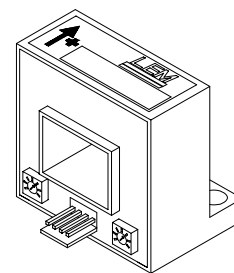


# Current Transducer HAL 600-S

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

For the electronic measurement of DC, AC and pulsed currents, with a galvanic isolation between the primary (high power) circuit and the secondary (electronic) circuit.



## Electrical data

$I_{PN}$	Primary nominal DC or rms current	600	A
$I_P$	Primary current, measuring range	0 .. ± 1000	A
$\hat{I}_P$	Overload capacity (Ampere Turns)	30000	A
$V_{OUT}$	Analogue output voltage @ ± $I_{PN}$	± 4	V
$R_L$	Load resistance $T_A = 0 .. + 70^\circ\text{C}$	> 1	kΩ
		$T_A = - 25 .. + 85^\circ\text{C}$	> 3
$V_C$	Supply voltage (± 5%)	± 15	V
$I_C$	Current consumption (max)	25	mA
$V_b$	Rms rated voltage <sup>1)</sup>	500	V
$V_d$	Rms voltage for AC isolation test, 50 Hz, 1 mn	3	kV
$R_{is}$	Isolation resistance @ 500 $V_{DC}$	> 500	MΩ

## Accuracy - Dynamic performance data

$X$	Accuracy <sup>2)</sup> @ $I_{PN}, T_A = 25^\circ\text{C}, @ \pm 15\text{ V}$	± 1	%
$\epsilon_L$	Linearity <sup>2)</sup>	± 0.5	%
		Max	
$V_{OE}$	Electrical offset voltage @ $I_P = 0, T_A = 25^\circ\text{C}$	± 10	mV
$V_{OM}$	Residual offset voltage @ $I_P = 0$ after an overload of $3 \times I_{PN}$	± 10	mV
		± 1	mV/°K
$V_{OT}$	Thermal drift of offset voltage $T_A = - 25 .. + 85^\circ\text{C}$	± 1	mV/°K
$TCE_G$	Thermal drift of gain $T_A = - 25 .. + 85^\circ\text{C}$	± 0.05	%/°K
$t_r$	Response time @ 90 % of $I_P$	< 3	μs
$di/dt$	di/dt accurately followed	> 50	A/μs
$f$	Frequency bandwidth (- 3 dB) <sup>3)</sup>	DC .. 50	kHz

## General data

$T_A$	Ambient operating temperature	- 25 .. + 85	°C
$T_S$	Ambient storage temperature	- 25 .. + 85	°C
$m$	Mass	75	g
		Standards	Safety
	EMC	EN50082-2 (1992)	
		EN50081-1 (1992)	
	Deviation in output when tested to EN 61000-4-6	< 10	% of $I_{PN}$
	Deviation in output when tested to EN 61000-4-4	< 10	% of $I_{PN}$

## Features

- Open loop transducer using Hall Effect
- Panel mounting - Horizontal or Vertical
- Insulated plastic case to UL 94-V0.

## Advantages

- Very good linearity
- Very good accuracy
- Low temperature drift
- Wide frequency bandwidth
- Very low insertion losses
- High immunity to external interference
- Current overload capability
- Low power consumption
- Wide dynamic range, 50 to 600 A in one package.

## Applications

- AC variable speed drives and servo motor drives
- Static converters for DC motor drives
- Battery supplied applications
- Uninterruptable Power Supplies (UPS)
- Switched Mode Power Supplies (SMPS)
- Power supplies for welding applications.

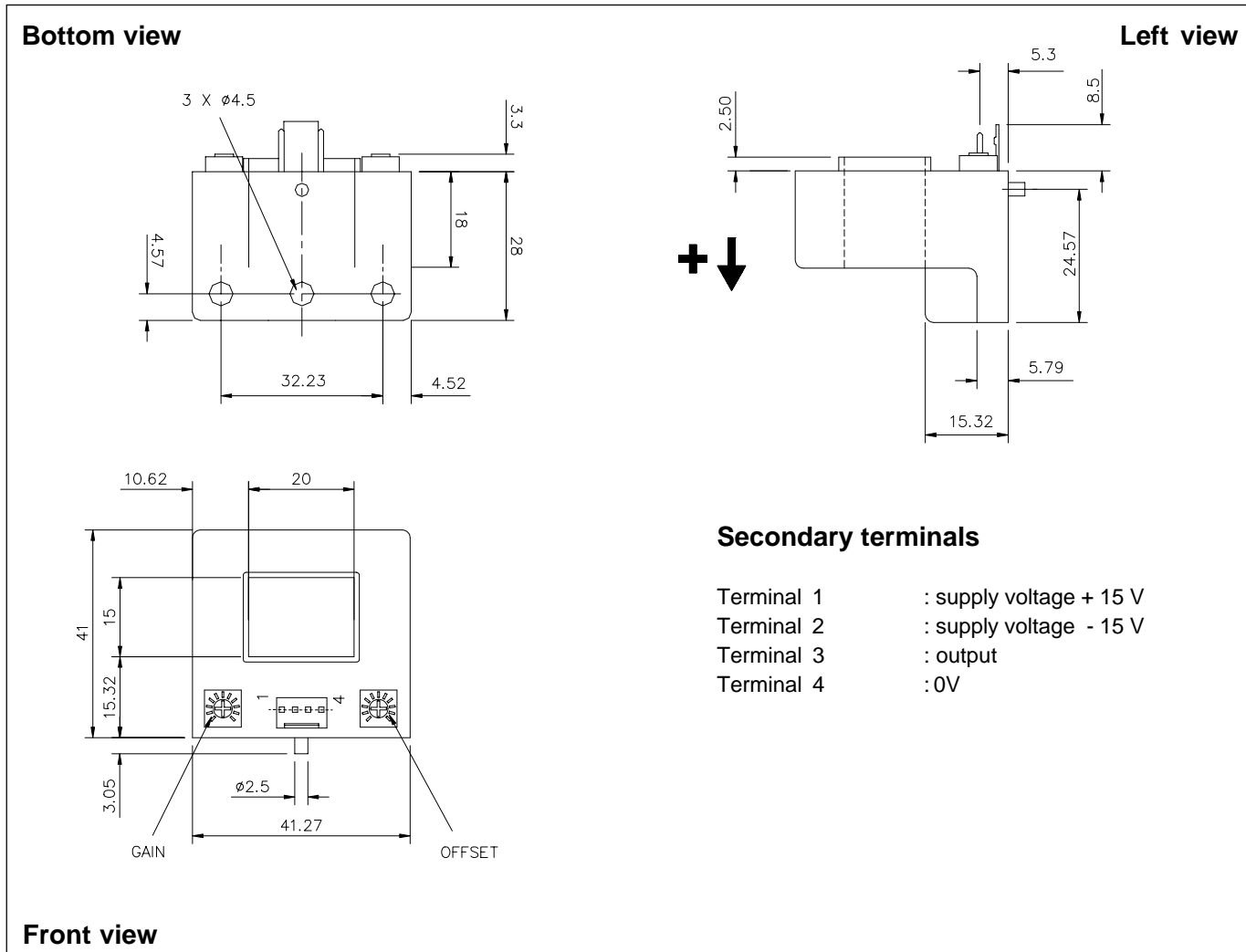
**Notes :** <sup>1)</sup> Overvoltage Category III, Pollution Degree 2

<sup>2)</sup> Excludes the electrical offset

<sup>3)</sup> Refer to derating curves in the technical file to avoid excessive core heating at high frequency

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## Dimensions HAL 600-S (in mm. 1 mm = 0.0394 inch)



### Mechanical characteristics

- General tolerance  $\pm 0.5$  mm
- Primary through-hole 20 mm x 15 mm
- Connection of secondary Molex 5045-04-A

### Remarks

- $V_{OUT}$  is positive when  $I_p$  flows in the direction of the arrow.
- Temperature of the primary conductor should not exceed 90°C.
- This is a standard model. For different versions (supply voltages, secondary connections, unidirectional measurements, operating temperatures, etc.) please contact us.