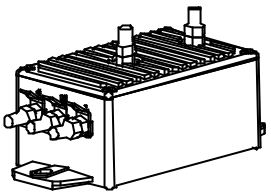
Voltage Transducer AV100 Series

V_{PN} = 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[1] (50 Hz/1min)	Type
V_{PN} (V)	V_{Pmax} (V)	V_d (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

$\hat{V}_P$	Not measurable overload	2 x V_{Pmax} (1s/h)			V_{DC}
R_M	Measuring resistance		$R_{M\,min}$	$R_{M\,max}$	
	@ V_C=11.4V		0	47	Ω
	@ V_C=22.8V		0	184	Ω
I_{SN}	Secondary nominal r.m.s. current		50		mA
V_C	Supply voltage (± 5 %)		DC ± 12 .. 24		V
I_c	Current consumption		50+I_S		mA
	Max Common mode voltage and		$U_{HT+} + U_{HT-} \le 4.2$		kV$_{DC}$
			$\lvert U_{HT+} - U_{HT-} \rvert \le V_{PMAX}$		
V_e	R.m.s. voltage for partial discharge extinction @ 10pC		1.1 [2]		kV
			2.2 [3]		kV

Accuracy - Dynamic performance data

X_G	Overall Accuracy @ V_{PN}, T_A = + 25°C	± 0.7	%
X_G	Overall Accuracy @ V_{PN}, T_A = - 25 .. + 70°C	± 1.5	%
X_G	Overall Accuracy @ V_{PN}, T_A = - 40 .. + 85°C	± 1.7	%
ε_L	Linearity @ T_A = 25°C	< 0.1	%
I_O	Offset current @ V_P = 0, T_A = 25°C	± 0.15	mA
t_r	Response time @ 10 % of V_{Pmax}	Between 10 and 13	µs
f	Frequency bandwidth (- 3 dB)	DC .. 13	kHz

General data

T_A	Ambient operating temperature	- 40 .. + 85	°C
T_S	Ambient storage temperature	- 50 .. + 90	°C
m	Mass	375	g
	Standards	EN 50155	
		EN 50124-1	
		NFF16101/2	

Notes : [1] Between primary and secondary
[2] For models AV 100-50 to 750
[3] For models AV 100-1000 & AV 100-1500

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.

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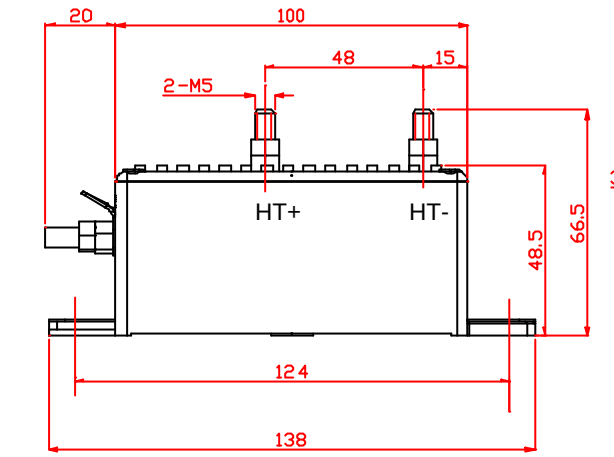
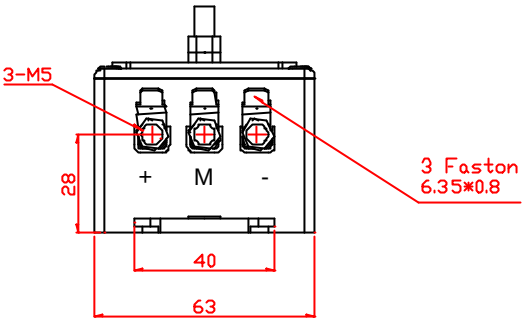
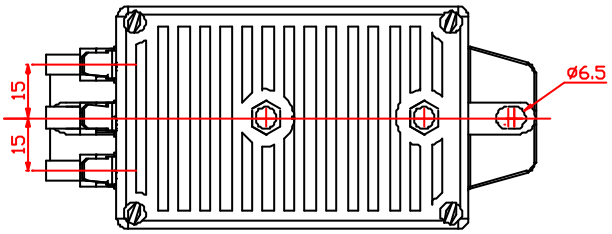
Dimensions AV100 Series (in mm. 1 mm = 0.0394 inch)

Front view



Left view



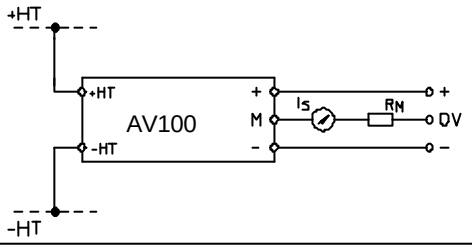


TOP view

Secondary terminals

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

Connection



Mechanical characteristics

- General tolerance ± 1 mm
- Fastening 2 holes ∅ 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.