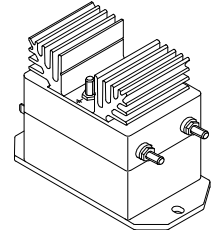


Voltage Transducer LV 100-400

$$V_{PN} = 400 \text{ V}$$

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 voltage rms	400	V			
V_{PM}	Primary voltage, measuring range	0 .. ± 600	V			
I_{PN}	Primary nominal current rms	25	mA			
R_M	Measuring resistance	$R_{M \min}$	$R_{M \max}$			
		with $\pm 15 \text{ V}$	@ $\pm 400 \text{ V}_{\max}$	0	200	Ω
			@ $\pm 600 \text{ V}_{\max}$	0	115	Ω
		with $\pm 24 \text{ V}$	@ $\pm 400 \text{ V}_{\max}$	0	370	Ω
	@ $\pm 600 \text{ V}_{\max}$	0	230	Ω		
I_{SN}	Secondary nominal current rms	50	mA			
K_N	Conversion ratio	400 V / 50 mA				
V_C	Supply voltage ($\pm 5 \%$)	$\pm 15 \dots 24$	V			

Features

- Closed loop (compensated) voltage transducer using the Hall effect
- Isolated plastic case recognized according to UL 94-V0
- Primary resistor R_1 incorporated into the housing.

Advantages

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

Accuracy - Dynamic performance data

X_G	Overall Accuracy @ $V_{PN}, T_A = 25^\circ\text{C}$	± 1	%
e_L	Linearity error	< 0.1	%
I_O	Offset current @ $I_p = 0, T_A = 25^\circ\text{C}$	Typ	± 0.2 mA
		Max	± 0.2 mA
I_{OT}	Temperature variation of I_O	$0^\circ\text{C} \dots +70^\circ\text{C}$	± 0.3 mA
t_r	Response time to 90 % of V_{PN} step	80	μs

General data

T_A	Ambient operating temperature	0 .. +70	$^\circ\text{C}$
T_S	Ambient storage temperature	-25 .. +85	$^\circ\text{C}$
N	Turns ratio	4000 : 2000	
P	Total primary power loss	10	W
R_1	Primary resistance @ $T_A = 25^\circ\text{C}$	16	k Ω
R_S	Secondary coil resistance @ $T_A = 70^\circ\text{C}$	60	Ω
m	Mass	850	g
	Standards	EN 50178: 1997	

Applications

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

Application domain

- Industrial.

Voltage transducer LV 100-400

Isolation characteristics

V_d	Rms voltage for AC isolation test, 50 Hz, 1 min	6 Min	kV
dCp	Creepage distance	17.9	mm
dCl	Clearance distance	17.5	mm
CTI	Comparative Tracking Index (Group IIIa)		

Safety



This transducer must be used in electric/electronic equipment with respect to applicable standards and safety requirements in accordance with the manufacturer's operating instructions.



Caution, risk of electrical shock

When operating the transducer, certain parts of the module can carry hazardous voltage (eg. primary busbar, power supply).

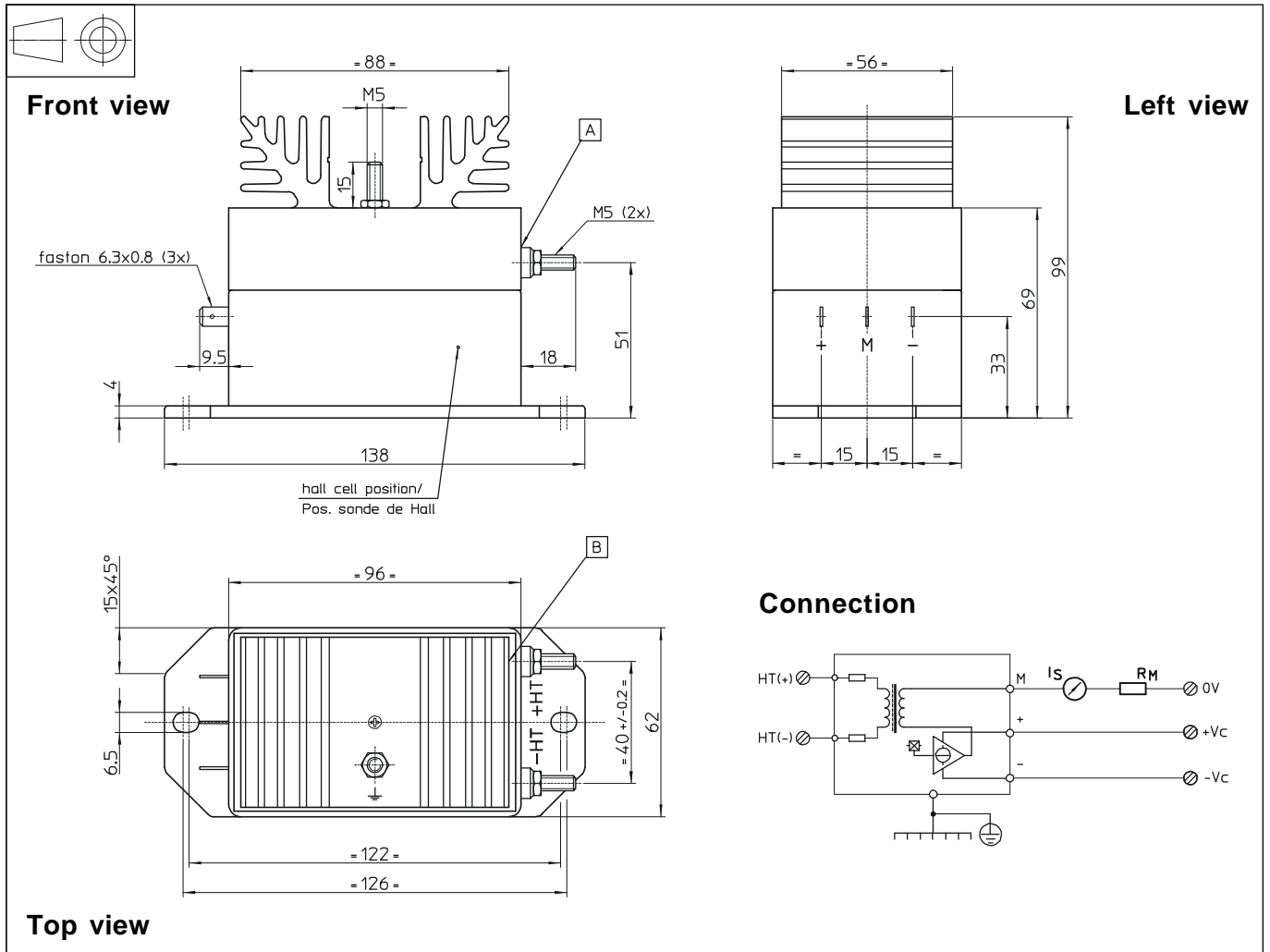
Ignoring this warning can lead to injury and/or cause serious damage.

This transducer is a built-in device, whose conducting parts must be inaccessible after installation.

A protective housing or additional shield could be used.

Main supply must be able to be disconnected.

Dimensions LV 100-400 (in mm. 1 mm = 0.0394 inch)



Mechanical characteristics

- General tolerance ± 0.3 mm
- Transducer fastening 2 holes Ø 6.5 mm
M6 steel screws
Recommended fastening torque 3.8 Nm or 2.8Lb - Ft.
- Connection of primary M5 threaded studs
- Connection of secondary Faston 6.3 x 0.8 mm
- Connection to the ground M5 threaded stud
Recommended fastening torque 2.2 Nm or 1.62 Lb. -Ft.

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.
- This is a standard model. For different versions (supply voltages, turns ratios, unidirectional measurements...), please contact us.