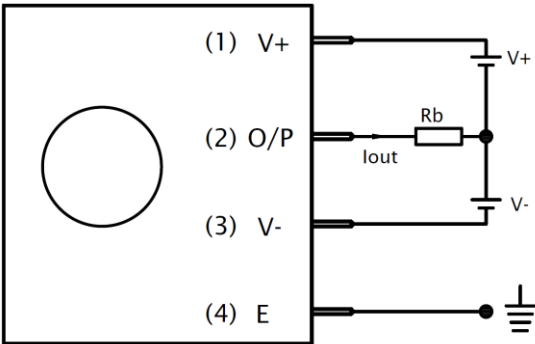
Mechanical dimensions



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 400 in mm	>400 up to 1000 in mm	ALL DIMENSIONS ARE IN 'mm'	
± 0.20	± 0.50	± 1.0	± 1.50	± 2.50	± 4.0	SCALE -NTS	

Connection Diagram



General information

- Connector on the product: M5 Studs & Faston tab, Part no- 61365-1, TE Connectivity AMP Connectors
- Suggested mating connector: Faston receptacle terminal, Part no- 63609-2, TE Connectivity AMP Connectors
- Secondary connection M5 Studs in 4 Places, recommended fastening torque 2.2 N-m
- Sensor mounting: 4 slots X Ø 10.5mm, M10 steel screws, recommended fastening torque 11.5 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 (I_p) 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 ($\gg I_{PN}$) can cause an additional voltage offset due to magnetic remanence.
- The temperature of the primary conductor shall not exceed 100 °C.
- This Sensors 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.