

## Current Transducers HAC 100 ... 800-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).

$$I_{PN} = 100 \dots 800 \text{ A}$$

### Preliminary



#### Electrical data

Primary nominal r.m.s. current $I_{PN}$ (A)	Primary current measuring range $I_P$ (A)	Type
100	$\pm 300$	HAC 100-S
200	$\pm 600$	HAC 200-S
300	$\pm 900$	HAC 300-S
400	$\pm 900$	HAC 400-S
600	$\pm 1800$	HAC 600-S
800	$\pm 1800$	HAC 800-S

$V_C$	Supply voltage ( $\pm 5\%$ )	$\pm 15$	V
$I_C$	Current consumption	HAC 100-S .. 400-S HAC 600-S .. 800-S	$< \pm 18$ $< \pm 25$
			mA mA
$V_d$	R.m.s. voltage for AC isolation test, 50/60 Hz, 1 mn	2.5	kV
$R_{IS}$	Isolation resistance @ 500 VDC	$> 1000$	M $\Omega$
$V_{OUT}$	Output voltage @ $\pm I_{PN}$ , $R_L = 10 \text{ k}\Omega$ , $T_A = 25^\circ\text{C}$	$\pm 4$	V
$R_{OUT}$	Output internal resistance	100	$\Omega$
$R_L$	Load resistance	$> 10$	k $\Omega$

#### Features

- Hall effect measuring principle
- Galvanic isolation between primary and secondary circuit
- Isolation voltage 2500 V
- Low power consumption
- Extended measuring range ( $3 \times I_{PN}$ )

#### Advantages

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

#### Accuracy - Dynamic performance data

$X$	Accuracy @ $I_{PN}$ , $T_A = 25^\circ\text{C}$ (without offset)	$< \pm 1$	% of $I_{PN}$
$e_L$	Linearity ( $0 \dots \pm I_{PN}$ )	$< \pm 1$	% of $I_{PN}$
$V_{OE}$	Electrical offset voltage, $T_A = 25^\circ\text{C}$	$< \pm 30$	mV
$V_{OH}$	Hysteresis offset voltage @ $I_P = 0$ ; after an excursion of $1 \times I_{PN}$	$< \pm 35$	mV
$V_{OT}$	Thermal drift of $V_{OE}$	$< \pm 1$	mV/K
$TCE_G$	Thermal drift (% of reading)	$< \pm 0.1$	%/K
$t_r$	Response time @ 90% of $I_P$	$< 7$	$\mu\text{s}$
$f$	Frequency bandwidth (-3 dB) <sup>1)</sup>	DC .. 50	kHz

#### General data

$T_A$	Ambient operating temperature	- 10 .. + 80	$^\circ\text{C}$
$T_S$	Ambient storage temperature	- 15 .. + 85	$^\circ\text{C}$
$m$	Mass	70	g

Notes : EN50178 approval pending

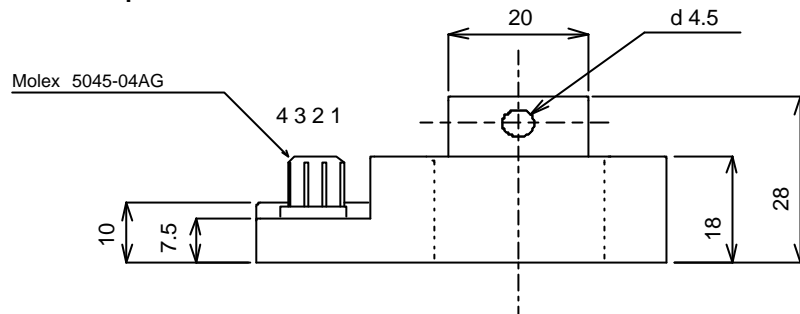
<sup>1)</sup> Derating is needed to avoid excessive core heating at high frequency.

#### Applications

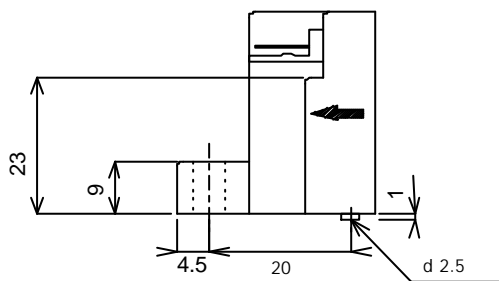
- AC variable speed drives
- Static converters for DC motor drives
- Battery supplied applications
- Uninterruptible Power Supplies (UPS)
- Switched Mode Power Supplies (SMPS)
- Power supplies for welding applications.

# HAC 100 ... 800-S

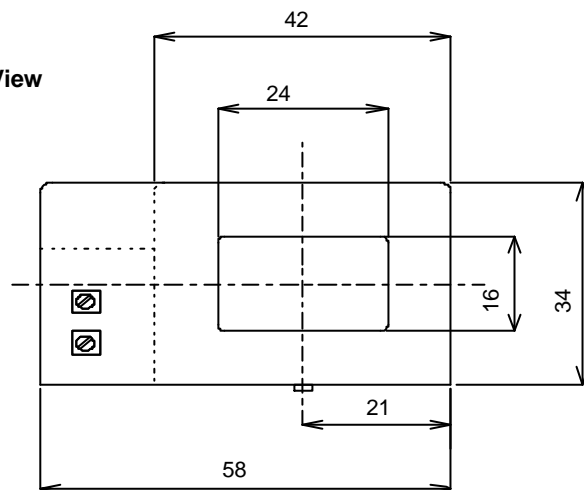
Top View



Left View



Front View



Terminal Identification

- 1.....+Vcc
- 2.....-Vcc
- 3.....Output
- 4.....0V

TOLERANCE : +/-0.5 mm  
UNLESS OTHERWISE SPECIFIED

UNIT : mm