Voltage Transducer LV 100-3000/SP13

V_{PN} = 2800 V

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

Electrical data

V_{PN}	Primary nominal r.m.s. voltage		2800		V
V_P	Primary voltage, measuring range		0 .. ± 4500		V
I_{PN}	Primary nominal r.m.s. current		2.8		mA
R_M	Measuring resistance		$R_{M\ min}$	$R_{M\ max}$	
	with ± 15 V	@ ± 2800 V_{max}	0	210	Ω
		@ ± 4500 V_{max}	0	102	Ω
	with ± 24 V	@ ± 2800 V_{max}	50	350	Ω
		@ ± 4500 V_{max}	50	180	Ω
I_{SN}	Secondary nominal r.m.s. current		50		mA
K_N	Conversion ratio		2800 V / 50 mA		
V_C	Supply voltage (+ 5/- 10 %)		± 15 .. 24		V
I_C	Current consumption		28 (@ ± 24 V) + I_S		mA
V_d	R.m.s. voltage for AC isolation test, 50 Hz, 1 mn		12 [1]		kV
			1 [2]		kV

Accuracy - Dynamic performance data

X_G	Overall Accuracy @ V_{PN}, T_A = 25 °C		± 0.7		%
ε_L	Linearity		< 0.1		%
			Typ	Max	
I_O	Offset current @ I_P = 0, T_A = 25 °C			± 0.3	mA
I_{OT}	Thermal drift of I_O	- 25 °C .. + 70 °C	± 0.3	± 0.5	mA
t_r	Response time @ 90 % of V_{PN}		180		µs

General data

T_A	Ambient operating temperature	- 25 .. + 70	°C
T_S	Ambient storage temperature	- 45 .. + 85	°C
N	Turns ratio	35000 : 2000	
P	Total primary power loss	7.84	W
R_1	Primary resistance @ T_A = 25 °C	1	MΩ
R_S	Secondary coil resistance @ T_A = 70 °C	60	Ω
m	Mass	850	g
	Standards	EN 50155	

Notes : [1] Between primary and secondary + shield
[2] Between secondary and shield.

Features

- Closed loop (compensated) voltage transducer using the Hall effect
- Insulated plastic case recognized according to UL 94-V0
- Primary resistor R_1 incorporated within the housing.

Special features

- V_{PN} = 2800 V
- V_C = ± 15 .. 24 (+ 5/- 10 %) V
- V_d = 12 kV [1]
- T_A = - 25 °C .. + 70 °C
- Shield
- Connection to primary and secondary circuit on M5 threaded studs
- VRT Burn-in
- Railway equipment.

Advantages

- Excellent accuracy
- Very good linearity
- Low thermal drift
- High immunity to external interference.

Applications

- AC variable speed drives and servo motor drives
- Static converters for DC motor drives
- Uninterruptible Power Supplies (UPS)
- Power supplies for welding applications
- Railway overhead line voltage measurement.

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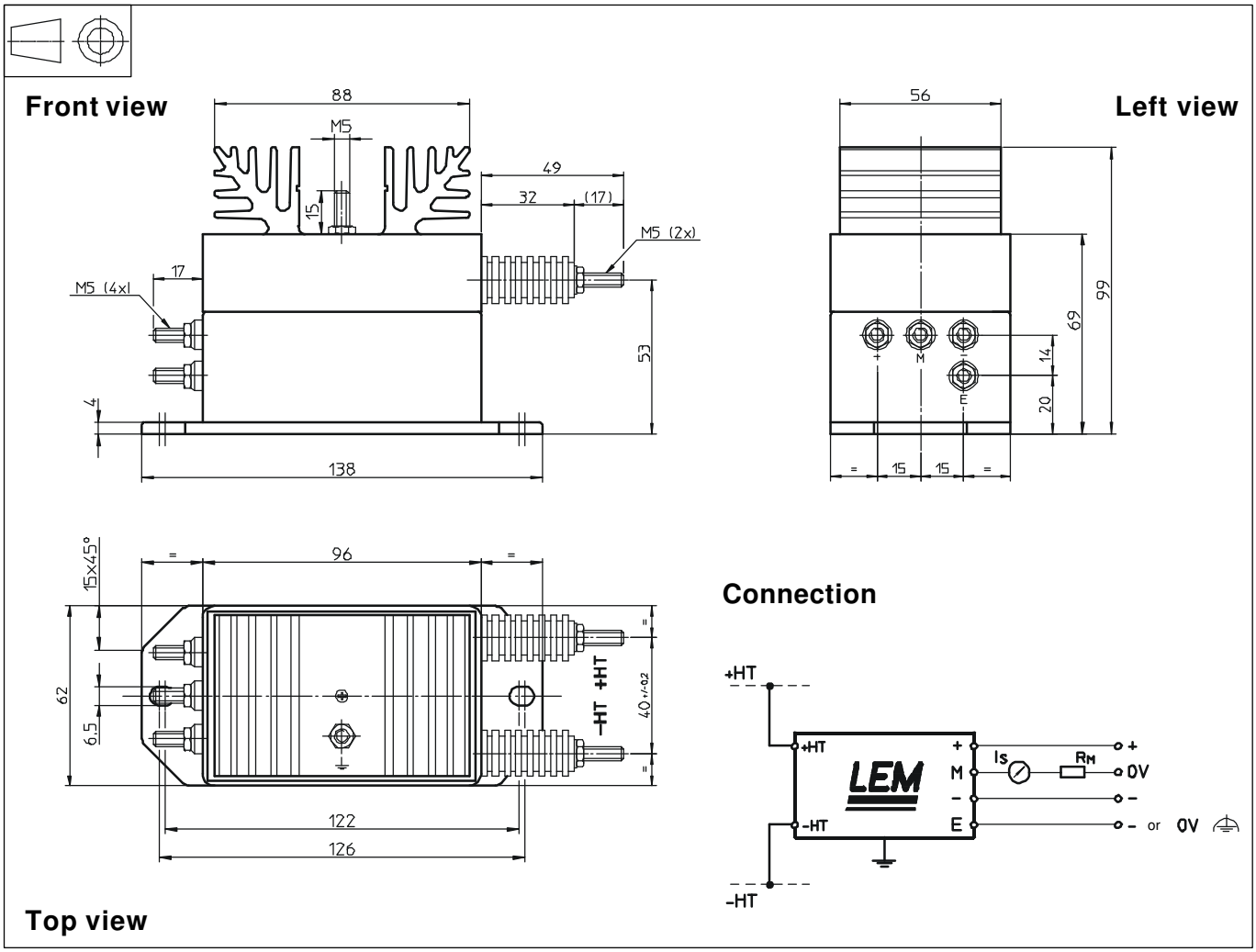
Dimensions LV 100-3000/SP13 (in mm. 1 mm = 0.0394 inch)



Mechanical characteristics

• General tolerance	± 0.3 mm
• Transducer fastening	2 holes ∅ 6.5 mm M6 steel screws
Fastening torque max	5 Nm or 3.69 Lb - Ft.
• Connection of primary	M5 threaded studs
• Connection of secondary	M5 threaded studs
• Connection to the ground	M5 threaded stud
• Fastening torque max	2.2 Nm or 1.62 Lb. - Ft.

Remarks

- $\mathbf{I}_S$ is positive when $\mathbf{V}_P$ is applied on terminal +HT.
- The primary circuit of the transducer must be linked to the connections where the voltage has to be measured.