

$I_{pn} = 75A, 1000A$ 

Representative image only

### Features

- Used for measurement of electric current AC/DC
- Open loop current sensor
- Pulsed in electric & electronic equipment
- Ratiometric output
- Plastic outer case complaint to UL94-V0
- Dual current sensor

### Advantage

- Good linearity
- Low power consumption

### Applications

- Battery current measurement

### Standards

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## Insulation Characteristics

Parameters	Symbol	Value	Units
Dielectric strength between primary and secondary terminals, 50 Hz, 60 seconds	$V_d$	2.5	kVrms
Comparative tracking index	CTI	600	V
Insulation resistance at 500 VDC	$R_{IS}$	>100	MΩ
Creepage distance		52.5	mm
Clearance distance		38.0	mm

**Specifications (Unless otherwise specified temperature is 25°C)**

Parameters	Symbol	Condition	Min	Typ	Max	Units
Burden resistance	$R_b$		10			k $\Omega$
Supply voltage	$V_s$		4.75	5.00	5.25	V
Current consumption at +5V	$I_c$			28.0		mA
Accuracy at $I_{pn}$ (Excluding offset)	$X_G$	$V_s=5V$		$\pm 1$		%
Linearity error	$\Sigma_L$	$V_s=5V$		$\pm 1$		%
Temperature coefficient of $V_{off}$	$TV_{off}$	-40 to +85 °C		$\pm 0.5$		mV/K
Temperature coefficient of $V_{out}$	$TV_{out}$	-40 to +85 °C		$\pm 0.1$		%/K
Response time at 90% of $I_{pn}$	$t_r$			---		--
Frequency bandwidth	BW	-3dB, small signal bw	DC		70	Hz
di/dt accurately followed	di/dt			--		--
Ambient operating temperature	$T_A$		-40		+125	°C
Ambient storage temperature	$T_S$		-40		+125	°C
Mass	$m$			150		g

**Channel 1**

Parameters	Symbol	Condition	Min	Typ	Max	Units
Primary Nominal Current (see note 1)	$I_{pn}$			75		A
Primary Measuring Range	$I_p$		-75		+75	A
Output offset voltage	$V_{off}$	at $I_p = 0$		$V_s/2$		V
Output voltage 1 (Note 3)	$V_{out}$	at $\pm I_{pn}$ , $V_s=5V$ , $R_b=10k\Omega$		$V_{off} + 2.0$		V
Output sensitivity	$V_{sens}$			26.67		mV/A

**Channel 2**

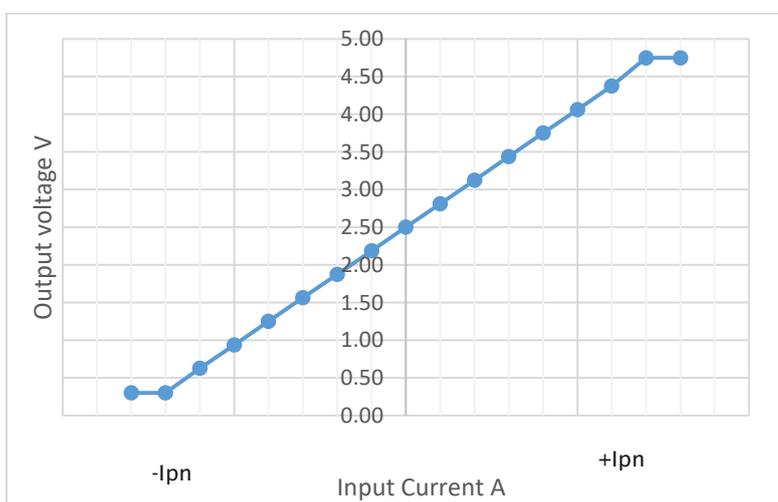
Parameters	Symbol	Condition	Min	Typ	Max	Units
Primary Nominal Current (see note 1,2)	$I_{pn}$			1000		A
Primary Measuring Range	$I_p$		-1000		+1000	A
Output offset voltage	$V_{off}$	at $I_p = 0$		$V_s/2$		V
Output voltage 2 (Note 3)	$V_{out}$	at $\pm I_{pn}$ , $V_s=5V$ , $R_b=10k\Omega$		$V_{off} + 2.0$		V
Output sensitivity	$V_{sens}$			2.0		mV/A

Notes:

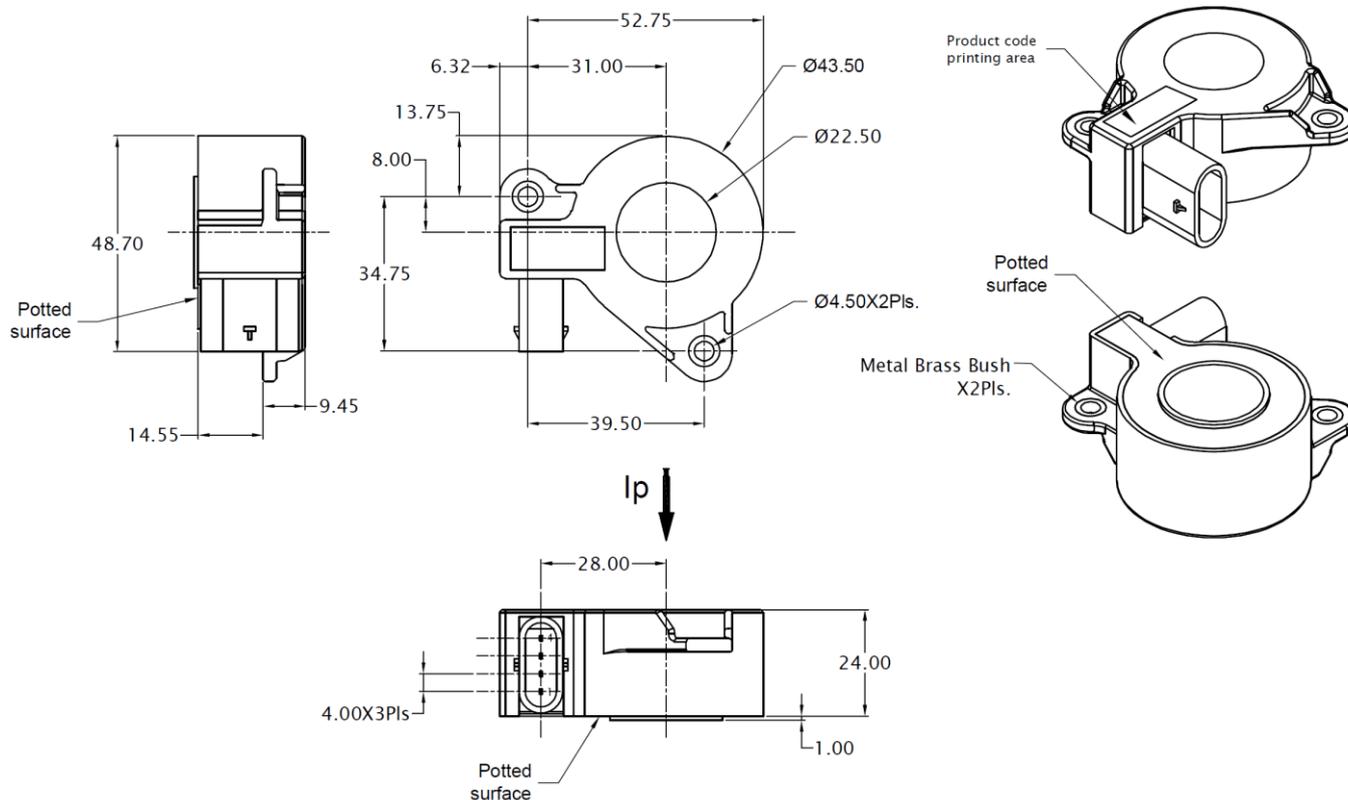
1 Ensure peak values of Alternating current to be measured is complying with in the specification.

2 The maximum RMS current value for continuous operation is determined by the busbar temperature and should be limited to 150 °C.

3 Output offset and sensitivity will vary based on the actual value of supply voltage

**Input & Output Characteristics for channel 1 and channel 2 at  $V_s=5V$** 


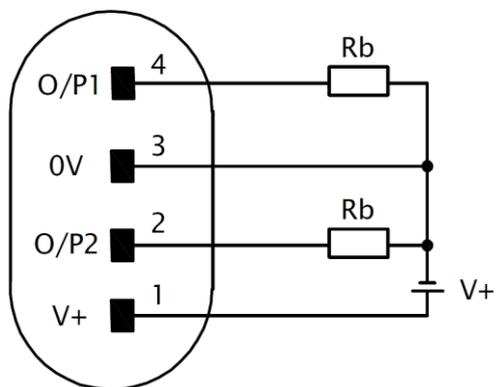
**Mechanical dimensions**



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	± 0.30	± 0.50	± 0.80	± 1.20	± 2.0	SCALE -NTS	

**Connection Diagram**



- Suggested mating connector: Connector housing, Part no 1-1456426-5, TE connectivity
- It is recommended to centrally locate the current carrying conductor or completely fill the central opening for optimum performance.
- Output increases when current ( $I_p$ ) 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
- 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)
- 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 reserves the right to make modifications on products for improvements without prior notice.