I_{PN} = 300A

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
- Commercial
- Industrial

Standards
- EN 50178
- UL508

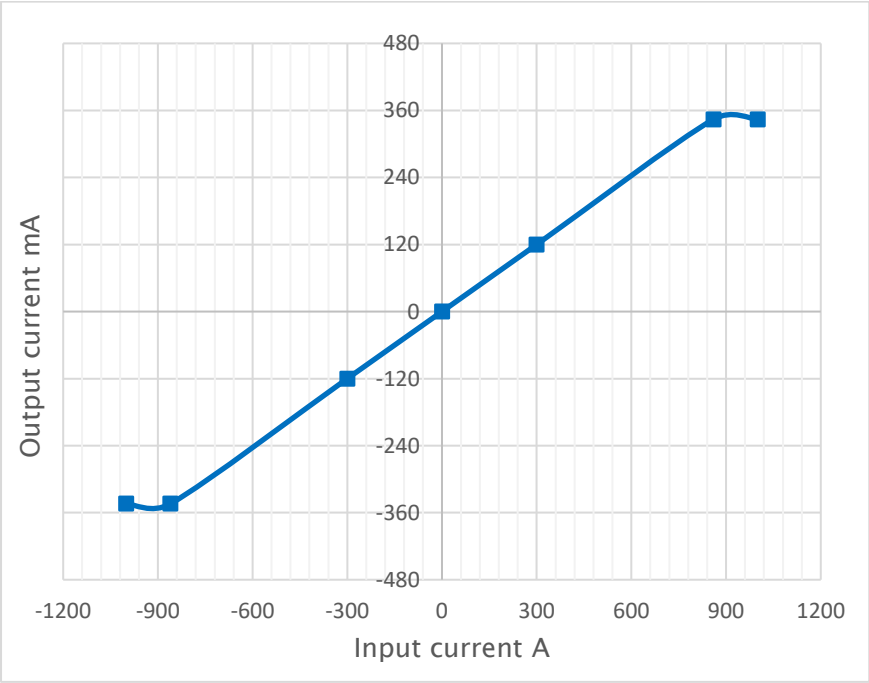
Insulation Characteristics

Parameters	Symbol	Value	Units
Dielectric strength between primary and secondary terminals,50Hz, 60 seconds	V_d	3.0	kVrms
Partial discharge extinction voltage @10pC		2	kV
Impulse withstand voltage 1.2 / 50 µs		6	kV
Comparative tracking index	CTI	250	V
Insulation resistance at 500 VDC	R_{is}	>100	MΩ
Creepage distance		6.80	mm
Clearance distance		6.80	mm

Specifications (Unless otherwise specified temperature is 25°C)

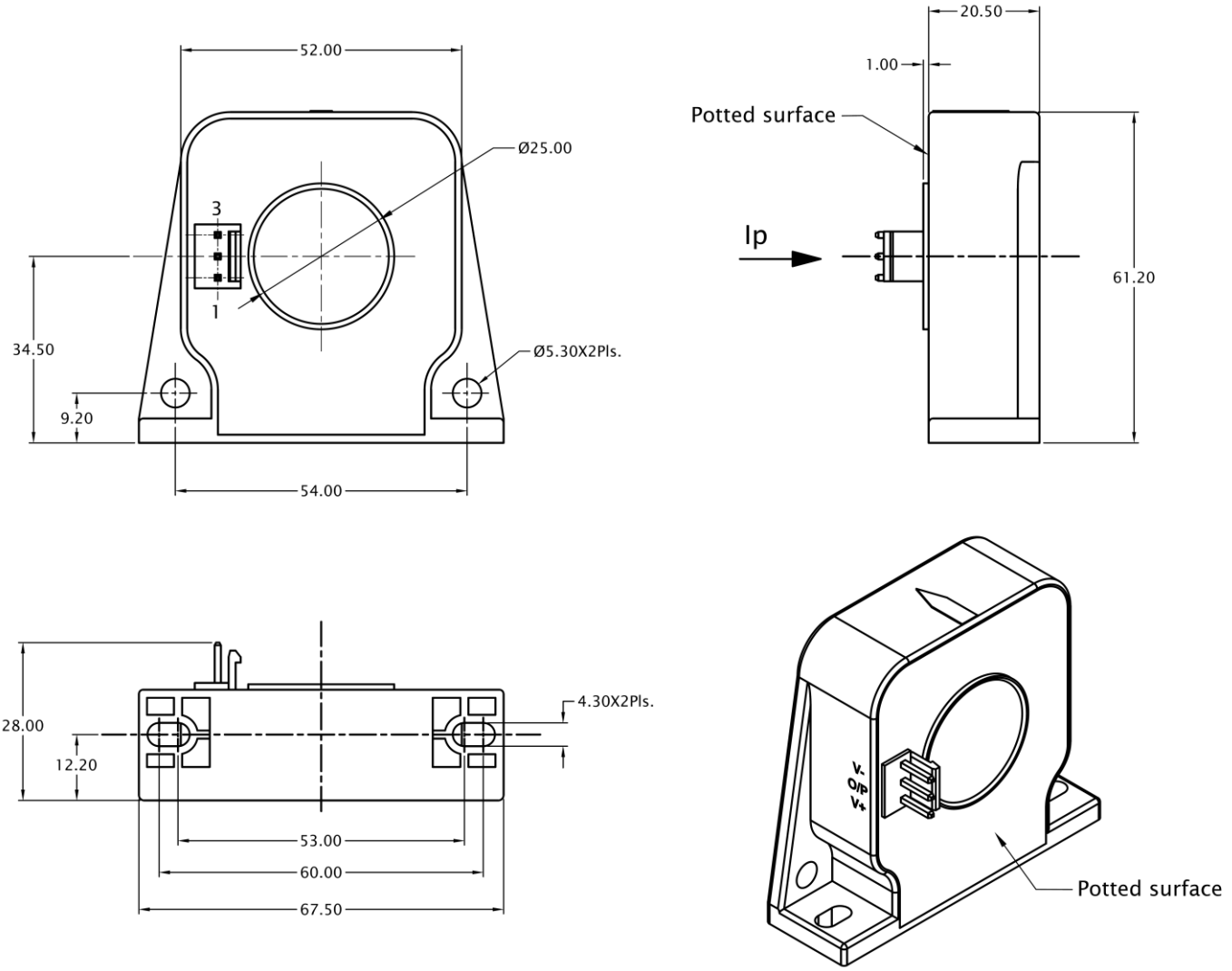
Parameters	Symbol	Condition	Min	Typ	Max	Units
Input current nominal	I_{pn}			300		A
Input current measuring range	I_p		-860		+860	A
Burden resistance	R_b	with ±24V at ±300A	9		125	Ω
		with ±24V at ±860A	9		15	Ω
Resistance of secondary winding	R_s	at +70°C		44		Ω
Output current at I_{pn}	I_{out}			120		mA
Number of secondary turns	N_s			2500		
Theoretical sensitivity	G_{th}			0.4		mA/A
Supply voltage	V_s	±5%		±24		V
Current consumption	I_c	V_s = ±24 V		30+I_{out}		mA
Offset current	I_o		-0.17		+0.17	mA
Variation of I_o wrt temperature	I_{OT}	-10 to +70°C	-0.25		+0.25	mA
Magnetic offset current at Ip = 0 and specified R_b after an overload of 3x I_{pn}			-0.15		+0.15	mA
Linearity error	Σ_L			<0.1		% of I_{pn}
Overall accuracy at I_{pn}	X_G		-0.47		+0.47	% of I_{pn}
Response time at 90% of I_{pn}	t_{ra}	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		-10		+70	°C
Ambient storage temperature	T_S		-25		+85	°C
Mass	m			125		g

Input & Output Characteristics

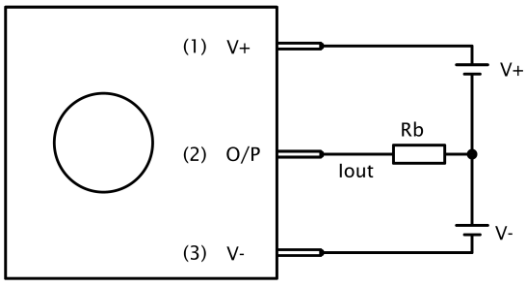


Mechanical dimensions

GENERAL TOL. ± 0.5 mm	
ALL DIMENSIONS ARE IN 'mm'	SCALE -NTS



Connection Diagram



- Connector on the product: Connector header, part no- B3P-VH(LF)(SN), JST Mfg.Co.Ltd.
- Suggested mating connector: Connector housing, part no- VHR-3N, & corresponding pin part no: SVH-21T-P1.1, JST Mfg.Co.Ltd.
- Sensor mounting: Base mounting, 2 holes X Ø 4.30mm, M4 steel screws, recommended fastening torque 3 N-m
  Vertical mounting, 2 holes X 5.30mm, M5 steel screws, recommended fastening torque 3.5 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 (Ip) flows in the direction of arrow
- Ensure proper connection of Power supply to avoid damage to the Sensor

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.

General information:

Electrohms the reserves right to make modifications on products for improvements without prior notice.