

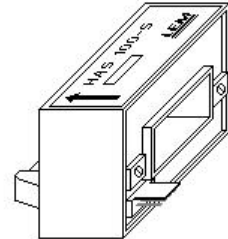
## Current Transducers HAS 50 to 600-S

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



$$I_{PN} = 50 \dots 600 \text{ A}$$

$$V_{OUT} = \pm 4 \text{ V}$$



### Electrical data

Primary nominal r.m.s. current $I_{PN}$ (A)	Primary current measuring range $I_P$ (A)	Type
50	$\pm 150$	HAS 50-S
100	$\pm 300$	HAS 100-S
200	$\pm 600$	HAS 200-S
300	$\pm 900$	HAS 300-S
400	$\pm 900$	HAS 400-S
500	$\pm 900$	HAS 500-S
600	$\pm 900$	HAS 600-S

$V_C$	Supply voltage ( $\pm 5\%$ )	$\pm 15$	V
$I_C$	Current consumption	$\pm 15$	mA
$I_{OC}$	Overload capacity	30,000	At
$V_d$	R.m.s. voltage for AC isolation test, 50/60 Hz, 1 mn	3	kV
$V_b$	R.m.s. rated voltage, safe separation	500 <sup>1)</sup>	V
$R_{IS}$	Isolation resistance @ 500 VDC	> 1000	M $\Omega$
$V_{OUT}$	Output voltage @ $\pm I_{PN}$ , $R_L = 10 \text{ k}\Omega$ , $T_A = 25^\circ\text{C}$	$\pm 4 \text{ V} \pm$	
40	mV		
$R_{OUT}$	Output internal resistance	approx. 100	$\Omega$
$R_L$	Load resistance	> 1	k $\Omega$

### Accuracy - Dynamic performance data

$X$	Accuracy @ $I_{PN}$ , $T_A = 25^\circ\text{C}$ (without offset)	$< \pm 1$	%
$e_L$	Linearity <sup>2)</sup> ( $0 \dots \pm I_{PN}$ )	$< \pm 1$	% of $I_{PN}$
$V_{OE}$	Electrical offset voltage, $T_A = 25^\circ\text{C}$	$< \pm 20$	mV
$V_{OH}$	Hysteresis offset voltage @ $I_P = 0$ ; after an excursion of $1 \times I_{PN}$	$< \pm 20$	mV
$V_{OT}$	Thermal drift of $V_{OE}$	HAS 50-S HAS 100 to HAS 600-S	$< \pm 2$ mV/K $< \pm 1$ mV/K
$TCE_G$	Thermal drift of the gain (% of reading)	$< \pm 0.1$	%/K
$t_f$	Response time @ 90% of $I_P$	< 3	$\mu\text{s}$
$di/dt$	di/dt accurately followed	> 50	A/ $\mu\text{s}$
$f$	Frequency bandwidth (-3 dB) <sup>3)</sup>	DC .. 50	kHz

### General data

$T_A$	Ambient operating temperature	-10 .. +80	$^\circ\text{C}$
$T_S$	Ambient storage temperature	-25 .. +80	$^\circ\text{C}$
$m$	Mass	approx. 60	g
	Standards <sup>4)</sup>	EN 50178	

### Features

- Hall effect measuring principle
- Galvanic isolation between primary and secondary circuit
- Isolation voltage 3000 V~
- Low power consumption
- Extended measuring range ( $3 \times I_{PN}$ )
- Insulated plastic case made of polycarbonate PBT recognized according to UL 94-V0

### Advantages

- Easy mounting
- Small size and space saving
- Only one design for wide current ratings range
- High immunity to external interference.

### Applications

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

**Notes :** <sup>1)</sup> Pollution class 2, overvoltage category III.

<sup>2)</sup> Linearity data exclude the electrical offset.

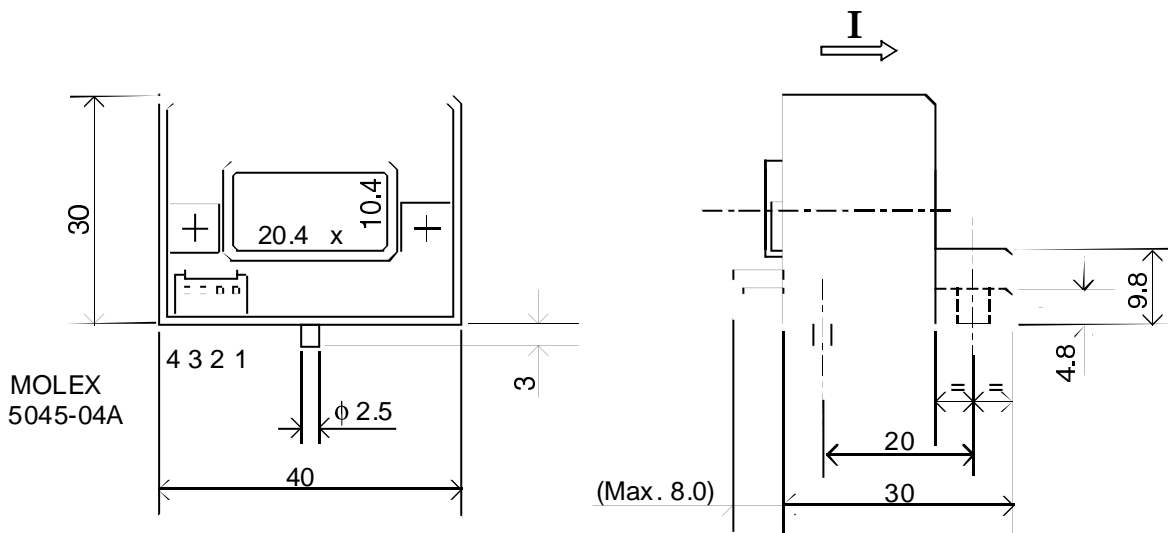
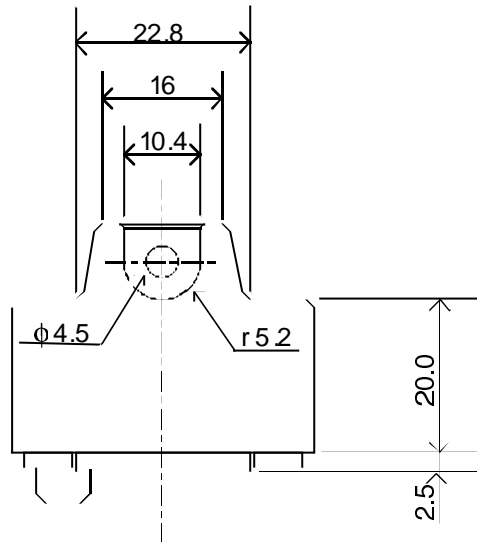
<sup>3)</sup> Please refer to derating curves in the technical file to avoid excessive core heating at high frequency.

<sup>4)</sup> Please consult characterisation report for more technical details and application advice.

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# HAS 50 to 600-S

## Dimensions (in mm)



### PINS ARRANGEMENT

- 1 = +15V
- 2 = -15V
- 3 = OUTPUT
- 4 = 0V