

Current Transducers HAX 500 to 2500-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).

$$I_{PN} = 500 \dots 2500 \text{ A}$$

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



Electrical data

Primary nominal r.m.s. current I_{PN} (A)	Primary current measuring range I_P (A)	Type
500	± 1500	HAX 500-S
1000	± 3000	HAX 1000-S
1500	± 4500	HAX 1500-S
2000	± 5500	HAX 2000-S
2500	± 5500	HAX 2500-S

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

Accuracy - Dynamic performance data

X	Accuracy @ I_{PN} , $T_A = 25^\circ\text{C}$ (without offset)	$< \pm 1$	%
ϵ_L	Linearity ²⁾ ($0 \dots \pm I_{PN}$)	$< \pm 1$	% 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 $1 \times I_{PN}$	$< \pm 30$	mV
V_{OT}	Thermal drift of V_{OE}	$< \pm 1$	mV/K
TCE_G	Thermal drift of the gain (% of reading)	$< \pm 0.1$	%/K
t_r	Response time @ 90% of I_P	< 5	μs
di/dt	di/dt accurately followed	> 50	A/ μs
f	Frequency bandwidth ³⁾ (-3 dB)	DC .. 25	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. 450	g
	Standards ⁴⁾	EN 50178	

Features

- Hall effect measuring principle
- Galvanic isolation between primary and secondary circuit
- Isolation voltage 5000 V~
- Low power consumption
- Extended measuring range ($3 \times I_{PN}$)
- Package meets UL 94V-0 polycarbonate PBT

Advantages

- Easy mounting
- Small size and space savings
- Only one design for wide current ratings range
- High immunity against external interference

Applications

- AC motor speed control
- Battery supplied applications
- Uninterruptible Power Supplies (UPS)
- Power supplies for welding, cable TV and telecommunication applications.

Notes : ¹⁾ Pollution class 2, overvoltage category III

²⁾ Linearity data exclude the electrical offset.

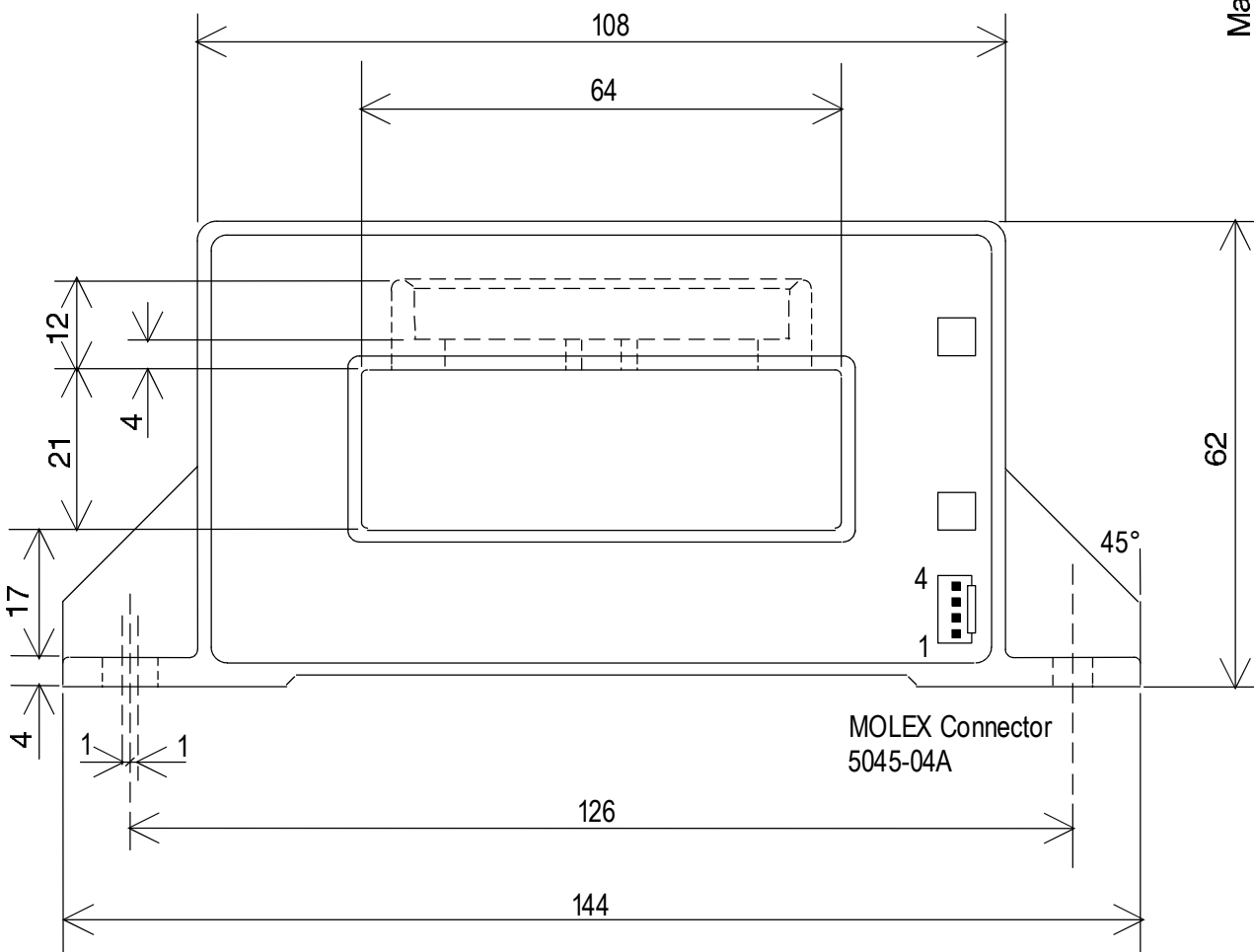
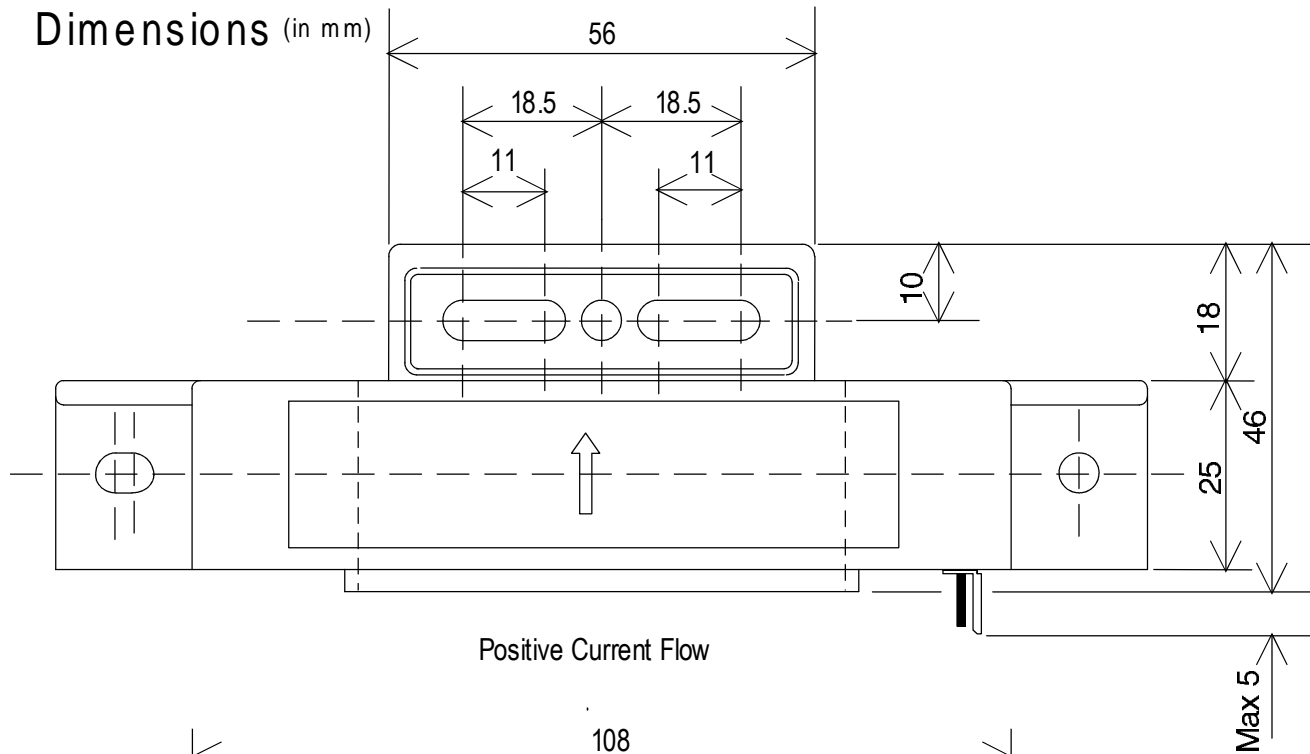
³⁾ Please refer to derating curves in the technical file to avoid excessive core heating at high frequency

⁴⁾ Please consult characterisation report for more technical details and application advice.

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HAX 500 to 2500-S

Dimensions (in mm)



Fixation by base-plate or on bus bar
with M5 screws

Pins arrangement:
1 2 3 4
(+) (-) Output 0V