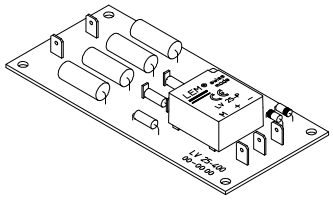
Voltage Transducer LV 25-400

V_{PN} = 400 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		400		V
V_P	Primary voltage, measuring range		0 .. ± 600		V
I_{PN}	Primary nominal r.m.s. current		10		mA
R_M	Measuring resistance		$R_{M\,min}$	$R_{M\,max}$	
	with ± 12 V	@ ± 400 V_{max}	30	200	Ω
		@ ± 600 V_{max}	30	100	Ω
	with ± 15 V	@ ± 400 V_{max}	100	320	Ω
		@ ± 600 V_{max}	100	180	Ω
I_{SN}	Secondary nominal r.m.s. current		25		mA
K_N	Conversion ratio		400 V / 25 mA		
V_C	Supply voltage (± 5 %)		± 12 .. 15		V
I_C	Current consumption		10 (@ ±15V) + I_S		mA
V_d	R.m.s. voltage for AC isolation test [1], 50 Hz, 1 mn		4.1		kV

Accuracy - Dynamic performance data

X_G	Overall Accuracy @ V_{PN} , T_A = 25°C		± 0.8		%
ε_L	Linearity		< 0.2		%
			Typ	Max	
I_O	Offset current @ I_P = 0, T_A = 25°C			± 0.15	mA
I_{OT}	Thermal drift of I_O	- 25°C .. + 25°C	± 0.10	± 0.60	mA
		+ 25°C .. + 70°C	± 0.10	± 0.60	mA
t_r	Response time @ 90 % of $V_{P\,max}$		15		µs

General data

T_A	Ambient operating temperature		- 25 .. + 70	°C
T_S	Ambient storage temperature		- 40 .. + 85	°C
N	Turns ratio		2500 : 1000	
P	Total primary power loss		4	W
R_1	Primary resistance @ T_A = 25°C		40	kΩ
R_S	Secondary coil resistance @ T_A = 70°C		110	Ω
m	Mass		60	g
	Standards [2]		EN 50178	

Notes : [1] Between primary and secondary
[2] A list of corresponding tests is available

Features

- Closed loop (compensated) voltage transducer using the Hall effect
- Transducer with insulated plastic case recognized according to UL 94-V0
- Primary resistor R_1 and transducer mounted on printed circuit board 128 x 60 mm.

Advantages

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

Applications

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

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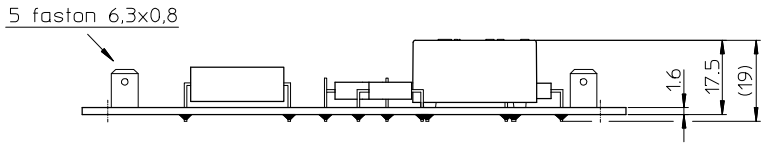
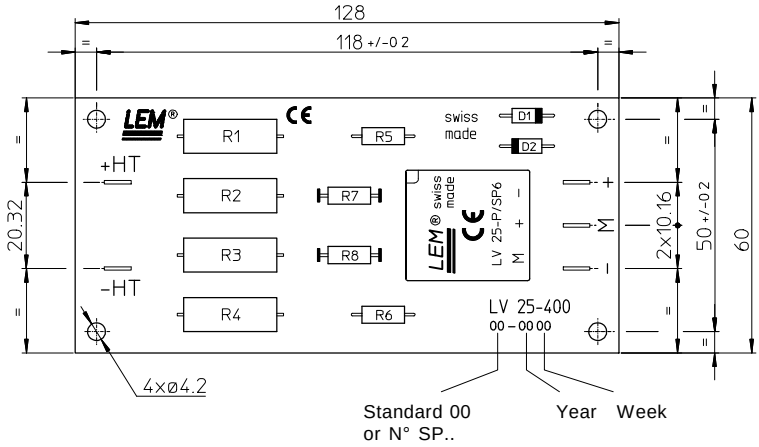
Dimensions LV 25-400 (in mm. 1 mm = 0.0394 inch)

Front view



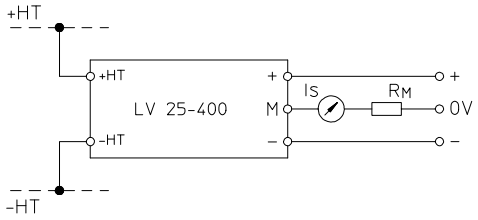
Top view



Secondary terminals

Terminal + : supply voltage + 12 .. 15 V
Terminal M : measure
Terminal - : supply voltage - 12 .. 15 V

Connection



Mechanical characteristics

• General tolerance	± 0.3 mm
• Fastening	4 holes ∅ 4.2 mm
• Connection of primary	Faston 6.3 x 0.8 mm
• Connection of secondary	Faston 6.3 x 0.8 mm

Remarks

- $\mathbf{I}_S$ is positive when $\mathbf{V}_P$ 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.