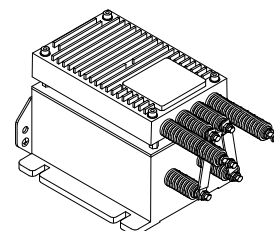


Voltage Transducer LV 200-AW/2/SP70

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

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 .. ± 6800	V			
R_M	Measuring resistance	$R_{M \min}$	$R_{M \max}$			
		with $\pm 24 \text{ V}$	@ $\pm 4200 \text{ V}_{\max}$	30	120	Ω
			@ $\pm 6800 \text{ V}_{\max}$	30	55	Ω
I_{SN}	Secondary nominal r.m.s. current	80	mA			
K_N	Conversion ratio	4200 V / 80 mA				
V_C	Supply voltage	- 30 % .. + 20 %	± 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 ¹⁾	kV		
			1 ²⁾	kV		
			0.5 ³⁾	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	± 1.5	%	
e_L	Linearity		< 0.1	%	
I_O	Offset current @ $I_P = 0, T_A = 25^\circ\text{C}$		Typ	Max	
				± 0.3	mA
I_{OT}	Thermal drift of I_O	- 40°C .. + 80°C	± 0.3	± 0.6	mA
t_r	Response time @ 90 % of $V_{P \max}$		500	μs	

General data

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

- $V_P = 0 .. \pm 6800 \text{ V}$
- $T_A = - 40^\circ\text{C} .. + 80^\circ\text{C}$
- $X_G = 2\%$ (-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

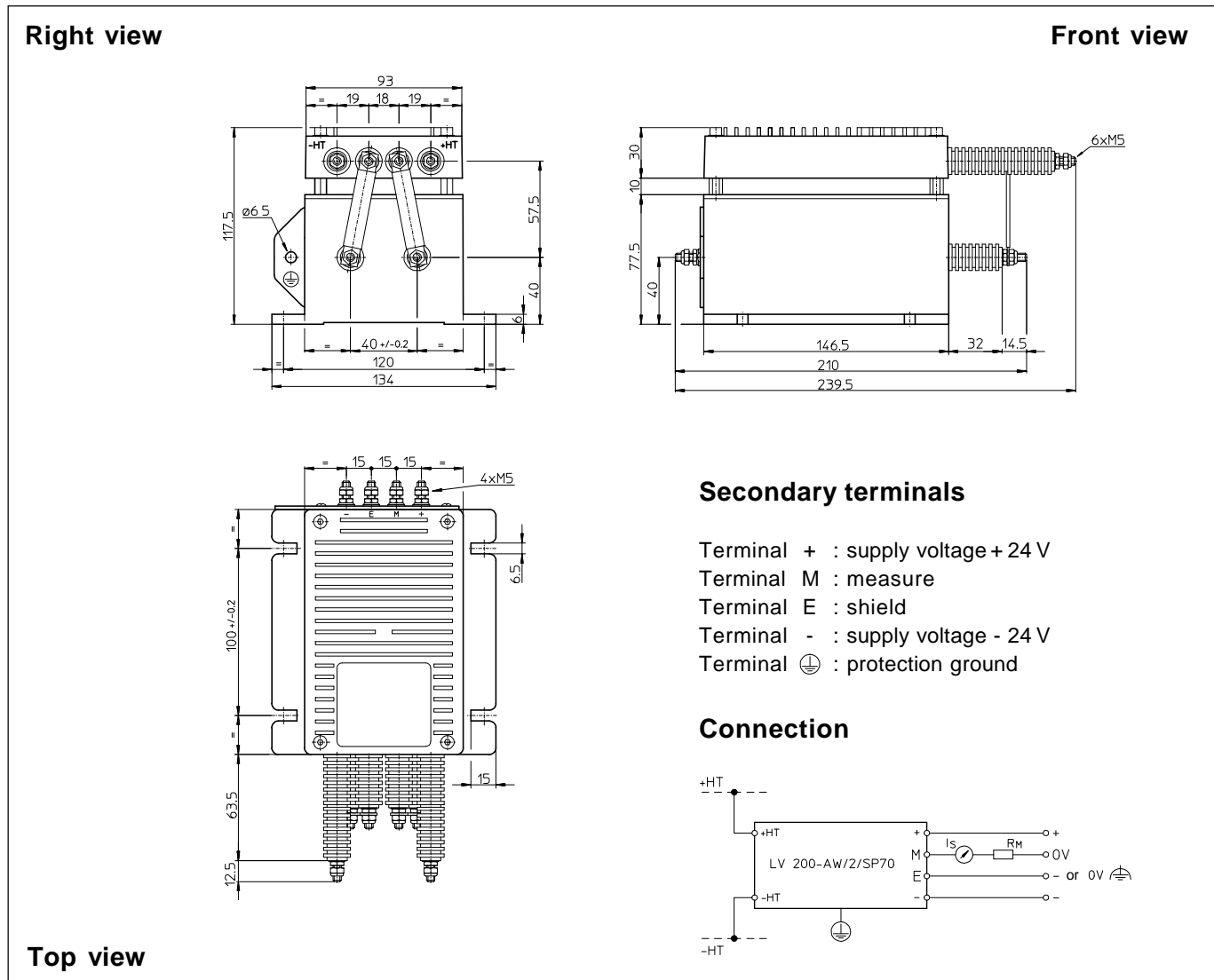
- Excellent accuracy
- Very good linearity
- Low thermal drift
- High immunity to external interference.

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 : 1) Between primary and secondary + shield
 2) Between secondary and shield
 3) Between secondary + shield and external shield
 4) 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.