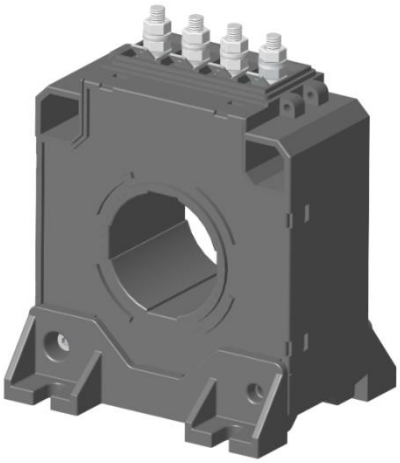
I_{pn} = 1000A



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
- High immunity to external interference
- No insertion losses
- Current overload capability

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
- Railways

Standards

- UL508*
- EN50155
- EN50178 (IEC 62477)

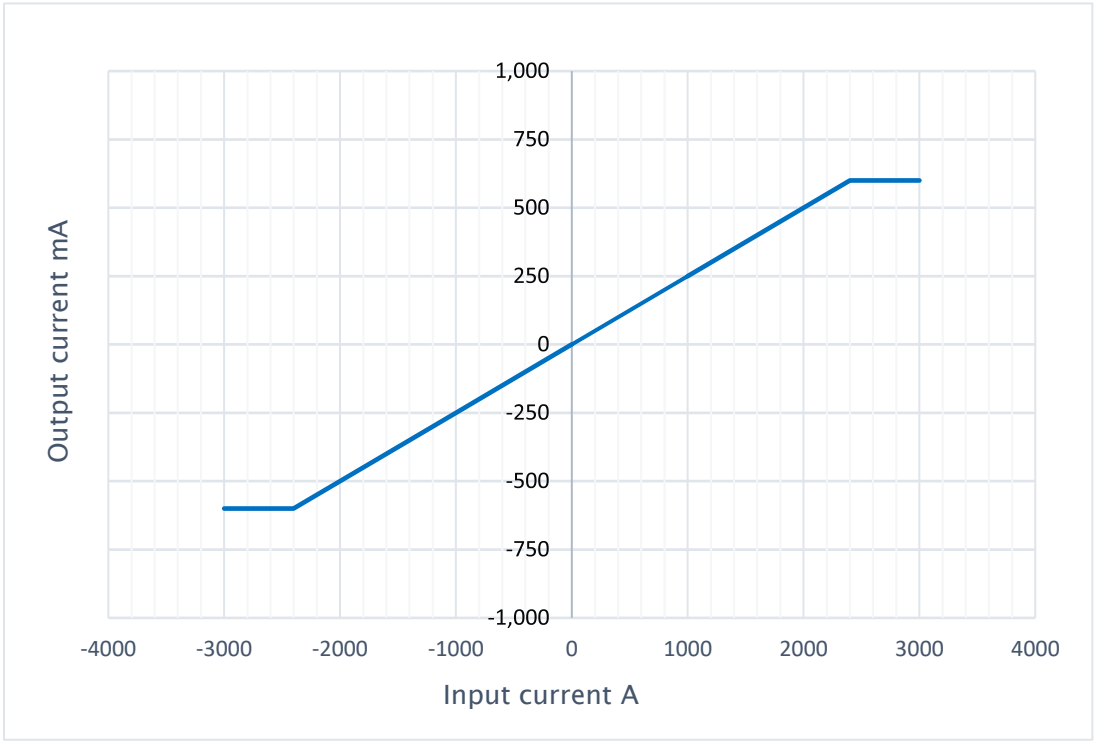
Insulation Characteristics

Parameters	Symbol	Value	Units
Dielectric strength between primary and secondary terminals,50Hz, 60 seconds	V_d	12.0	kVrms
Dielectric strength between shield and secondary terminals, 50Hz, 60 seconds.	V_d	1.0	kVrms
Comparative tracking index	CTI	600	V
Insulation resistance at 500 VDC	R_{is}	>100	MΩ
Creepage distance		66.50	mm
Clearance distance		45.60	mm

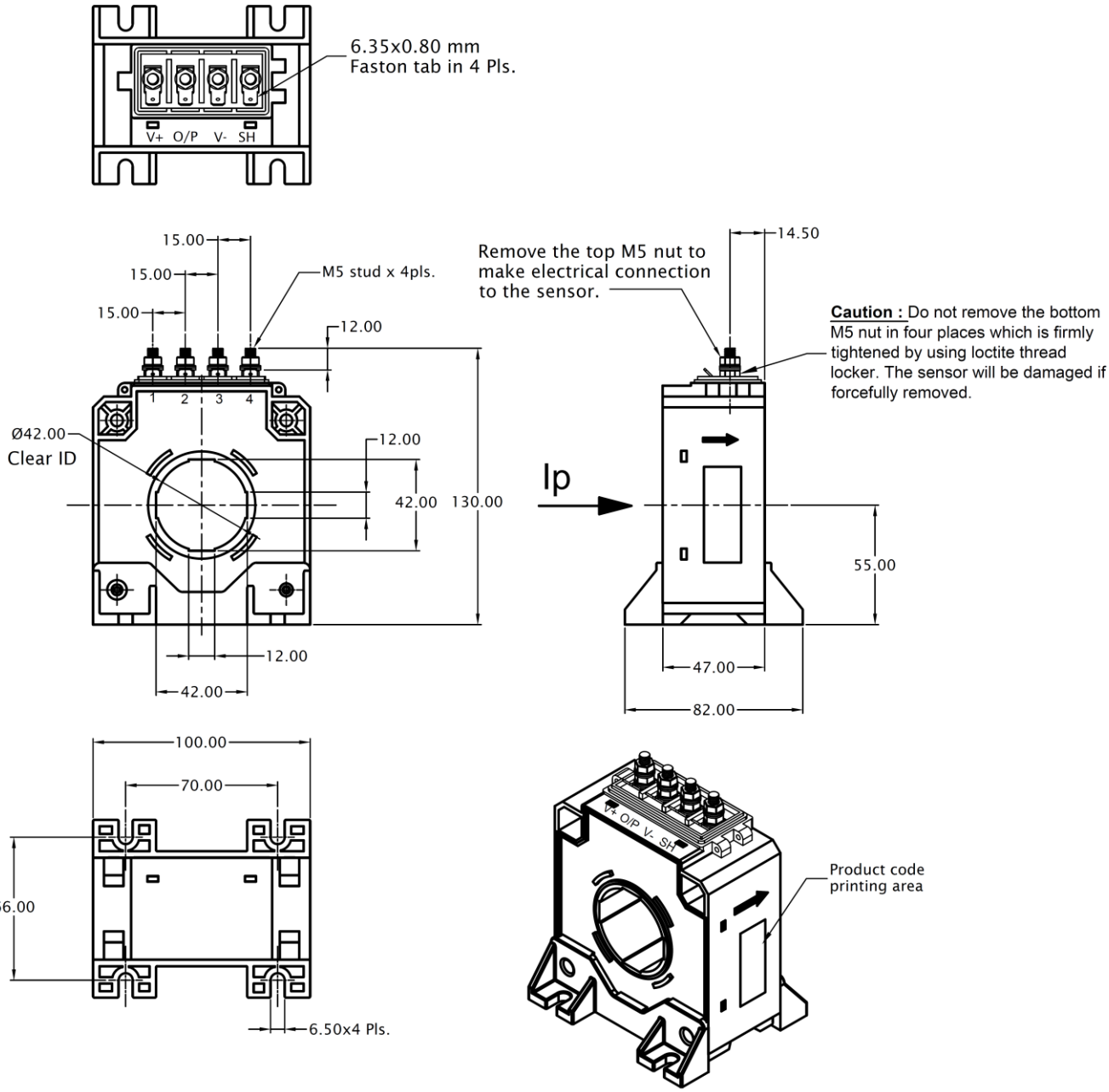
Specifications (Unless otherwise specified temperature is 25°C)

Parameters	Symbol	Condition	Min	Typ	Max	Units
Input current nominal	I_{pn}			1000		A
Input current measuring range	I_p		-2400		+2400	A
Burden resistance	R_b	With ±15V, ±1000A	0		20	Ω
		with ±15V, ±1200A	0		15	Ω
		with ±24V, ±1000A	5		55	Ω
		with ± 24V, ±2000A	5		15	Ω
Secondary winding resistance	R_s	at 85°C		27		Ω
Current output at I_{pn}	I_{out}			250		mA
Number of secondary turns	N_s			4000		---
Theoretical sensitivity	G_{th}			0.25		mA/A
Supply voltage	V_s	±5%	±15		±24	V
Current consumption	I_c	V_s = ±24 V		32 + I_{out}		mA
Offset current	I_o		-0.5		+0.5	mA
Variation of I_{off} wrt temperature	I_{ot}	-40 to +85°C	-1.0		+1.0	mA
Linearity error	Σ_L			<0.1		%
Overall accuracy at I_{pn}	X_G	+70°C -40 to +85°C	-0.4 -0.8		+0.4 +0.8	%
Response time @ 90% of I_{pn}	t_r	di/dt of 100 A/µs		<1.0		µs
Frequency bandwidth	BW	-3dB, small signal bw	0		100	kHz
di/dt accurately followed	di/dt			>100		A/µs
Ambient operating temperature	T_A		-40		+85	°C
Ambient storage temperature	T_S		-45		+90	°C
Mass	m			1.100		kg

Input & Output Characteristics



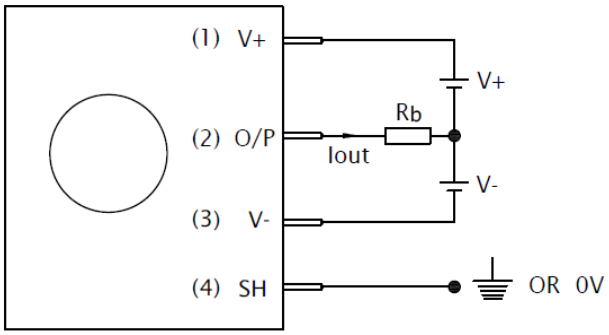
Mechanical dimensions



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

- 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 6.5mm, M6 steel screws, recommended fastening torque 4.6 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 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 (»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.