Current Transducers HAZ 4000..20000-SRI

I_{PN} = 4000..20000 A

I_{OUT}= 0 .. 20 mA (T-RMS DC)

For the electronic measurement of currents: DC, AC, pulsed, mixed, with galvanic isolation between the primary circuit (high power) and the secondary circuit (electronic circuit).

Electrical data

Primary nominal current rms I_{PN} (A)	Primary current measuring range I_{PM} (A)	Type
4000	± 4000	**HAZ 4000-SRI**
6000	± 6000	**HAZ 6000-SRI**
10000	± 10000	**HAZ 10000-SRI**
12000	± 12000	**HAZ 12000-SRI**
14000	± 14000	**HAZ 14000-SRI**
20000	± 20000	**HAZ 20000-SRI**

V_C	Supply voltage (± 5 %)		± 15	V
I_C	Current consumption		± 50	mA
I_P	Overload capability		30,000	A
R_{IS}	Isolation resistance @ 500 VDC		> 1,000	MΩ
I_{OUT}	Output current @ ± I_{PN}, T_A = 25°C		0 .. 20	mA
R_{OUT}	Output internal resistance	approx.	20	Ω
R_L	Load resistance		< 300	Ω

Accuracy - Dynamic performance data

X	Accuracy @ I_{PN} , T_A = 25°C(excluding offset)	<± 1	%
ε_L	Linearity error [1] (0 .. ± I_{PN})	< ± 0.5	% of I_{PN}
I_{CE}	Electrical offset current, @T_A = 25°C, I_P = 0	< ± 0.08	mA
I_{OM}	Magnetic offset current @ I_P = 0 and specified R_M, after an overload of 1 x I_{PN}	< ± 0.025	; mV
TCI_{CE}	Temperature coefficient of I_{OE}	< ± 0.05	% of I_{PN}/K
TCI_{OUT}	Temperature coefficient of I_{OUT} (% of reading)	< ± 0.05	%/K
t_r	Response time to 90% of I_{PN} step	< 400	ms
BW	Frequency bandwidth ± 3 dB, small signal [2]	DC and 15 to 3	kHz

General data

T_A	Ambient operating temperature		- 25 .. + 85	°C
T_S	Ambient storage temperature		- 30 .. + 90	°C
	Housing PBT 30% glassfiber			
m	Mass	approx.	6	kg
	Standards [3]		EN 50178: 1997 EN 50155: 1995	

Note: [1] Linearity data exclude the electrical offset.
[2] To avoid excessive core heating
[3] Please consult characterisation report for more technical details and application advice.

Features

- Hall effect measuring principle
- Galvanic isolation between primary and secondary circuit
- True-rms, 0 .. 20mA DC current output
- Isolation voltage 17kV Rms /50 Hz /1min
- 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
- Traction

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Isolation characteristics

V_{de}	Rms voltage for AC isolation test, 50 Hz, 1 min	17	kV
V_e	Partial discharge extinction voltage rms @ 10pC	>3.75	kV
$\hat{V}_w$	Impulse withstand voltage 1.2/50 µs	32	kV
dCp	Creepage distance	>45	mm
dCl	Clearance distance	>45	mm
CTI	Comparative Tracking Index (group I)	>600	

Applications examples

According to EN 50178 and IEC 61010-1 standards and following conditions:

- Over voltage category OV 3
- Pollution degree PD2
- Non-uniform field

	EN 50178	IEC 61010-1
dCp, **dCl**,$\hat{V}_w$	Rated insulation voltage	Nominal voltage
Basic insulation	8000V	9000V
Reinforced insulation	3000V	4000V

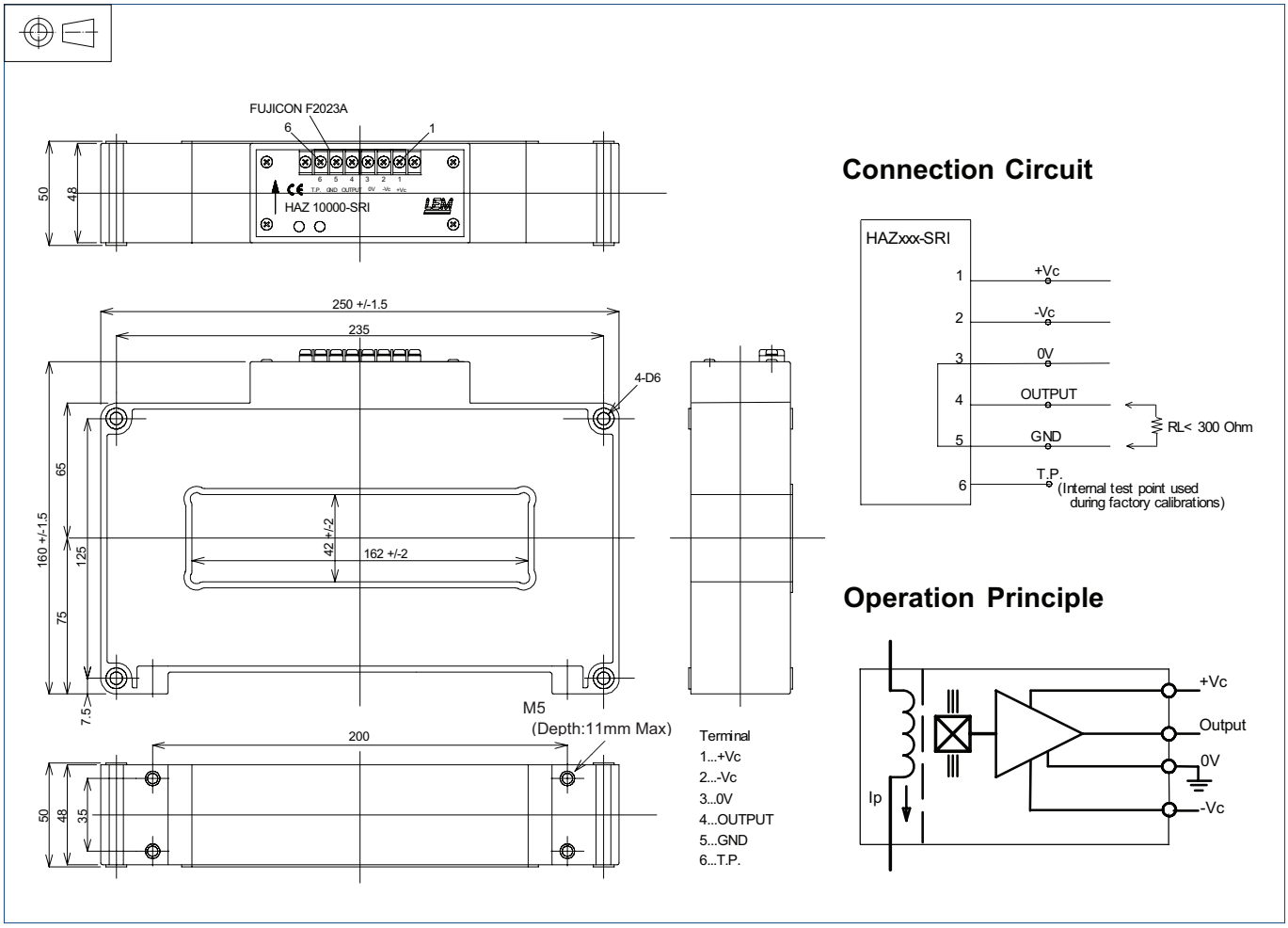
Safety

This transducer must be used in electric/electronic equipment with respect to applicable standards and safety requirements in accordance with the 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 build-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.

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



Mechanical characteristics

• General tolerance	± 0.5 mm
• Aperture for primary conductor	162 mm x 42 mm (± 2 mm)
• Transducer fastening	4 x M5 (not supplied)
• Recommended fastening torque	< 5 Nm
• Connection of secondary	Fujicon F2023A (6 terminals)

Remarks

- Temperature of the primary conductor should not exceed 120°C.