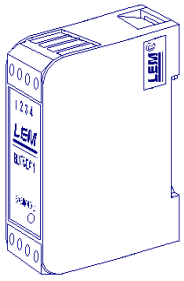
Voltage Transducer ATVR 400/500/600 D420L

V_{PN} = 400 .. 600 V

For the electronic True RMS measurement of AC voltage with a galvanic isolation between the primary and secondary circuit.



Electrical data

V_{PN}	Primary nominal voltage (V rms)	Type
	400	ATVR 400 D420L
	500	ATVR 500 D420L
	600	ATVR 600 D420L

R_M	Measuring resistance		≤ 500	Ω
V_P	Primary voltage		120	%V_{PN}
I_{SN}	Secondary nominal current	@ V_P = 0	I_s = 4	mA
		@ V_P = V_{PN}	I_s = 20	mA
V_C	Supply voltage (Loop-powered ± 5 %)		24	V DC
I_C	Current consumption		4	mA

Accuracy-dynamic performance data

X_G	Overall accuracy (T_A = 25 °C)	≤ ± 1	%
ε_L	Linearity error	≤ ± 0.5	%
t_r	Response time @ 90 % of I_{PN}	≤ 250	ms
BW	Frequency bandwidth (-1dB)	40~5K	Hz

General data

T_A	Ambient operating temperature	-10.. + 70	°C
T_S	Ambient storage temperature	-15.. + 80	°C
m	Mass	60	g
IPxx	Protection degree	IP 20	
	UL classification	V0	

Features

- Isolated plastic case recognized according to UL 94-V0
- DIN 23 mm rail mounting
- Loop-powered
- True RMS.

Advantages

- Excellent linearity
- Best ratio of feature and price
- Galvanic isolation between primary and secondary.

Applications

- Process automation
- Measuring instrument
- Monitoring
- Power station.

Application Domain

- Energy & Automation.

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Isolation characteristics

V_b	Rated isolation voltage rms	600	V
	According to the EN 50178 and IEC 61010-1[1] standards and the following conditions: – Reinforced isolation – Over voltage category OV 2: **Cat II** [2] – Pollution degree PD2 – Heterogeneous field		
V_d	Rms voltage for AC isolation test, 50 Hz, 1 min	3.5	kV
$\hat{V}_w$	Impulse withstand voltage 1.2/50 µs	6.4	kV
		Mini	
dCp	Creepage distance	8.2	mm
dCl	Clearance distance	8.2	mm
CTI	Comparative Tracking Index (Group III a)	225	

Notes : [1] According to 61000-4-3 the transducer has 20% drift around specific frequencies (report available on request)

[2] Do not use this transducer for over voltage category 3 (CAT III).

Safety

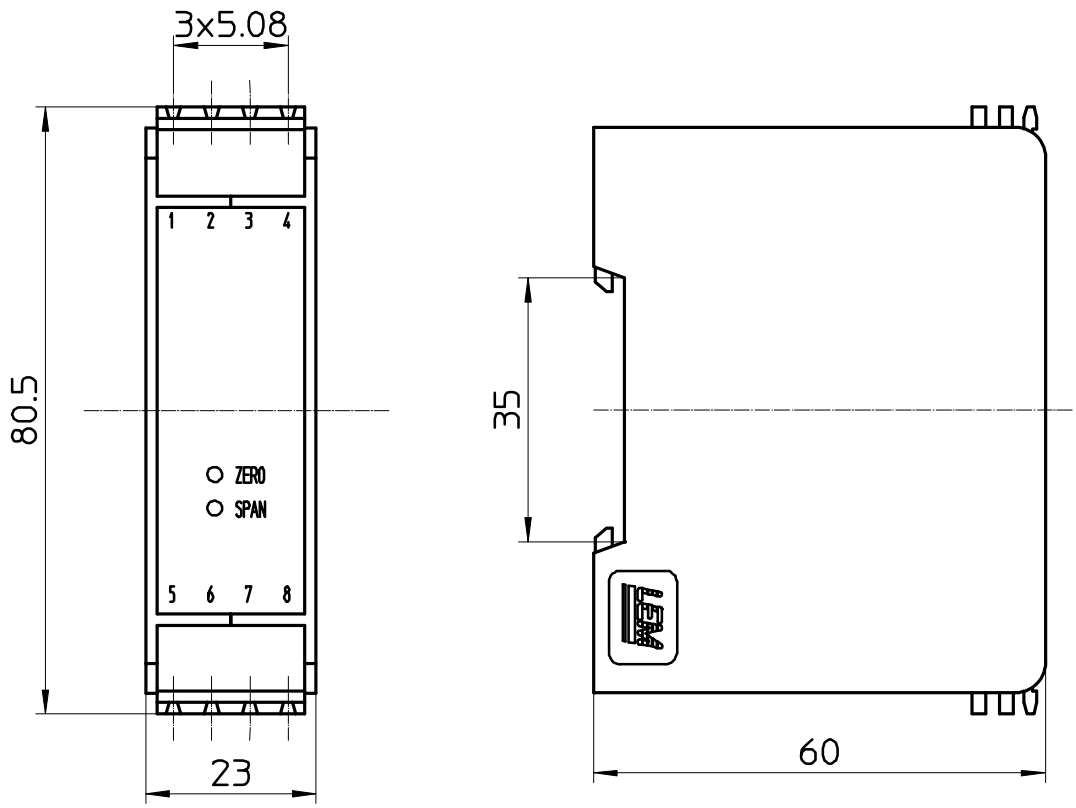
Read instructions thoroughly prior to installation.
This product is not intended for life or safety applications. This product is not intended for installation in hazardous or classified locations.
This transducer must be used in electric/electronic equipment with respect to applicable standards and safety requirements in accordance with the manufacturer's operating instructions.
Power supply shall be a low voltage source and shall have an efficient protective system against over current.
Installation and maintenance should be done with main power supply disconnected.
The operator must have an accreditation to install this material.

Caution! Risk of electrical shock

When operating the transducer, certain parts of the module can carry hazardous voltage (e.g. primary connection, power supply).
Ignoring this warning can lead to injury and/or cause serious damage.
The user must take care of all protection guarantee against electrical shock.
This transducer is a built-in device, whose conducting parts must be inaccessible after installation. A protective housing or additional shield could be used.

Dimensions **ATVR 400/500/600 D420L** (in mm. 1 mm = 0.0394 inch)

Front view **Left view**



Mechanical characteristics

• General tolerance	± 0.5 mm
• Mounting	DIN 23 mm
• Connection of secondary	Finger safe terminal block 5.08

Connection

1:	V_{PN}	5:	+ 24 V
2:	NC	6:	NC
3:	NC	7:	NC
4:	V_{PN}	8:	GND