

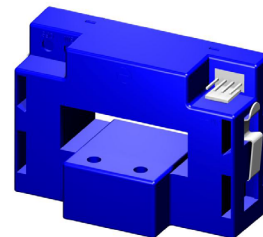
## Current Transducer HOP 200 ... 600-SB

For the electronic measurement of currents: DC, AC, pulsed..., with galvanic separation between the primary circuit and the secondary circuit.



RoHS

$$I_{PN} = 200 \dots 600 \text{ A}$$



### Electrical data

Type	Primary nominal RMS current $I_{PN}$ (A)	Primary current, measuring range $I_{PM}$ (A)	
HOP 200-SB	200	±300	
HOP 300-SB	300	±450	
HOP 400-SB	400	±600	
HOP 500-SB	500	±750	
HOP 600-SB	600	±900	
$V_{out}$ Output voltage (Analog)		±4	V
$R_L$ Load resistance		> 10	kΩ
$U_C$ Supply voltage (±5 %)		±12 ... 15	V
$I_C$ Current consumption		20	mA

### Accuracy - Dynamic performance data

$X$	Accuracy <sup>1)</sup> @ $I_{PN}$ , $T_A = 25^\circ\text{C}$	≤ ±2	%
$\varepsilon_L$	Linearity error <sup>1)</sup>	≤ ±1	%
$V_{OE}$	Electrical offset voltage @ $I_P = 0$ , $T_A = 25^\circ\text{C}$	Typ ±50	Max ±140 mV
$V_{OM}$	Magnetic offset voltage @ $I_P = 0$ and specified $R_M$ , after an overload of $3 \times I_{PN}$	±20	±30 mV
$V_{OT}$	Temperature variation of $V_O$ -10 °C ... +70 °C	±140	±550 mV
$\varepsilon_{GT}$	Thermal drift of sensitivity	±1.5	%
$t_r$	Step response time <sup>1)</sup> to 90 % of $I_{PN}$ <sup>2)</sup>	< 10	μs
$BW$	Frequency bandwidth (-1 dB)	DC ... 8	kHz

### General data

$T_A$	Ambient operating temperature	-10 ... +70	°C
$T_S$	Ambient storage temperature	-25 ... +85	°C
$m$	Mass	110	g
	Standards	EN 50178: 1997 UL 508: 2010	

### Features

- Open loop Hall effect transducer
- Insulating plastic case recognized according to UL 94-V0.

### Advantages

- Low power consumption
- Split core easy for mounting
- High insulation between the primary and the secondary circuit
- No insertion losses.

### Applications

- Power supplies for TELECOM (monitoring & measuring)
- Uninterruptible Power Supplies (UPS)
- Switched Mode Power Supplies (SMPS)
- Battery supplied applications
- Electrical chemistry
- Chopper.

### Application domain

- Industrial.

Notes: <sup>1)</sup> Excludes the electrical offset

<sup>2)</sup> For a  $di/dt = 50 \text{ A}/\mu\text{s}$ .

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### Insulation coordination

$U_d$	RMS voltage for AC insulation test, 50 Hz, 1 min	3	kV
$\hat{U}_w$	Impulse withstand voltage 1.2/50 $\mu$ s	6	kV
$U_e$	Partial discharge extinction RMS voltage @ 10 pC	$\geq 1.5$	kV
		Min	
$d_{cp}$	Creepage distance <sup>1)</sup>	9.7	mm
$d_{cl}$	Clearance <sup>1)</sup>	9.7	mm
$CTI$	Comparative tracking index (group IIIa)	250	

**Note:** <sup>1)</sup> On housing from pin to primary hole.

### Applications examples

According to EN 50178 and IEC 61010-1 standards and following conditions:

- Over voltage category OV 3
- Pollution degree PD2
- Non-uniform field

	EN 50178	IEC 61010-1
$d_{cp}, d_{cl}, \hat{U}_w$	Rated insulation voltage	Nominal voltage
Basic insulation	970 V	970 V
Reinforced insulation	485 V	300 V

### Safety

This transducer must be used in limited-energy secondary circuits according to IEC 61010-1.



This transducer must be used in electric/electronic equipment with respect to applicable standards and safety requirements in accordance with the manufacturer's operating instructions.



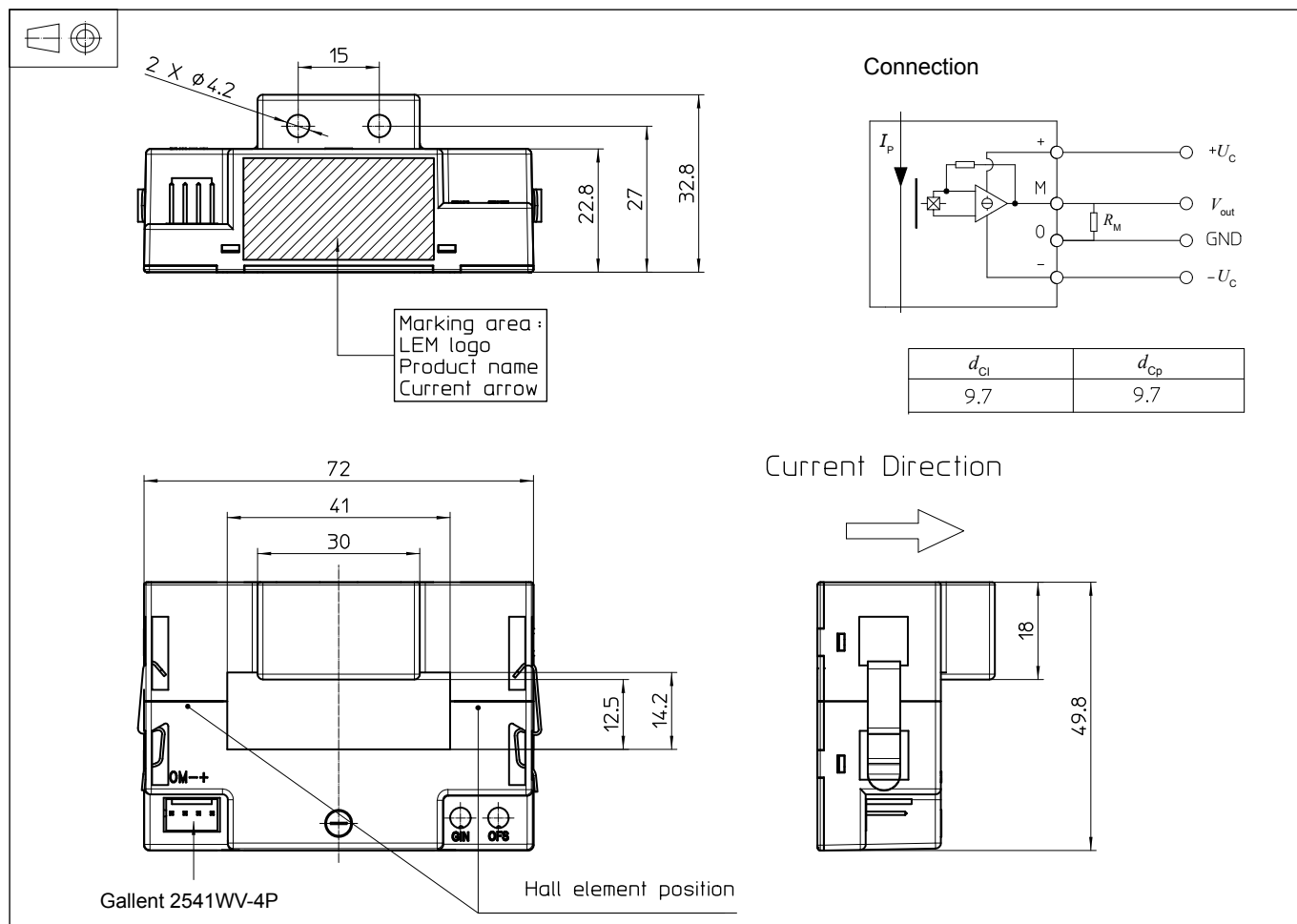
Caution, risk of electrical shock

When operating the transducer, 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.

This transducer is a build-in device, whose conducting parts must be inaccessible after installation. A protective housing or additional shield could be used.

Main supply must be able to be disconnected.

## Dimensions HOP 200 ... 600-SB (in mm)



### Mechanical characteristics

- General tolerance:  $\pm 0.5$  mm
- Transducer fastening: 2 holes  $\phi 4.2$  mm  
2 M4 steel screws  
Recommended fastening torque: 1.2 N·m
- Primary through-hole: 41 x 12.5 mm
- Connection of secondary: Gallent 2541WV-4P  
"Mating connector provided with the transducer"

### Remarks

- $I_s$  is positive when  $I_p$  flows in the direction of the arrow.
- Temperature of the primary conductor should not exceed 100 °C.
- Dynamic performances ( $di/dt$  and response time) are best with a single bar completely filling the primary hole.
- Installation of the transducer must be done unless otherwise specified on the datasheet, according to LEM Transducer Generic Mounting Rules. Please refer to LEM document N°ANE120504 available on our Web site: [Products/Product Documentation](#).
- This is a standard model. For different versions (supply voltages, turns ratios, unidirectional measurements...), please contact us.

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