Voltage Transducer CV 3-1500

V_{PN} = 1000 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).

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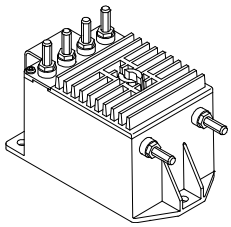

Electrical data

V_{PN}	Primary nominal r.m.s. voltage	1000	V
V_P	Primary voltage, measuring range	0 .. ± 1500	V
V_S	Secondary analog voltage @ $V_{P\,max}$	10	V
K_N	Conversion ratio	1500 V / 10 V	
R_L	Load resistance	≥ 1	kΩ
C_L	Capacitive loading	≤ 5	nF
V_C	Supply voltage (± 5 %)	± 15	V
I_C	Current consumption	32 + V_S / R_L	mA
V_d	R.m.s. voltage for AC isolation test, 50 Hz, 1 mn	6	kV
V_e	R.m.s. voltage for partial discharge extinction @ 10 pC	2	kV

Accuracy - Dynamic performance data

			Typ	Max	
X_G	Overall accuracy @ $V_{P\,max}$	T_A = 25°C		± 0.2	%
		- 40°C .. + 85°C		± 0.6	%
V_O	Offset voltage @ V_P = 0	T_A = 25°C		± 5.0	mV
		- 40°C .. + 85°C		± 13.0	mV
t_r	Response time [1] @ 90 % of $V_{P\,max}$		0.4		µs
dv/dt	dv/dt accurately followed		900		V/µs
f	Frequency bandwidth (- 1 dB) @ 33 % of V_{PN}		DC .. 800		kHz

General data

T_A	Ambient operating temperature	- 40 .. + 85	°C
T_S	Ambient storage temperature	- 45 .. + 90	°C
P	Total primary power loss	2.8	W
R_1	Primary resistance	360	kΩ
m	Mass	560	g
	Standards	EN 50155	

Features

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

Advantages

- Excellent accuracy
- Very good linearity
- Low thermal drift
- Low response time
- High bandwidth
- High immunity to external interference
- Low disturbance in common mode.

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.

Note : [1] With a dv/dt of 900 V/µs

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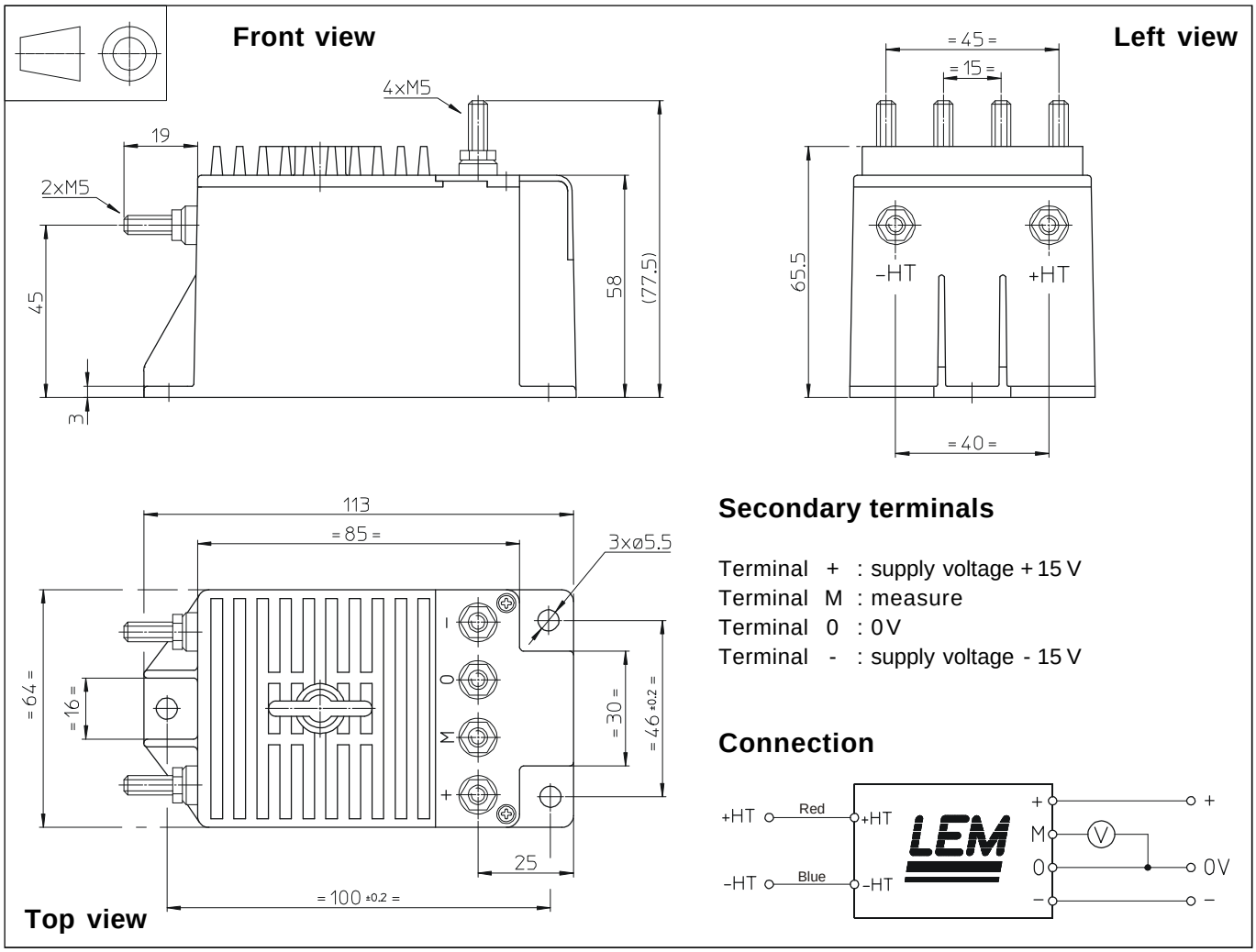
Dimensions CV 3-1500 (in mm. 1 mm = 0.0394 inch)



Secondary terminals

Terminal + : supply voltage + 15 V
Terminal M : measure
Terminal 0 : 0 V
Terminal - : supply voltage - 15 V

Connection

Mechanical characteristics

• General tolerance	± 0.3 mm
• Transducer fastening	3 holes ∅ 5.5 mm 3 M5 steel screws
Fastening torque max	4 Nm or 2.95 Lb. - Ft.
• Connection of primary	M5 threaded studs
• Connection of secondary	M5 threaded studs
• Fastening torque max	2.2 Nm or 1.62 Lb. -Ft.

Remarks

- $\mathbf{V}_S$ is positive when $\mathbf{V}_P$ is applied on terminal +HT.
- CEM tested with a shielded secondary cable.
  Shield connected to 0 V at both ends, or disconnected.
- This is a standard model. For different versions (supply voltages, turns ratios, unidirectional measurements...), please contact us.