

## Current Transducers HAZ 4000..20000-SRU

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).

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

$$V_{OUT} = 0-10 \text{ V} \\ \text{(T-RMS DC)}$$



### Electrical data

Primary nominal r.m.s. current $I_{PN}$ (A)	Primary current measuring range $I_p$ (A)	Type
4000	± 4000	HAZ 4000-SRU
6000	± 6000	HAZ 6000-SRU
10000	± 10000	HAZ 10000-SRU
12000	± 12000	HAZ 12000-SRU
14000	± 14000	HAZ 14000-SRU
20000	± 20000	HAZ 20000-SRU

$V_C$	Supply voltage (± 5 %)	± 15	V
$I_C$	Current consumption	± 30	mA
$I_{OC}$	Overload capacity	30,000	A
$R_{IS}$	Isolation resistance @ 500 VDC	> 1000	MΩ
$V_{OUT}$	Output voltage @ ± $I_{PN}$ , $R_L = 10 \text{ k}\Omega$ , $T_A = 25^\circ\text{C}$	0-10	V DC
$R_{OUT}$	Output internal resistance	approx. 100	Ω
$R_L$	Load resistance	> 10	kΩ

### Accuracy - Dynamic performance data

$X$	Accuracy @ $I_{PN}$ , $T_A = 25^\circ\text{C}$ (without offset)	< ± 1	%
$e_L$	Linearity error <sup>1)</sup> (0 .. ± $I_{PN}$ )	< ± 0.5	% of $I_{PN}$
$V_{OE}$	Electrical offset voltage, $T_A = 25^\circ\text{C}$ , @ $I_p = 0$	< ± 100	mV
$V_{OH}$	Hysteresis offset voltage @ $I_p = 0$ ; after an excursion of $1 \times I_{PN}$	< ± 12.5	mV
$V_{OT}$	Thermal drift of $V_{OE}$	< ± 1	mV/K
$TCE_G$	Thermal drift of the gain (% of reading)	< ± 0.05	%/K
$t_r$	Response time @ 90% of $I_{PN}$	< 400	ms
$f$	Frequency range, ±3 dB, small signal <sup>2)</sup>	DC and 15 to 3kHz	

### General data

$T_A$	Ambient operating temperature	- 25 .. + 85	°C
$T_S$	Ambient storage temperature	- 30 .. + 90	°C
	Housing PBT 30% glassfiber		
	UL94 classification	V0	
$m$	Mass	approx. 6	kg
	Standards <sup>3)</sup>	EN 50178:1997	



### Features

- Hall effect measuring principle
- Galvanic isolation between primary and secondary circuit
- True-rms, 0-10V DC voltage output
- Isolation voltage 12kV Rms/ 50 Hz / 1 min
- Low power consumption
- Package in PBT meeting 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 telecom applications.

### Application Domain

- Industrial

**Notes :** <sup>1)</sup> Linearity data exclude the electrical offset.

<sup>2)</sup> To avoid excessive core heating.

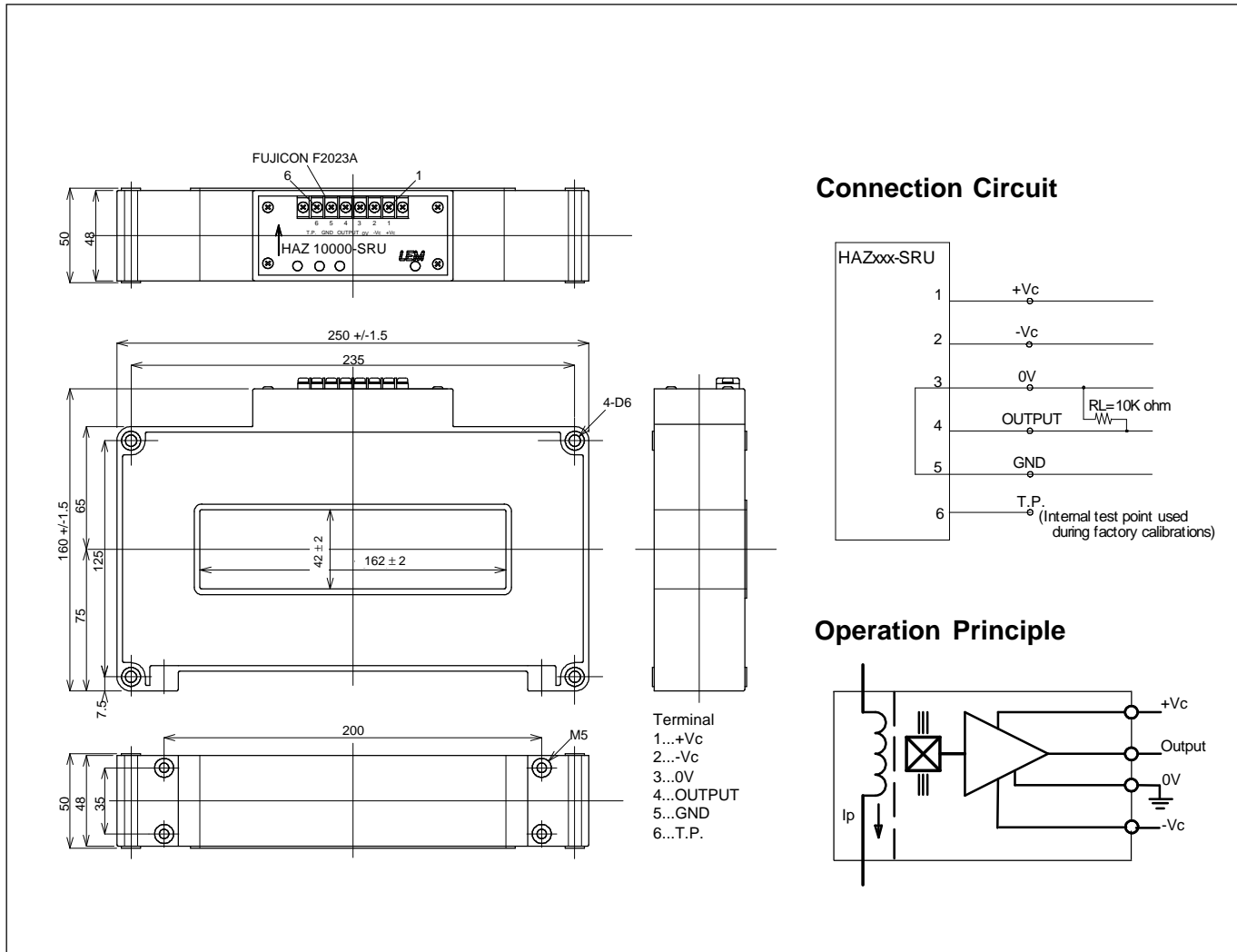
<sup>3)</sup> Please consult characterisation report for more technical details and application advice.

## Current Transducer HAZ 4000..20000-SRU

Isolation characteristics			
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$V_b$	Nominal Voltage with IEC 61010-1 standard and following conditions - Single insulation - Over voltage category III - Pollution degree 2 - Heterogeneous field	2000	V r.m.s.
$V_b$	Nominal Voltage with EN 50178 standard and following conditions - Reinforced insulation - Over voltage category III - Pollution degree 2 - Heterogeneous field	2000	V r.m.s.
$V_d$	R.m.s. voltage for AC isolation test, 50/60 Hz, 1 mn	12	kV
$V_e$	R.m.s. voltage for partial discharge extinction @ 10pC	> 3	kV
$\hat{V}_w$	Impulse withstand voltage 1.2/50 $\mu$ s	27	kV
<b>dCp</b>	Creepage distance	> 45	mm
<b>dCl</b>	Clearance distance	> 45	mm
<b>CTI</b>	Comparative Tracking Index (Group IIIa)	220	V

## Dimensions HAZ 4000..20000-SRU (in mm. 1 mm = 0.0394 inch)



### Mechanical characteristics

- General tolerance  $\pm 0.5 \text{ mm}$
- Aperture for primary conductor  $162 \text{ mm} \times 42 \text{ mm}$  ( $\pm 2 \text{ mm}$ )
- Transducer fastening  $4 \times \text{M5}$  (not supplied)
- Recommended fastening torque  $< 5 \text{ Nm}$
- Connection of secondary Fujicon F2023A (6 terminals)

### Remarks

- **Temperature of the primary conductor should not exceed  $120^\circ\text{C}$ .**

### Safety



This transducer must be used in electric/electronic equipment with respect to applicable standards and safety requirements in accordance with the following manufacturer's operating instructions.



Caution, risk of electrical shock

When operating the transducer, certain parts of the module can carry hazardous voltage (eg. primary busbar, power supply). Ignoring this warning can lead to injury and/or cause serious damage.

This transducer is a built-in device, whose conducting parts must be inaccessible after installation.

A protective housing or additional shield could be used.

Main supply must be able to be disconnected.

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