

## Current Transducers HAZ 4000..20000-SB

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).

$$I_{PN} = 4000..20000 \text{ A}$$

$$V_{OUT} = \pm 10 \text{ V}$$



Preliminary



### Electrical data

Primary nominal current $I_{PN}$ (A)	Primary current measuring range $I_P$ (A)	Type
4000	$\pm 4000$	HAZ 4000-SB
6000	$\pm 6000$	HAZ 6000-SB
10000	$\pm 10000$	HAZ 10000-SB
12000	$\pm 12000$	HAZ 12000-SB
14000	$\pm 14000$	HAZ 14000-SB
20000	$\pm 20000$	HAZ 20000-SB

$V_C$	Supply voltage ( $\pm 5\%$ )	$\pm 15$	V
$I_C$	Current consumption	$\pm 30$	mA
$I_{OC}$	Overload capacity	30,000	At
$V_d$	R.m.s. voltage for AC isolation test, 60 Hz, 1 mn	12	kV
$V_b$	R.m.s. rated voltage, safe separation	2000 <sup>1)</sup>	V
$R_{IS}$	Isolation resistance @ 500 VDC	$> 1000$	M $\Omega$
$V_{OUT}$	Output voltage @ $\pm I_{PN}$ , $R_L = 10 \text{ k}\Omega$ , $T_A = 25^\circ\text{C}$	$\pm 10$	V
$R_{OUT}$	Output internal resistance	approx. 100	$\Omega$
$R_L$	Load resistance	$> 10$	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, $T_A = 25^\circ\text{C}$	$< \pm 50$	mV
$V_{OH}$	Hysteresis offset voltage @ $I_P = 0$ ; after an excursion of $1 \times I_{PN}$	$< \pm 50$	mV
$V_{OT}$	Thermal drift of $V_{OE}$	$< \pm 1$	mV/K
$TCE_G$	Thermal drift of the gain (% of reading)	$< \pm 0.05$	%/K
$t_r$	Response time @ 90% of $I_P$	$< 10$	$\mu\text{s}$
$di/dt$	$di/dt$ accurately followed	$> 50$	A/ $\mu\text{s}$
$f$	Frequency bandwidth <sup>3)</sup> (-3 dB)	DC .. 3	kHz

### General data

$T_A$	Ambient operating temperature	-25 .. +80	$^\circ\text{C}$
$T_S$	Ambient storage temperature	-25 .. +80	$^\circ\text{C}$
$m$	Mass	approx. 6	kg
	Standards <sup>4)</sup>	EN 50178	
	Minimum creepage & clearance	45	mm
	Housing PBT 30% glassfiber	CTI IIIa, UL94-V0	

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

<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.

### Features

- Hall effect measuring principle
- Galvanic isolation between primary and secondary circuit
- Instantaneous voltage output
- Isolation voltage 12kV~
- Low power consumption
- 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

- Battery supplied applications
- Uninterruptible Power Supplies (UPS)
- Power supplies for welding and telecommunication applications.

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# HAZ 4000 .. 20000-SB (in mm)

Preliminary

