

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	± 300	HAC 100-S
200	± 600	HAC 200-S
300	± 900	HAC 300-S
400	± 900	HAC 400-S
600	± 1800	HAC 600-S
800	± 1800	HAC 800-S

V_C	Supply voltage ($\pm 5\%$)	± 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 Ω
V_{OUT}	Output voltage @ $\pm I_{PN}$, $R_L = 10 \text{ k}\Omega$, $T_A = 25^\circ\text{C}$	± 4	V
R_{OUT}	Output internal resistance	100	Ω
R_L	Load resistance	> 10	k Ω

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	μs
f	Frequency bandwidth (-3 dB) ¹⁾	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

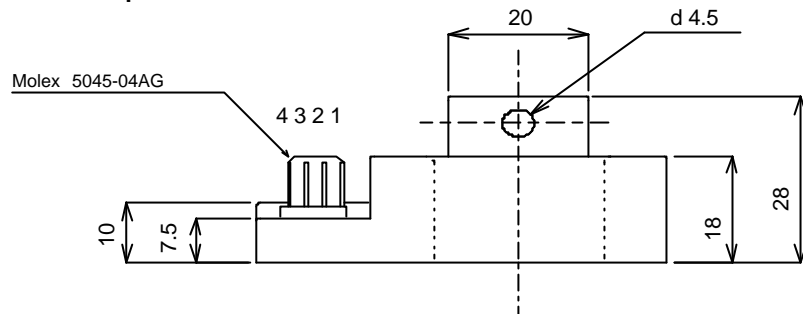
¹⁾ Derating is needed to avoid excessive core heating at high frequency.

Applications

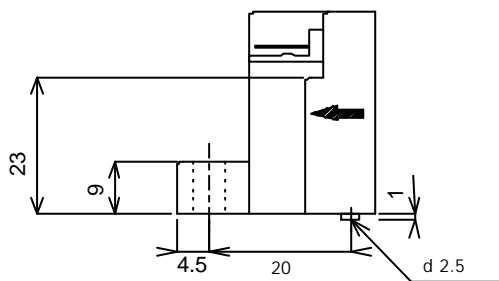
- AC variable speed drives
- Static converters for DC motor drives
- Battery supplied applications
- Uninterruptible Power Supplies (UPS)
- Switched Mode Power Supplies (SMPS)
- Power supplies for welding applications.

HAC 100 ... 800-S

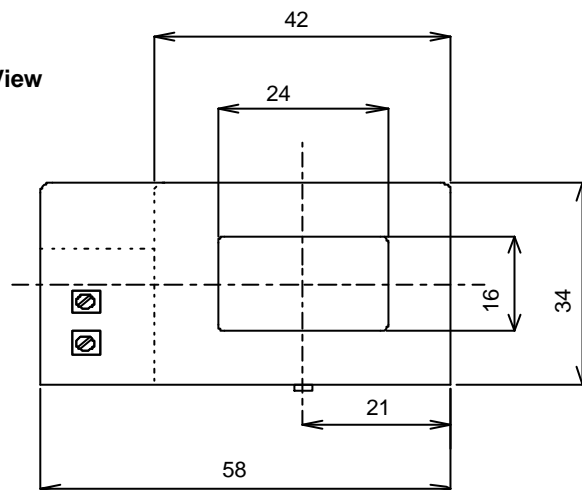
Top View



Left View



Front View



Terminal Identification

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

TOLERANCE : +/-0.5 mm
UNLESS OTHERWISE SPECIFIED

UNIT : mm