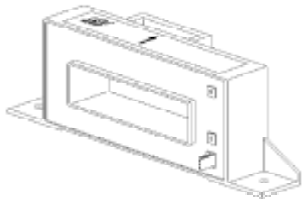
Current Transducers HAX 500 to 2500-S

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 .. 2500 A

V_{OUT} = ± 4 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**
850	± 2550	**HAX 850-S**
1000	± 3000	**HAX 1000-S**
1200	± 3600	**HAX 1200-S**
1500	± 4500	**HAX 1500-S**
2000	± 5500	**HAX 2000-S**
2500	± 5500	**HAX 2500-S**

V_C	Supply voltage (± 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	MΩ
V_{OUT}	Output voltage @ ± I_{PN}, R_L = 10 kΩ, T_A = 25°C		± 4V ± 40	mV
R_{OUT}	Output internal resistance	approx.	100	Ω
R_L	Load resistance		> 1	kΩ

Accuracy - Dynamic performance data

X	Accuracy @ I_{PN}, T_A = 25°C (without offset)	< ± 1	%
ε_L	Linearity [2)] (0 .. ± I_{PN})	< ± 1	% of I_{PN}
V_{OE}	Electrical offset voltage, T_A = 25°C	< ± 20	mV
V_{OH}	Hysteresis offset voltage @ I_P = 0; after an excursion of 1 x I_{PN}	< ± 30	mV
V_{OT}	Thermal drift of V_{OE}	< ± 1	mV/K
TCE_G	Thermal drift of the gain (% of reading)	< ± 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		- 25 .. + 85	°C
T_S	Ambient storage temperature		- 25 .. + 85	°C
m	Mass	approx.	450	g
	Min. internal creepage distance/clearance		≥ 8.5	mm
	Isolation material group		IIIa	
	Standards [4)]		EN 50178	

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.

Features

- Hall effect measuring principle
- Galvanic isolation between primary and secondary circuit
- Isolation voltage 5000 V~
- Low power consumption
- Extended measuring range (3 x I_{PN})
- Package in PBT meets UL 94-V0

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.

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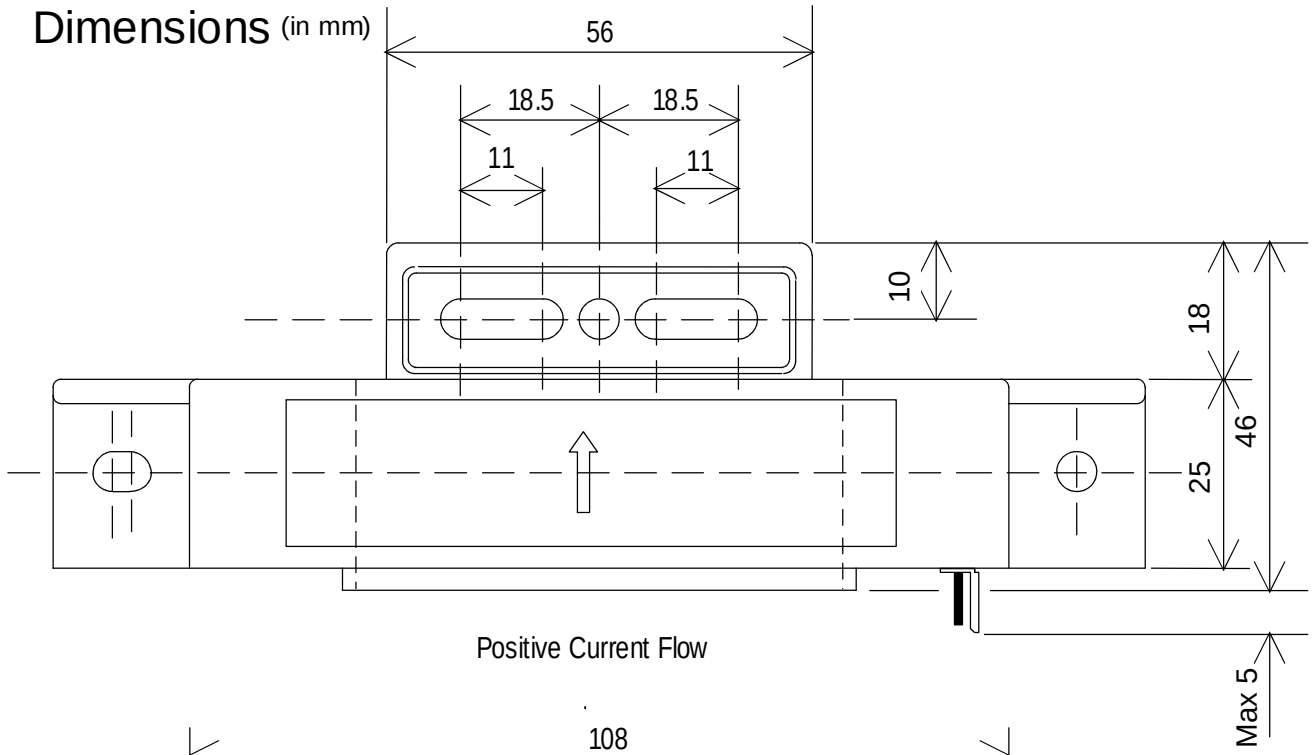
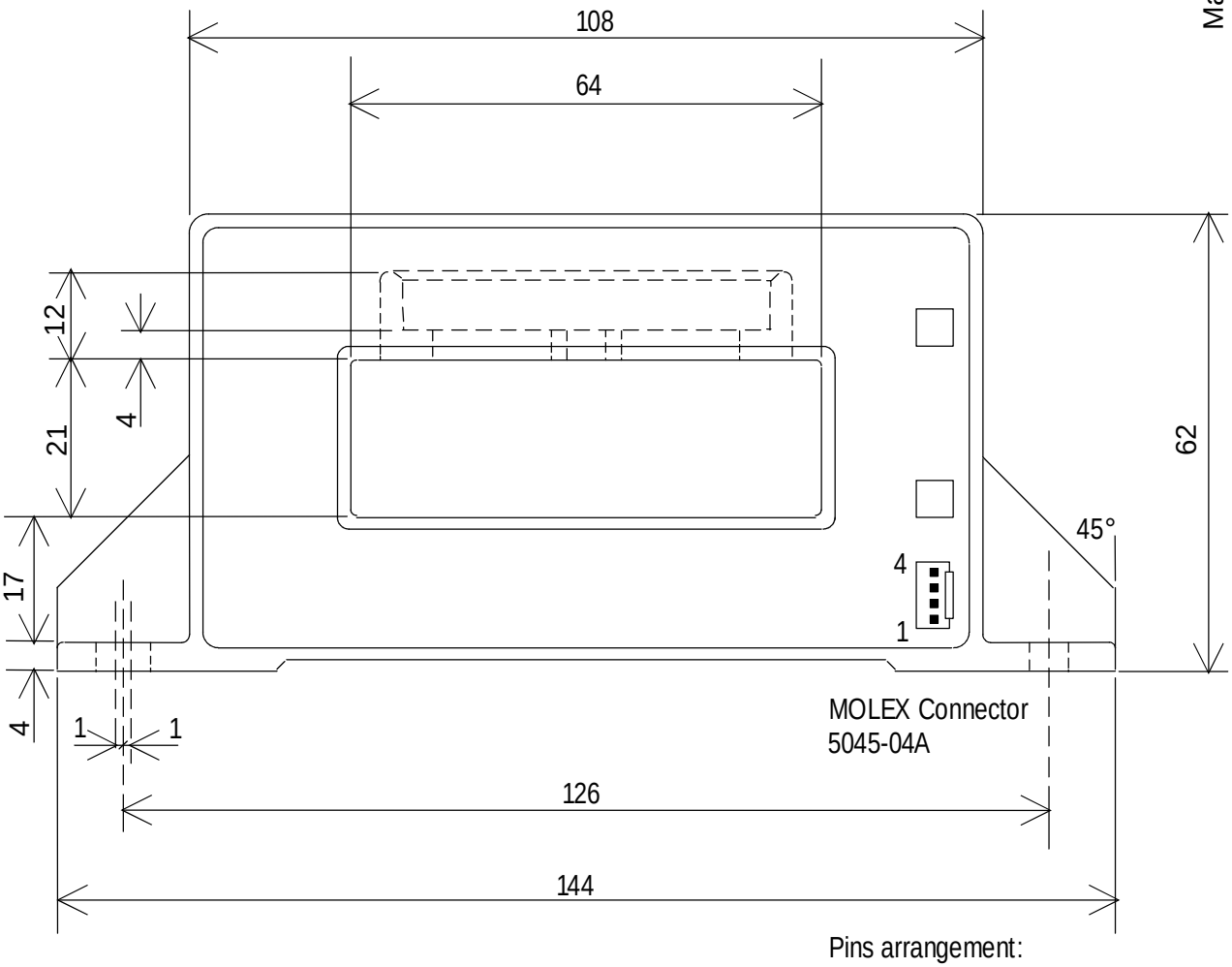
HAX 500 to 2500-S
Dimensions (in mm)





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

Pins arrangement:

1	2	3	4
(+)	(-)	Output	0V