

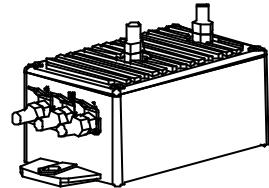
# Voltage Transducer AV100 Series

**V<sub>PN</sub> = 50...1500 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**

Primary nominal R.m.s or DC voltage	Primary Voltage measuring range	R.m.s. voltage for AC isolation test <sup>1)</sup> (50 Hz/1min)	Type
V <sub>PN</sub> (V)	V <sub>Pmax</sub> (V)	V <sub>d</sub> (kV)	
50	± 75	3.3	AV 100-50
125	± 187.5	3.3	AV 100-125
150	± 225	3.3	AV 100-150
250	± 375	3.3	AV 100-250
500	± 750	3.3	AV 100-500
750	± 1125	4.3	AV 100-750
1000	± 1500	5.5	AV 100-1000
1500	± 2250	6.5	AV 100-1500
^V <sub>P</sub>	Not measurable overload	2 x V <sub>Pmax</sub> (1s/h)	V <sub>DC</sub>
R <sub>M</sub>	Measuring resistance @ V <sub>C</sub> =11.4V @ V <sub>C</sub> =22.8V		R <sub>M min</sub> R <sub>M max</sub>
I <sub>SN</sub>	Secondary nominal r.m.s. current	50	mA
V <sub>C</sub>	Supply voltage (± 5 %)	DC ± 12 .. 24	V
I <sub>c</sub>	Current consumption	50+I <sub>S</sub>	mA
	Max Common mode voltage and	U <sub>HT+</sub> + U <sub>HT-</sub> ≤ 4.2 kV <sub>DC</sub>	
V <sub>e</sub>	R.m.s. voltage for partial discharge extinction @ 10pC	U <sub>HT+</sub> - U <sub>HT-</sub>   ≤ V <sub>PMAX</sub>	
		1.1 <sup>2)</sup>	kV
		2.2 <sup>3)</sup>	kV

**Features**

- Insulated plastic case recognized according to UL 94-V0.
- Included primary resistor

**Advantages**

- Low power
- 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.

**Accuracy - Dynamic performance data**

X <sub>G</sub>	Overall Accuracy @ V <sub>PN</sub> , T <sub>A</sub> = + 25°C	± 0.7	%
X <sub>G</sub>	Overall Accuracy @ V <sub>PN</sub> , T <sub>A</sub> = - 25 .. + 70°C	± 1.5	%
X <sub>G</sub>	Overall Accuracy @ V <sub>PN</sub> , T <sub>A</sub> = - 40 .. + 85°C	± 1.7	%
e <sub>L</sub>	Linearity @ T <sub>A</sub> = 25°C	< 0.1	%
I <sub>O</sub>	Offset current @ V <sub>P</sub> = 0, T <sub>A</sub> = 25°C	± 0.15	mA
t <sub>r</sub>	Response time @ 10 % of V <sub>Pmax</sub>	Between 10 and 13 µs	
f	Frequency bandwidth (- 3dB)	DC .. 13	kHz

**General data**

T <sub>A</sub>	Ambient operating temperature	- 40 .. + 85	°C
T <sub>S</sub>	Ambient storage temperature	- 50 .. + 90	°C
m	Mass	375	g
	Standards	EN 50155 EN 50124-1 NFF16101/2	

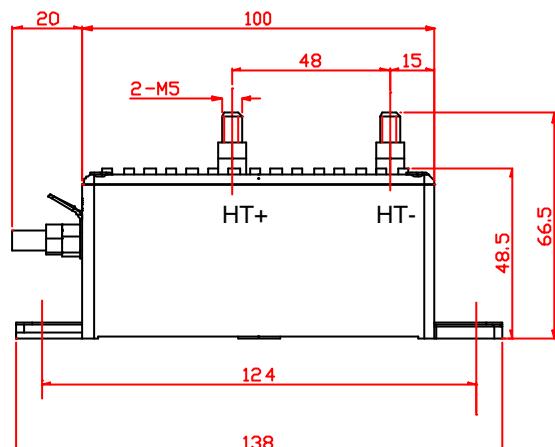
Notes : <sup>1)</sup> Between primary and secondary

<sup>2)</sup> For models AV 100-50 to 750

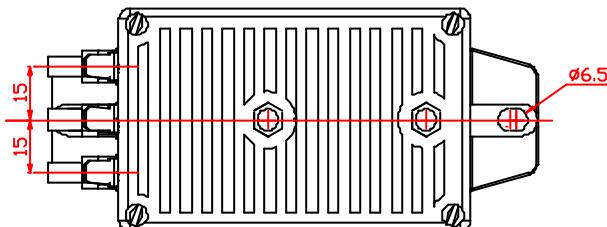
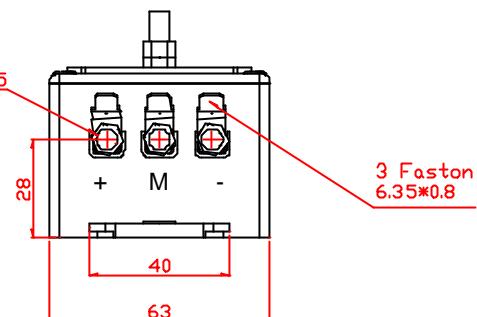
<sup>3)</sup> For models AV 100-1000 & AV 100-1500

## Dimensions AV100 Series (in mm. 1 mm = 0.0394 inch)

### Front view



### Left view

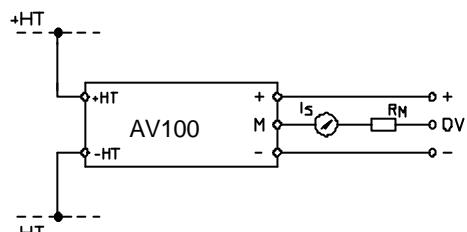


### TOP view

### Secondary terminals

Terminal + : Supply voltage +12 .. 24 V  
 Terminal M : Measure  
 Terminal - : Supply voltage - 12 .. 24V

### Connection



### Mechanical characteristics

- General tolerance  $\pm 1$  mm
- Fastening 2 holes  $\varnothing 6.5$  mm
- Distance between holes axes : 124mm
- Fastening & connection of primary 2 x M5
- Fastening & connection of secondary 3 x M5 or 3 Faston 6.35 x 0.8mm
- Output connections must be made with screened cables
- Fastening torque: 2.2 Nm

### Remarks

- $I_s$  is positive when  $V_p$  is applied on terminal +HT.
- This is a standard model. For different versions, please contact us.