

Voltage Transducer LV 25-600/SP2

For the electronic measurement of voltage: DC, AC, pulsed..., with galvanic separation between the primary circuit and the secondary

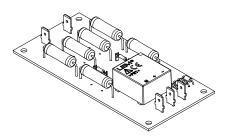








$V_{PN} = 600 \text{ V}$



Electrical data

$V_{_{\mathrm{PN}}}$	Primary nominal rms vo	oltage	600		V
$V_{_{\mathrm{PM}}}$	Primary voltage, measuring range		0 ± 900		V
$I_{\scriptscriptstyle{PN}}$	Primary nominal rms current		10		mΑ
$R_{\rm M}$	Measuring resistance		$R_{ m Mmin}$	$R_{_{ m Mmax}}$	
	with ± 12 V	@ \pm 600 V _{max}	30	200	Ω
		@ ± 900 V max	30	100	Ω
	with ± 15 V	@ ± 600 V max	100	320	Ω
		@ ± 900 V max	100	180	Ω
$I_{\scriptscriptstyle{\mathrm{SN}}}$	Secondary nominal rms current		25		mΑ
$K_{\rm N}$	Conversion ratio		600 V	: 25 mA	
$U_{\rm c}$	Supply voltage (± 5 %)		± 12	. 15	V
$I_{_{ m C}}$	Current consumption		10 (@	± 15 V) + <i>I</i>	s mA

Accuracy - Dynamic performance data

$X_{_{\mathrm{G}}}$	Overall accuracy @ V_{PN} , T_{A} = 25 °	С	± 0.8		%
$\boldsymbol{\varepsilon}_{_{\!\scriptscriptstyle 1}}$	Linearity error		< 0.2		%
_			Тур	Max	
$I_{_{ m O}}$	Offset current @ $V_p = 0$, $T_A = 25$ °	С		Max ± 0.15	mΑ
$I_{_{ m OT}}$	Temperature variation of $I_{\scriptscriptstyle m O}$	+ 25 °C + 70 °C	± 0.10	± 0.40	mΑ
	_	- 30 °C + 25 °C	± 0.10	± 0.50	mΑ
t_{r}	Step response time to 90 % of $V_{\rm Ph}$	N	< 15		us

General data

T_A T_S N_D/N_S	Ambient operating temperature Ambient storage temperature Turns ratio	- 30 + 70 - 40 + 85 2500 : 1000	°C °C
$P_{\rm p}^{\rm r}$	Total primary power loss	6	W
R _P	Resistance of primary @ T_A = 25 °C	60	kΩ
R _s	Resistance of secondary winding @ T_A = 70 °C	115	Ω
m	Mass	60	g
	Standards	EN 50155: 2001	
		UL 508: 2010	

Features

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

Special features

- $T_A = -30 \, ^{\circ}\text{C..} + 70 \, ^{\circ}\text{C}$
- Coated
- Railway equipment.

Advantages

- Excellent accuracy
- Very good linearity
- Low temperature 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.

Application Domain

• Traction.

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In	sulation coordination		
$U_{\rm d}$	Rms voltage for AC insulation test ¹⁾ , 50 Hz, 1 min	4.1 Min	kV
$d_{_{\mathrm{Cn}}}$	Creepage distance	13.8	mm
$oldsymbol{d}_{ extsf{CP}} \ oldsymbol{d}_{ extsf{CI}}$	Clearance	13.8	mm
CTI	Comparative tracking index (group IIIb)	< 175	

Note: 1) Between primary and secondary.

Safety

This transducer must be used in limited-energy secondary circuits according to IEC 61010-1.



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.



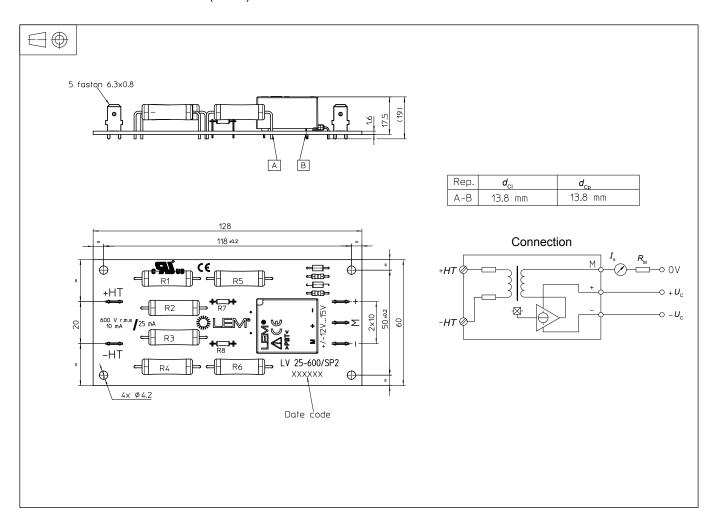
Caution, risk of electrical shock

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 build-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 25-600/SP2 (in mm)



Mechanical characteristics

• General tolerance ± 0.3 mm

Transducer fastening 4 holes Ø 4.3 mm the mounting must be done on a adapted holder with four M4

screws

• Connection of primary Faston 6.3 × 0.8 mm

Connection of socondary
 Faston 6.3 × 0.8 mm

Remarks

- $I_{\rm S}$ is positive when $V_{\rm P}$ is applied on terminal + HT.
- The primary circuit of the transducer must be linked to the connections where the voltage has to be measured.
- Installation of the transducer must be done unless otherwise specified on the datasheet, according to LEM Transducer Generic Mounting Rules. Please refer to LEM document N°ANE120504 available on our Web site: Products/Product Documentation.