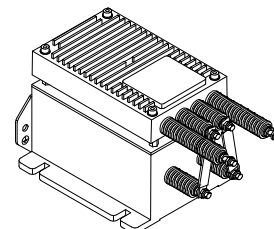


# Voltage Transducer LV 200-AW/2/SP70

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

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 .. $\pm 6800$	V			
$R_M$	Measuring resistance	$R_{Mmin}$	$R_{Mmax}$			
		with $\pm 24 \text{ V}$	@ $\pm 4200 \text{ V}_{max}$	30	120	$\Omega$
			@ $\pm 6800 \text{ V}_{max}$	30	55	$\Omega$
$I_{SN}$	Secondary nominal r.m.s. current	80	mA			
$K_N$	Conversion ratio	4200 V / 80 mA				
$V_C$	Supply voltage	- 30 % .. + 20 %	$\pm 24$	V		
$I_C$	Current consumption		$30 + I_S$	mA		
$V_d$	R.m.s. voltage for AC isolation test, 50 Hz, 1 mn		12 <sup>1)</sup>	kV		
			1 <sup>2)</sup>	kV		
			0.5 <sup>3)</sup>	kV		
$V_e$	R.m.s. voltage for partial discharges extinction @ 10 pC	4.8	kV			

## Accuracy - Dynamic performance data

$X_G$	Overall Accuracy @ $V_{PN}$	- 25 °C .. + 70 °C	$\pm 1.5$	%	
$\mathcal{E}_L$	Linearity		< 0.1	%	
$I_O$	Offset current @ $I_P = 0, T_A = 25 \text{ °C}$		Typ	Max	
				$\pm 0.3$	mA
$I_{OT}$	Thermal drift of $I_O$	- 40 °C .. + 80 °C	$\pm 0.3$	$\pm 0.6$	mA
$t_r$	Response time @ 90 % of $V_{Pmax}$		500	$\mu\text{s}$	

## General data

$T_A$	Ambient operating temperature	- 40 .. + 80	°C
$T_S$	Ambient storage temperature	- 50 .. + 85	°C
$N$	Turns ratio	105000 : 2500	
$R_1$	Primary resistance @ $T_A = 25 \text{ °C}$	2.2	M $\Omega$
$R_S$	Secondary coil resistance @ $T_A = 80 \text{ °C}$	41.5	$\Omega$
$P$	Total primary power loss @ $V_{PN}$	8	W
$m$	Mass	2	kg
	Standards <sup>4)</sup>	EN 50155	

## 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

- $V_P = 0 .. \pm 6800 \text{ V}$
- $T_A = - 40 \text{ °C} .. + 80 \text{ °C}$
- $X_G = 2 \%$  (-40 °C .. -25 °C; +70 °C .. +80 °C)
- In-built primary resistance  $R_1$  is connected in 2 equal parts to both sides of the primary winding
- Better behaviour with potential variations in common mode
- Screening around connections of secondary
- Railway equipment.

## Advantages

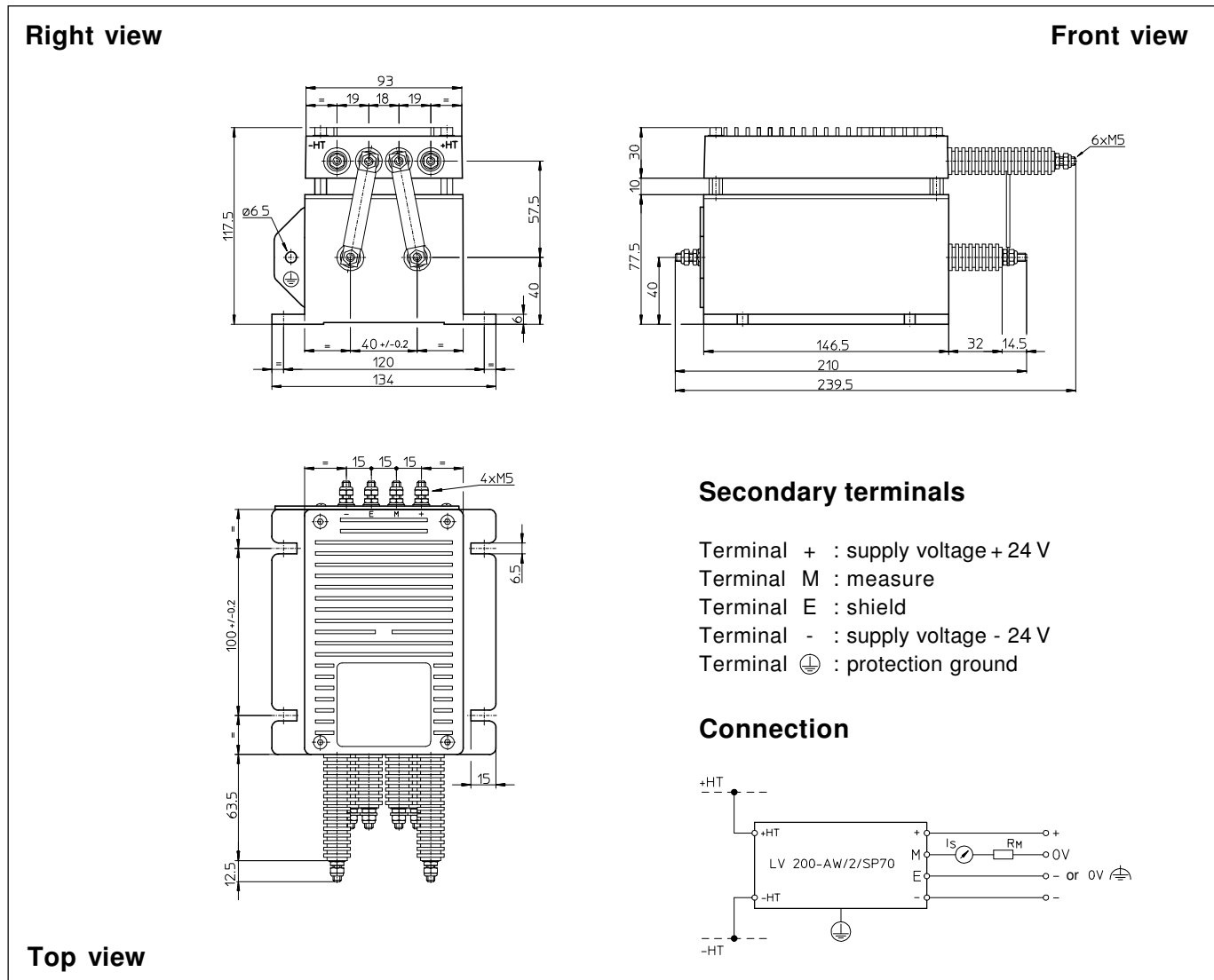
- Excellent accuracy
- Very good linearity
- Low thermal drift
- High immunity to external interference.

## Applications

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

Notes :  
<sup>1)</sup> Between primary and secondary + shield  
<sup>2)</sup> Between secondary and shield  
<sup>3)</sup> Between secondary + shield and external shield  
<sup>4)</sup> A list of corresponding tests is available

## Dimensions LV 200-AW/2/SP70 (in mm. 1 mm = 0.0394 inch)



## Mechanical characteristics

- |                            |                        |
|----------------------------|------------------------|
| • General tolerance        | ± 0.5 mm               |
| • Fastening                | 4 holes Ø 6.5 mm       |
| • Connection of primary    | M5 threaded studs      |
| • Connection of secondary  | M5 threaded studs      |
| • Fastening torque         | 2.2 Nm or 1.62 Lb - Ft |
| • Connection to the ground | hole Ø 6.5 mm          |

## Remarks

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