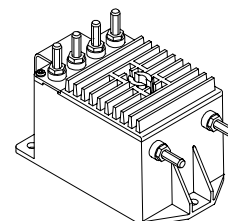


Voltage Transducer CV 3-200/SP5

$$V_{PN} = 140 \text{ V}$$

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	140	V
V_p	Primary voltage, measuring range	0 .. ± 200	V
V_s	Secondary analog voltage @ V_{Pmax}	10	V
K_N	Conversion ratio	200 V / 10 V	
R_L	Load resistance	≥ 1	k Ω
C_L	Capacitive loading	≤ 5	nF
V_C	Supply voltage ($\pm 10\%$)	$\pm 15 .. 24$	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	2.5	kV
V_e	R.m.s. voltage for partial discharge extinction @ 10 pC	2	kV

Accuracy - Dynamic performance data

X_G	Overall accuracy @ V_{Pmax}	$T_A = 25^\circ\text{C}$	Max	
		- 25 $^\circ\text{C}$.. + 75 $^\circ\text{C}$	± 0.2	%
V_O	Offset voltage @ $V_p = 0$	$T_A = 25^\circ$	± 5	mV
		- 25 $^\circ\text{C}$.. + 75 $^\circ\text{C}$	± 10	mV
t_r	Response time ¹⁾ @ 90 % of V_{PN}	0.4	μs	
dv/dt	dv/dt accurately followed	160	V/ μs	
f	Frequency bandwidth (- 3 dB) @ V_{PN}	DC .. 700	kHz	

General data

T_A	Ambient operating temperature	- 25 .. + 75	$^\circ\text{C}$
T_S	Ambient storage temperature	- 40 .. + 85	$^\circ\text{C}$
P	Total primary power loss	3.1	W
R_1	Primary resistance	6.4	k Ω
m	Mass	0.65	kg
	Standards	EN 50155	

Features

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

Special features

- $V_C = \pm 15 .. 24 (\pm 10\%) \text{ V}$
- $V_d = 2.5 \text{ kV}$
- $T_A = - 25^\circ\text{C} .. + 75^\circ\text{C}$
- VRT Burn-in
- Railway equipment.

Advantages

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

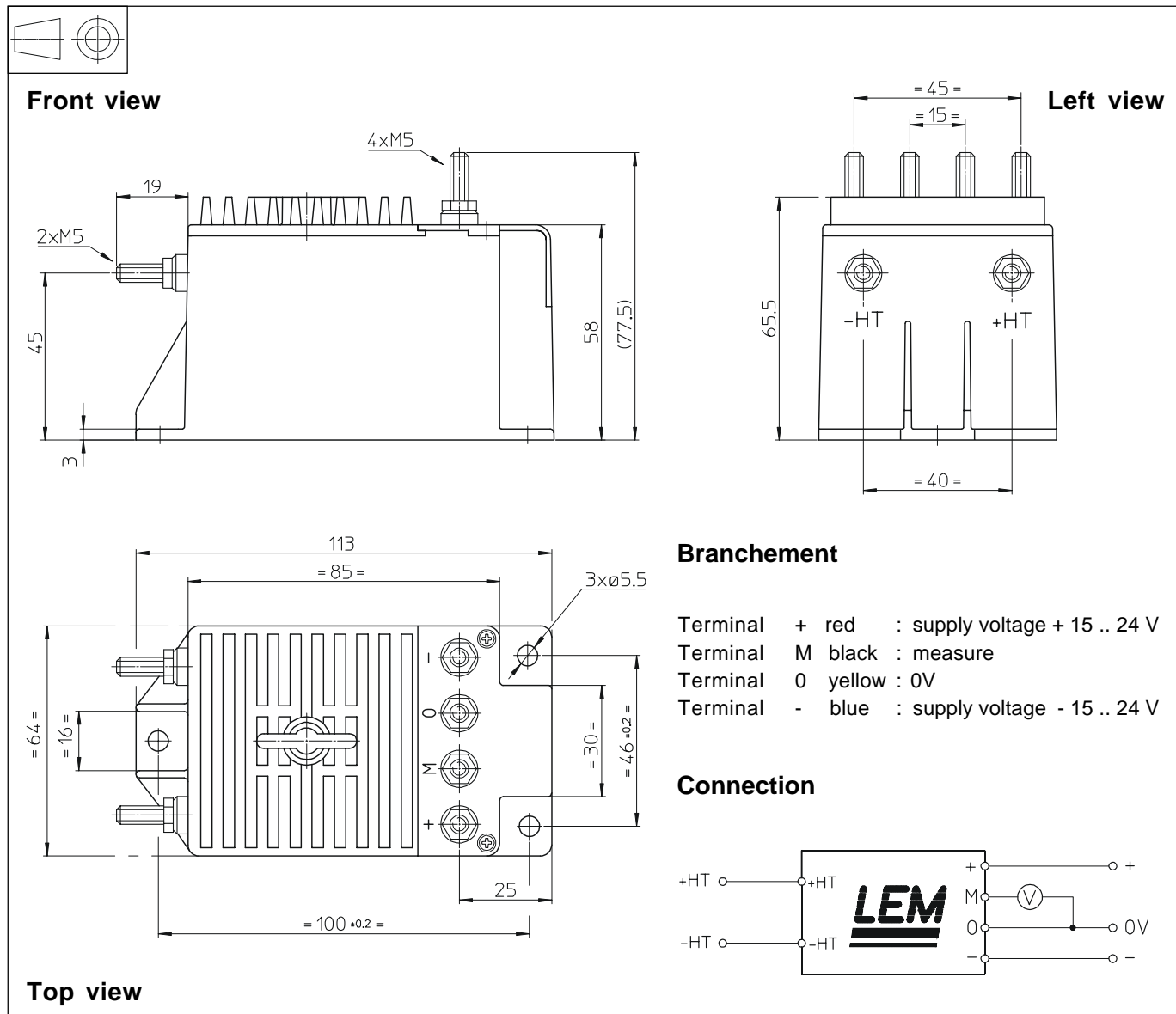
Applications

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

Note: ¹⁾ With a dv/dt of 200 V/ μs .

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Dimensions CV 3-200/SP5 (in mm. 1 mm = 0.0394 inch)



Mechanical characteristics

- General tolerance ± 0.3 mm
- Transducer fastening
 - 3 holes $\varnothing 5.5$ mm
 - M5 steel screens
 - Fastening torque max 3.8 Nm or 2.8 Lb. -Ft.
- Connection of primary and secondary
 - M5 threaded studs
 - Fastening torque max 2.2 Nm or 1.62 Lb. -Ft.

Remarks

- V_s is positive when V_p is applied on terminal +HT.
- CEM tested with a shielded secondary cable.
Shield connected to 0 V at both ends, or disconnected.