Voltage Transducer DCVT 1000/SP1

V_{PN} = 1000 V

For the electronic measurement of DC voltages with a galvanic isolation between the primary circuit (high voltage) and the secondary circuit (electronic circuit).

Preliminary

All Data are given with a R_L = 10 kΩ

Electrical data

V_{PN}	Primary nominal voltage	1000	V DC
V_{Pmax}	Primary voltage measuring range	56 .. 1400	V DC
$\hat{V}_P$	Not measurable overload	3000 (1s/h)	V_{DC}
R_P	Primary input resistance	appr. 97.5	MΩ
R_L	Load impedance	10	kΩ
V_{OUT}	Output voltage [1]	V_{OUT} = a x V_P - b	V
		a = 0.01 ± 0.5	%
		b = 0.3 ± 0.1	
I_C	Current consumption	appr. 1	mA/kV
V_d	R.m.s. voltage for AC isolation test, 50 Hz,1 min	5.5	kV
V_e	R.m.s. voltage for partial discharge extinction @ 10pC	2.2	kV

Accuracy-Dynamic performance data

X_G	Overall Accuracy @ V_{PN}, T_A = +25°C	±1.5	%
X_G	Overall Accuracy @ V_{PN}, T_A = -15 .. +70°C	±3.5	%
ε_L	Linearity @ T_A = 25°C	< ±0.5	%
t_r	Response time @ 10% of V_{PN}	< 100	µs

General data

T_A	Ambient operating temperature	-15 .. +70	°C
T_S	Ambient storage temperature	-25 .. +85	°C
dCp	Creepage distance	> 10	mm
dCl	Clearance distance	none	
CTI	Comparative tracking index (Group)	600	V
	UL94 classification	V0	
	Potting material	Polyurethane resin, UL94 V0	
m	Mass	appr. 400	g

Features

- Self-Powered
- Insulated plastic case recognized according to UL 94-V0
- Included primary resistor

Advantages

- Low power consumption
- Very good linearity
- Low thermal drift
- High immunity to external interference
- Low disturbance in common mode

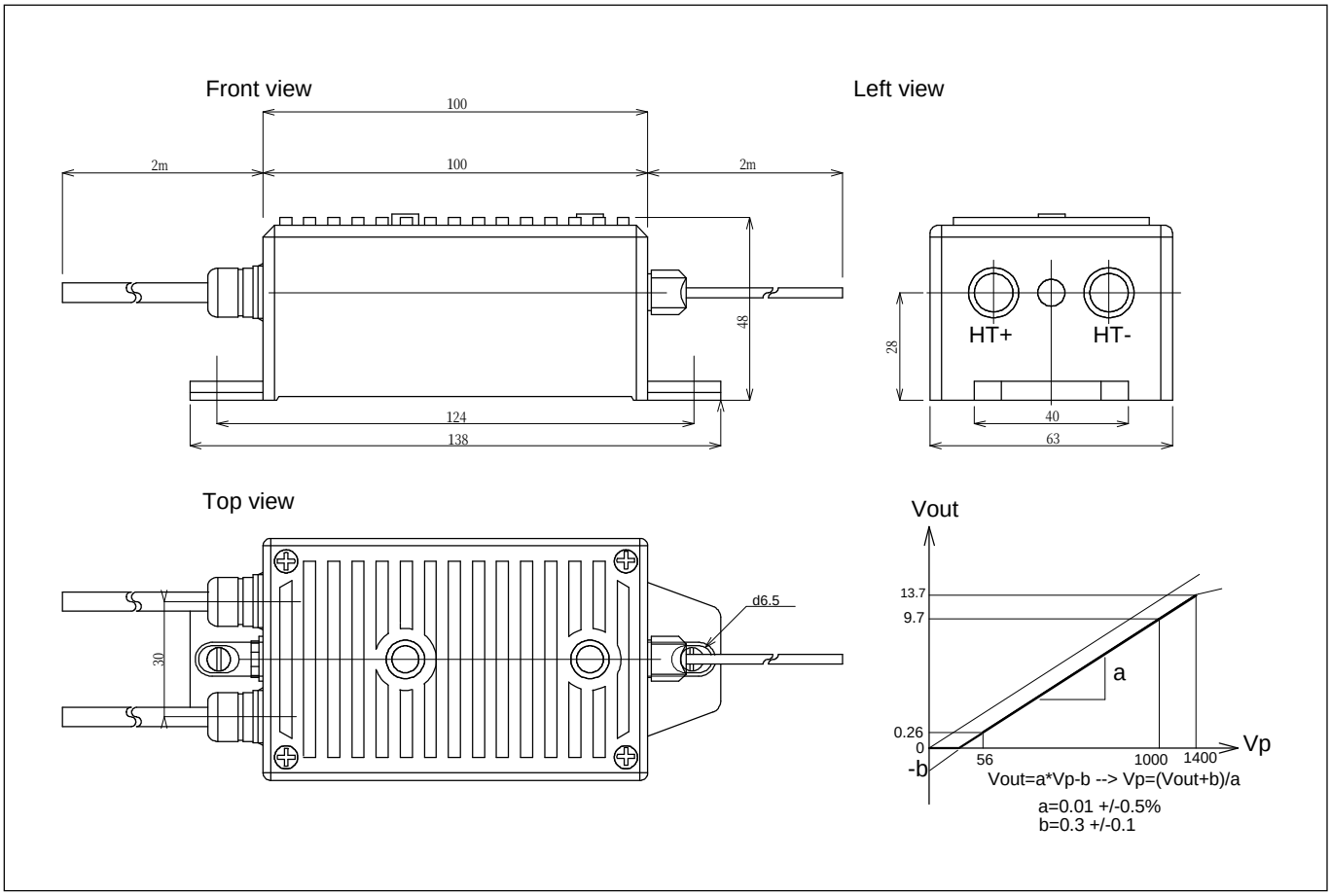
Applications

- Static converters for DC motor drives
- Battery supplied applications
- Uninterruptible Power Supplies (UPS)
- DC voltage monitoring

This is customer specific model.
Utilization restricted to agreed specifications.

Notes : [1] See graphical presentation of transfer function overleaf.

Dimensions DCVT 1000/SP1 (in mm. 1mm = 0.0394 inch)



Mechanical characteristics

- General tolerance ± 1 mm
- Transducer fastening 2 holes ∅ 6.5 mm
  Distance between holes 124 mm
- Connection
  Primary 2m halogen free 1 x 1.5 mm² cable
  Secondary 2m halogen free 2 x 0.5 mm² + EMC screen

- Recommended fastening torque 2.2 Nm or 1.62 Lb-Ft.

Remark

- $\mathbf{I}_S$ is positive when $\mathbf{V}_P$ is applied on terminal +HT.