

# Voltage Transducer LV 200-AW/2/SP91

$$V_{PN} = 3400 \text{ V}$$

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	3400	V
$V_p$	Primary voltage, measuring range	0 .. $\pm 4200$	V
$R_M$	Measuring resistance with $\pm 24 \text{ V}$	$R_{M \min}$	$R_{M \max}$
		@ $\pm 3400 \text{ V}_{\max}$	50    220 $\Omega$
		@ $\pm 4200 \text{ V}_{\max}$	50    170 $\Omega$
$I_{SN}$	Secondary nominal r.m.s. current	80	mA
$K_N$	Conversion ratio	3400 V/80 mA	
$V_C$	Supply voltage ( $\pm 5 \%$ )	$\pm 24$	V
$I_C$	Current consumption	$30 + I_S$	mA
$V_d$	R.m.s. voltage for AC isolation test, 50 Hz, 1 mm	12 <sup>1)</sup>	kV
		1 <sup>2)</sup>	kV
$V_e$	R.m.s. voltage for partial discharge extinction @ 10 pC	> 4	kV
LS	Clearance distance	186	mm
KS	Creepage distance	195	mm

## Accuracy - Dynamic performance data

X	Accuracy @ $V_{PN}, T_A = 25^\circ\text{C}$	$\pm 0.5$	%
$e_L$	Linearity	< 0.1	%
$I_O$	Offset current @ $I_p = 0, T_A = 25^\circ\text{C}$	Typ	Max
$I_{OT}$	Thermal drift of $I_O$ -25°C .. +70°C	$\pm 0.3$	mA
		$\pm 0.6$	mA
$t_r$	Response time @ 90 % of $V_{PN}$	400	$\mu\text{s}$

## General data

$T_A$	Ambient operating temperature	-25 .. +70	$^\circ\text{C}$
$T_S$	Ambient storage temperature	-40 .. +85	$^\circ\text{C}$
N	Turns ratio	85000 / 2500	
$R_1$	Primary resistance @ $T_A = 25^\circ\text{C}$	1.44	M $\Omega$
$R_S$	Secondary coil resistance @ $T_A = 70^\circ\text{C}$	40	$\Omega$
P	Total primary power loss @ $V_{PN}$	8	W
m	Mass	2.5	kg
	Standards <sup>3)</sup>	EN 50178(01.10.97)	

**Notes :** 1) Between primary and secondary + shield

2) Between secondary and shield

3) A list of corresponding tests is available.

## 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

- $V_p = 0 .. \pm 4200 \text{ V}$
- $T_A = -25^\circ\text{C} .. +70^\circ\text{C}$
- Built-In primary resistance  $R_1$  is connected in 2 equal parts to both sides of the primary winding
- Internal shield linked to the external shield
- Shield around connections of secondary

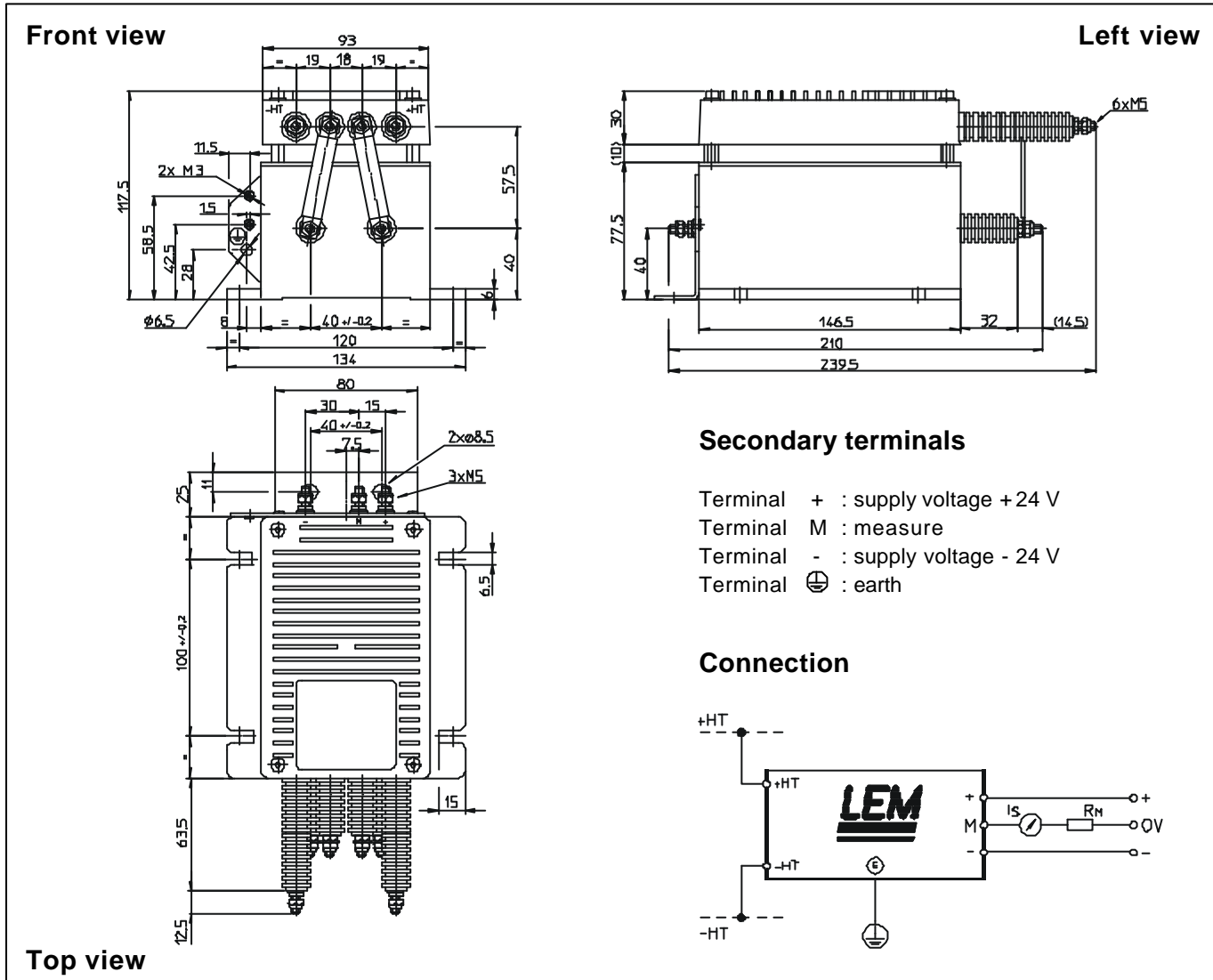
## Advantages

- Excellent accuracy
- Very good linearity
- Low temperature 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.

## Dimensions LV 200-AW/2/SP91 (in mm. 1 mm = 0.0394 inch)



## Caractéristiques mécaniques

- General tolerance  $\pm 0.5$  mm
- Transducer fastening
  - 4 slots  $\varnothing 6.5$  mm
  - 4 x M6 steel screws
  - Recommended fastening torque 4.5 Nm or 3.32 Lb. - Ft.
- Connection of primary M5 threaded studs
- Connection of secondary M5 threaded studs
- Recommended fastening torque 2.2 Nm or 1.62 Lb. - Ft.
- Connection to the ground
  - hole  $\varnothing 6.5$  mm
  - and/or 2 holes  $\varnothing 8.5$  mm
  - and/or M3 screw terminals

## 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.