

Voltage Transducer CV 4-4000/SP1

$$V_{PN} = 2800 \text{ V}$$

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	2800	V
V_p	Primary voltage, measuring range	0 .. ± 4000	V
V_s	Secondary analog voltage @ V_{Pmax}	10	V
K_N	Conversion ratio	4000 V / 10 V	
R_L	Load resistance	≈ 2	k Ω
C_L	Capacitance loading	£ 5	nF
V_C	Supply voltage ($\pm 10\%$)	± 24	V
I_C	Current consumption	$35 + V_s/R_L$	mA
V_d	R.m.s. voltage for AC isolation test, 50 Hz, 1 mn	9.5	kV
V_e	R.m.s. voltage for partial discharge extinction @ 10 pC	3.75	kV

Features

- Closed loop (compensated) voltage transducer
- Insulated plastic case recognized according to UL 94-V0
- Patent pending.

Special features

- $V_C = \pm 24 (\pm 10\%) \text{ V}$
- $V_d = 9.5 \text{ kV}$
- $T_A = -40^\circ\text{C} \dots +70^\circ\text{C}$
- Shield
- Connection to secondary circuit on SUB-D 9 Poles (male).

Accuracy - Dynamic performance data

			Typ	Max	
X_G	Overall accuracy @ V_{Pmax}	$T_A = 25^\circ\text{C}$ -40 $^\circ\text{C}$.. +70 $^\circ\text{C}$		± 0.4	%
V_O	Offset voltage @ $V_p = 0$	$T_A = 25^\circ\text{C}$ -40 $^\circ\text{C}$.. +70 $^\circ\text{C}$		± 20	mV
				± 60	mV
t_r	Response time ¹⁾ @ 90 % of V_{PN}		≈ 50		μs
f	Frequency bandwidth (-3 dB) @ 50 % of V_{PN}		DC .. 6		kHz

Advantages

- Excellent accuracy
- Very good linearity
- Low thermal drift.

General data

T_A	Ambient operating temperature	-40 .. +70	$^\circ\text{C}$
T_S	Ambient storage temperature	-50 .. +85	$^\circ\text{C}$
P	Total primary power loss	2.8	W
R_1	Primary resistance	2.8	M Ω
m	Mass	750	g
	Standards ^{2) 3)}	EN 50155	
		EN 50178	

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.

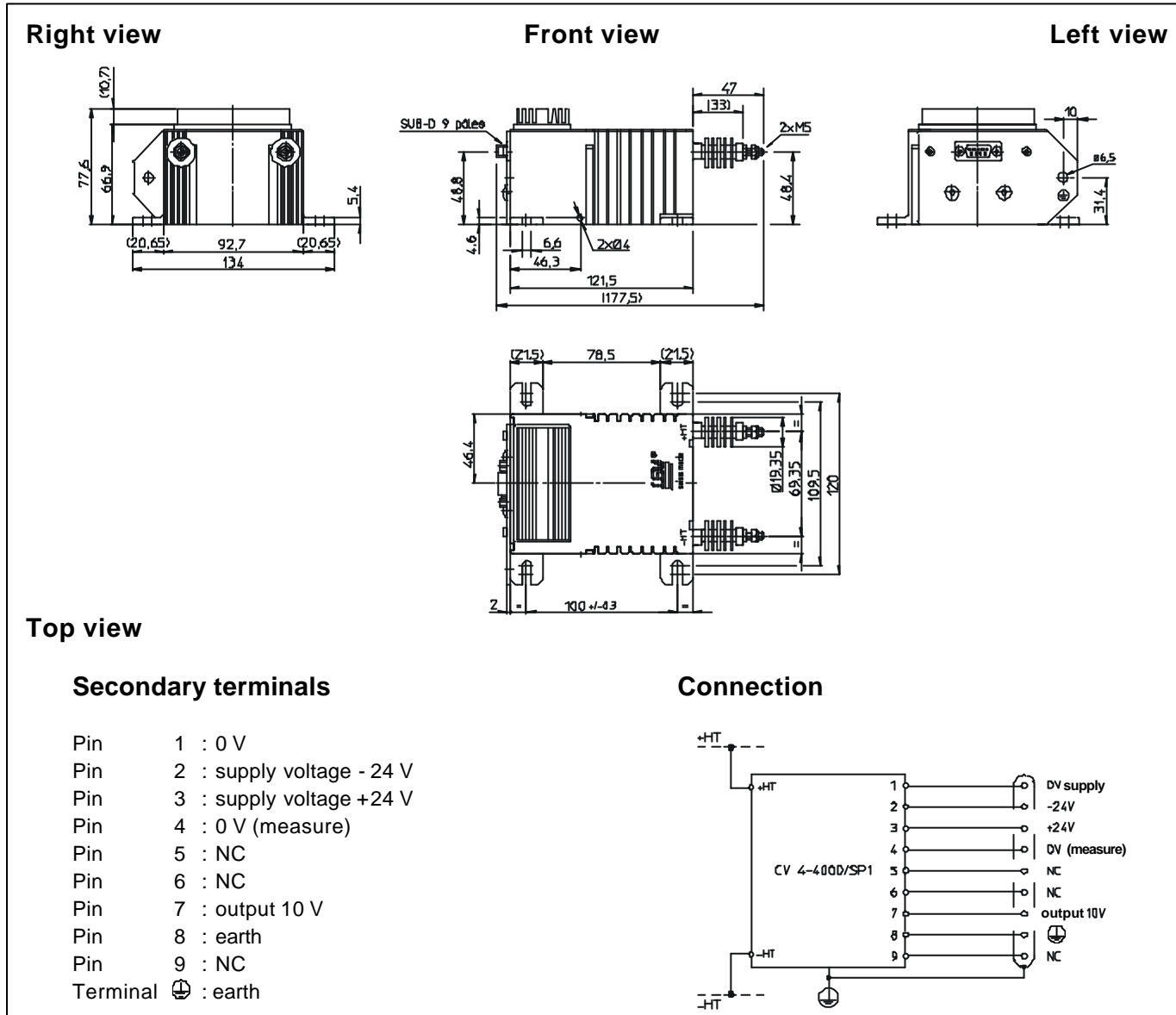
Notes : ¹⁾ With a dv/dt of 1000 V/ μs

²⁾ Specifications according to IEC 1000-4-3 are not guaranteed around 100 MHz. Sensitivity to induced radiation on connecting cable.

³⁾ A list of corresponding tests is available.

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Dimensions CV 4-4000/SP1 (in mm. 1 mm = 0.0394 inch)



Mechanical characteristics

- | | |
|----------------------------|-------------------------|
| • General tolerance | ± 0.5 mm |
| • Fastening | 4 slots Ø 6.6 mm |
| • Connection of primary | M5 threaded studs |
| Fastening torque | 2.2 Nm or 1.62 Lb. -Ft. |
| • Connection of secondary | SUB-D 9 Poles (male) |
| • Connection to the ground | hole Ø 6.5 mm |

Remark

- V_s is positive when V_p is applied on terminal +HT.