

Voltage Transducer LV 200-AW/2/SP86

$$V_{PN} = 4200 \text{ V}$$

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	4200	V
V_p	Primary voltage, measuring range	0 .. ± 5000	V
R_M	Measuring resistance with $\pm 24 \text{ V}$	$R_{M \text{ min}}$	$R_{M \text{ max}}$
		@ $\pm 4200 \text{ V}_{\text{max}}$	0 240 Ω
		@ $\pm 5000 \text{ V}_{\text{max}}$	0 70 Ω
I_{SN}	Secondary nominal r.m.s. current	20	mA
K_N	Conversion ratio	4200 V/20 mA	
V_C	Supply voltage ($\pm 5 \%$)	± 24	V
I_C	Current consumption	$30 + I_s$	mA
V_d	R.m.s. voltage for AC isolation test, 50 Hz, 1 mn	9 ¹⁾	kV
		500 ²⁾	V
V_e	R.m.s. voltage for partial discharge extinction @ 10 pC	≥ 3750	V

Accuracy - Dynamic performance data

X_G	Accuracy @ $V_{PN}, T_A = -40^\circ\text{C}..+85^\circ\text{C}$	± 2.5	%
e_L	Linearity	< 0.1	%
I_O	Offset current @ $I_p = 0, T_A = 25^\circ\text{C}$	Typ	Max
			± 0.1 mA
I_{OT}	Thermal drift of I_O	-25°C .. +70°C	± 0.1 ± 0.125 mA
		-40°C .. +85°C	± 0.2 mA
t_r	Response time @ 90 % of V_{PN}	370	μs

General data

T_A	Ambient operating temperature	-40 .. +85	$^\circ\text{C}$
T_S	Ambient storage temperature	-50 .. +90	$^\circ\text{C}$
N	Turns ratio	105000 / 10000	
R_1	Primary resistance @ $T_A = 25^\circ\text{C}$	2.2	M Ω
R_S	Secondary coil resistance @ $T_A = 85^\circ\text{C}$	750	Ω
P	Total primary power loss @ V_{PN}	8	W
m	Mass	2.5	kg
	Standards	EN 50155 (01.11.95)	

Notes : 1) Between primary and secondary + external shield

2) Between secondary and external shield.

Features

- Closed loop (compensated) voltage transducer using the Hall effect
- Insulated plastic case recognized according to UL 94-V0
- Accessible electronic circuit
- Shield between primary and secondary circuit
- Primary resistor R_1 incorporated into the housing.

Special features

- $V_p = 0 .. \pm 5000 \text{ V}$
- $T_A = -40^\circ\text{C} .. +85^\circ\text{C}$
- $X_G = 2.5 \%$ ($-40^\circ\text{C}..-25^\circ\text{C}; +70^\circ\text{C}..+85^\circ\text{C}$)
- Built-In primary resistance R_1 is connected in 2 equal parts to both sides of the primary winding
- Shield around connections of secondary
- Connection to secondary circuit on LEMO EGJ.1B.304.CYC
- Railway equipment.

Advantages

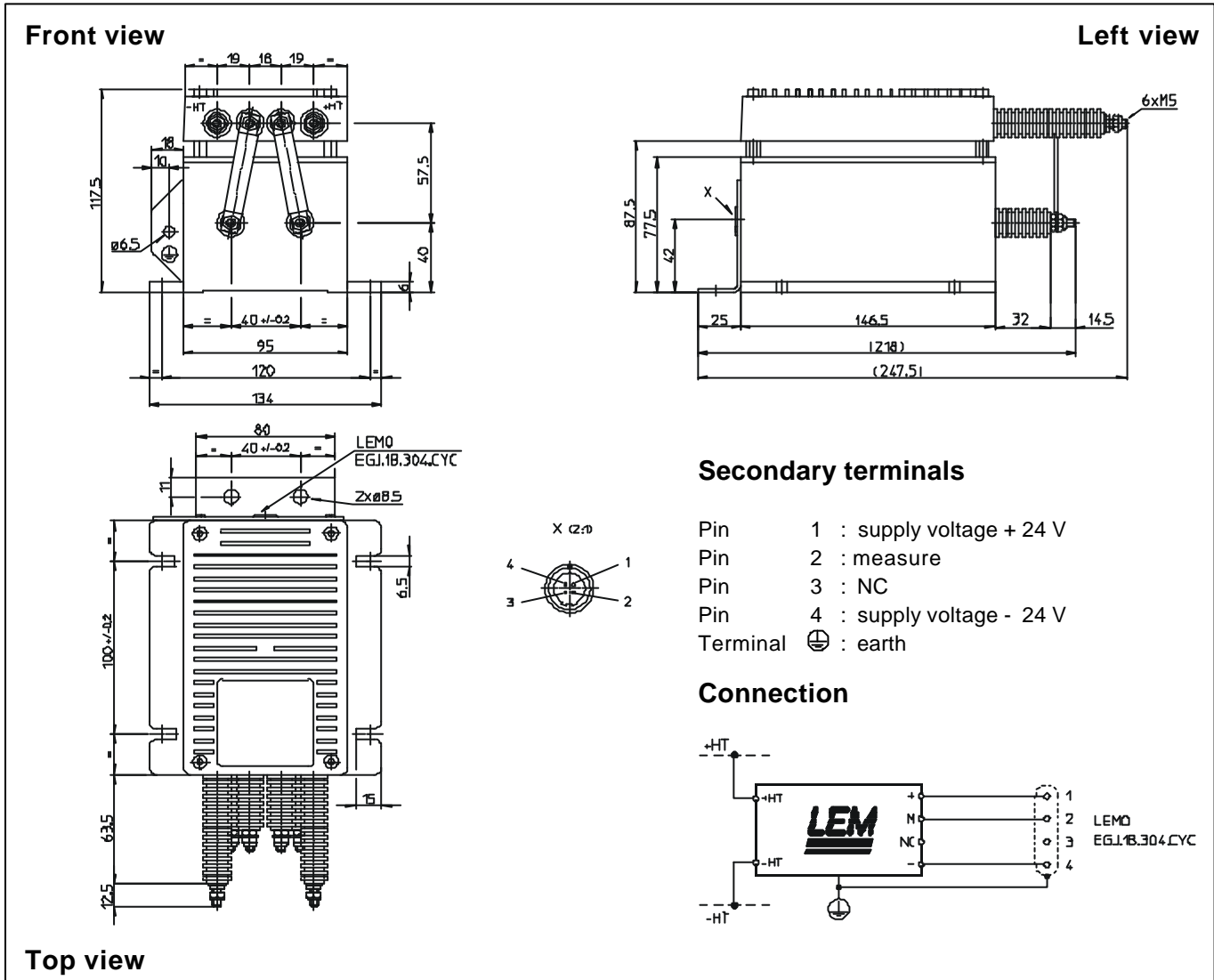
- Excellent accuracy
- Very good linearity
- Low temperature drift
- High immunity to external interference
- Better behaviour with potential variations in common mode.

Applications

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

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Dimensions LV 200-AW/2/SP86 (in mm. 1 mm = 0.0394 inch)



Mechanical characteristics

- General tolerance ± 0.5 mm
- Fastening of the transducer
 - 4 slots $\varnothing 6.5$ mm
 - 4 steel screws M6
 - Recommended fastening torque 4.5 Nm or 3.32 Lb. - Ft.
- Connection of primary
 - M5 threaded studs
 - Recommended fastening torque 2.2 Nm or 1.62 Lb. - Ft.
- Connection of secondary
 - Lemo EGJ 1B.304.CYC
- Connection to the ground
 - hole $\varnothing 6.5$ mm
 - 1 steel screw M6
 - Recommended fastening torque 3.9 Nm or 2.88 Lb. - Ft.
 - and/or
 - 2 holes $\varnothing 8.5$ mm
 - 2 steel screws M8
 - Recommended fastening torque 9 Nm or 6.64 Lb. - Ft.

Remarks

- I_s is positive when V_p is applied on terminal +HT.
- The primary circuit of the transducer must be connected to the voltage which has to be measured.