Current Transducer HAR 1000-S

I_{PN} = ± 1000A
V_{OUT} = ± 5 V

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

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Electrical data

I_{PN}	Primary nominal current rms	± 1000	A
I_{PM}	Primary current, measuring range @ V_C = ± 15 V	± 2500	A
V_C	Supply voltage (± 5 %)	± 15	V
I_C	Current consumption	< ± 20	mA
R_{IS}	Isolation resistance @ 500 VDC	> 500	MΩ
V_{OUT}	Output voltage (Analog) @ ± I_{PN}, R_L = 10 kΩ, T_A = 25°C	± 5	V
R_{OUT}	Output internal resistance	< 100	Ω
V_b	Rated isolation voltage rms	≥ 2.1	kV
V_d	Rms voltage for AC isolation test, 50 Hz, 1min	≥ 7	kV
R_L	Load resistance	≥ 10	kΩ
V_e	Partial discharge extinction voltage rms @ ≤ 10 pC	≥ 3.6	kV

Accuracy-Dynamic performance data

X	Accuracy [2] @ I_{PN}, T_A = 25 °C, V_C = ± 15 V (± 5 %)	< ± 0.5	% of I_{PN}
ε_L	Linearity error (0 .. ± I_{PN})	< ± 0.5	% of I_{PN}
V_O	Offset voltage @ T_A = 25°C	< ± 20	mV
V_{OH}	Hysteresis offset voltage @ I_P = 0, after an excursion of 1 x I_{PN}	< ± 15	mV
V_{OT}	Temperature variation of V_O (between - 40 .. + 70 °C)	< ± 50	mV
	Temperature variation of V_{OUT} (between - 40 .. + 70 °C)	≤ ± 5.5	% of I_{PN}
t_r	Response time to 90 % of I_{PN} step	≤ 5	µs
BW	Frequency bandwidth (- 3 dB)	DC .. 10	kHz

General data

T_A	Ambient operating temperature	- 40 .. + 70	°C
T_S	Ambient storage temperature	- 40 .. + 85	°C
m	Mass	400	g
dCp	Creepage distance	≥ 26	mm
dCl	Clearance	≥ 19	mm
	Standards	EN 50155, prEN 50124	

Features

- Hall effect measuring principle
- Galvanic isolation between primary and secondary circuit
- Isolation voltage 7000 V
- Extended measuring range
- Isolated plastic case recognized according to UL 94-V0

Advantages

- Easy installation
- Small size and space saving
- High immunity to external interference.
- Low power consumption

Applications

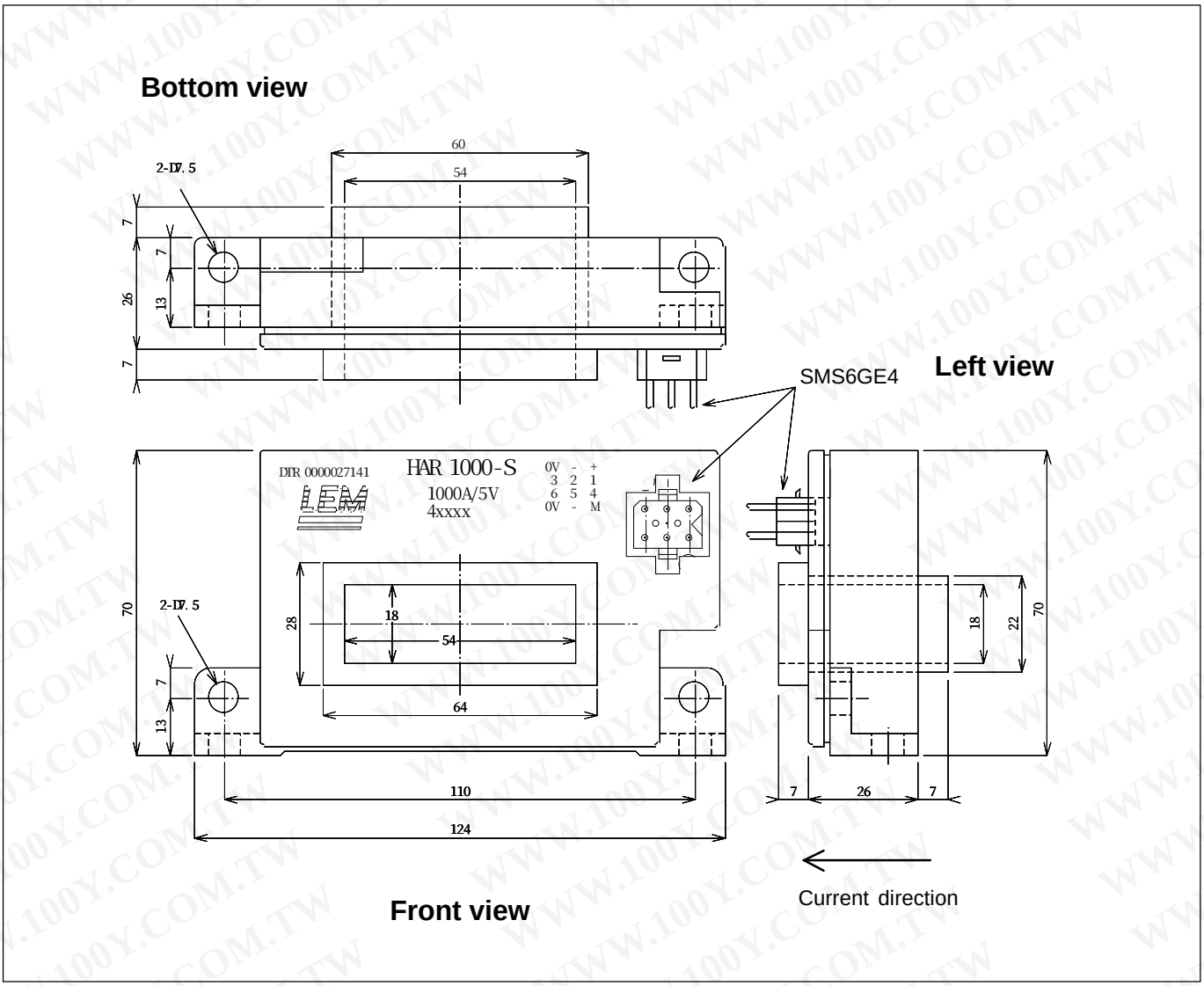
- Train

Application domain

- Traction

Notes : [1] Basic insulation, overvoltage category III, pollution degree 2
[2] Accuracy data exclude the eletrical offset.

Dimensions HAR 1000-S (in mm. 1 mm = 0.0394 inch)



Secondary pins Identification

- Pin 1 : + 15 V
- Pin 2 : - 15 V
- Pin 3 : 0 V
- Pin 4 : Output
- Pin 5 : - 15 V
- Pin 6 : 0 V

Mechanical characteristics

• General tolerance	± 1.0 mm
• Fastening	4 x Ø 7.5 mm
• Fastening	Max 6.2 Nm
• Apature	54 mm x 18 mm
• Connection of secondary	Burndy SMS6GE4

Remark

- The primary bus bar temperature should not exceed 100 °C