



High precision voltage sensor DXE1500-V5/42

$$U_{PN} = 1500V$$

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



Features

- Excellent accuracy
- Very good linearity
- Low temperature drift
- Wide frequency bandwidth
- Optimized response time

Application Domain

- AC variable speed and servo motor drives
- Single or three phase inverters
- Static converters for DC motor drives
- Propulsion and braking choppers
- Battery supplied applications
- Propulsion converters
- Uninterruptible Power Supplies (UPS)
- Auxiliary converters
- Switched Mode Power Supplies (SMPS)
- High power drives
- Power supplies for welding applications
- Substations
- Renewable Energy (Solar and Wind)



Electrical data

Parameter	specifications			Condition
	Minimum value	Standard value	Maximum value	
Rated primary voltage $V_{PN=}$		± 1500 Vdc		/
Measure range $V_{PM=}$			± 2000 Vdc	1Min/Hour
Power supply voltage V_c	± 14.5 Vdc	± 24 Vdc	± 26.4 Vdc	Full range
Current consumption I_c	± 40 mA	± 90 mA	± 120 mA	I_{PM} range
Transformation ratio K_N	1500V:50mA			Input : Output
Rated output current I_{SN}		50 mA		Rated input current
Measuring resistance R_M		60 Ω	100 Ω	

Accuracy- Dynamic Parameter

Project	Symbol	Test conditions	Numerical value			Unit
			minimum	standard	maximum	
Accuracy	X_e	@0%~50% I_{PN}	--	--	1.5	V
		@50% I_{PN} ~ I_{PM}	--	--	0.2	%RD
Ratio error	X_{Ge}	@0%~50% I_{PN}	--	--	1.5	V
		@50% I_{PN} ~ I_{PM}	--	--	0.2	%RD
angle error	X_{Pe}		--	--	0.05	crad
Linearity	ϵ_L	--	--	--	100	ppm
Temperature drift coefficient	TCI	--	--	--	10	ppm/K
Time drift coefficient	TT	--	--	--	10	ppm/month
Power supply anti-interference	TV	--	--	--	20	ppm/V
Zero offset current	I_o	25 \pm 10 $^{\circ}$ C	--	--	± 0.05	mA
Zero offset current	I_{oT}	Within the full operating temperature range	--	--	± 0.1	mA
Ripple current	I_n	DC-10Hz	--	--	50	ppm
Dynamic response time	T_r	di/dt=100A/us	--	--	10	us
		rise to 90% I_{PN}				
Current following speed	di/dt	--	100	--	--	A/us
Bandwidth(- 3 dB)	F	--	0	--	20	kHz



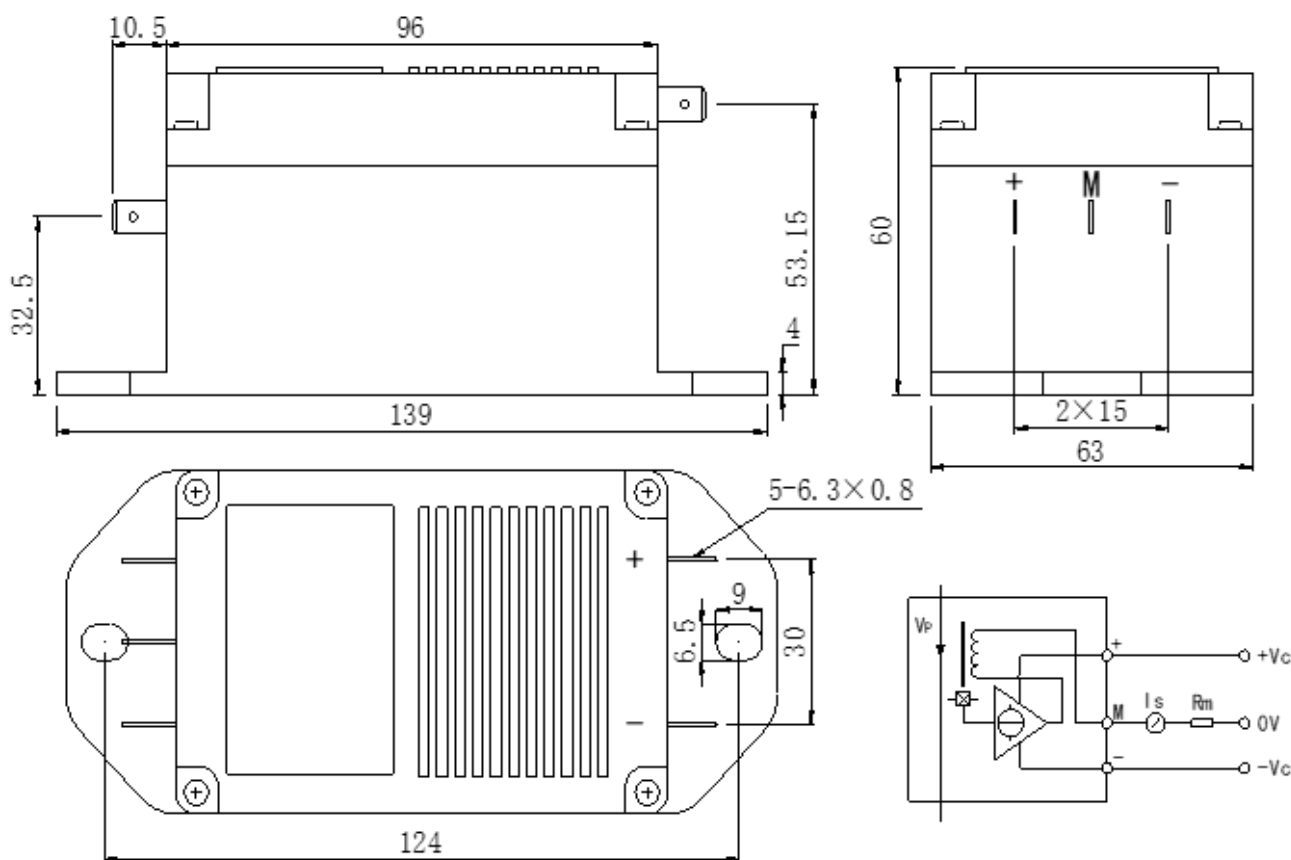
General characteristics

Project	Symbol	Test conditions	Numerical value			Unit
			minimum	standard	maximum	
Operating temperature range	T _A	--	-40	--	85	°C
Storage Temperature Range	T _S	--	-45	--	85	°C
Weight	m		350g±60g			g

Safety characteristics

Project	Symbol	Test conditions	Numerical value			Unit
			minimum	standard	maximum	
Withstand voltage	V _d	50Hz,1min		7		KV
Transient isolation withstand voltage	V _w	50us		10		KV

Mechanical dimension (mm)





Mechanical characteristics

- General tolerance: $\pm 1\text{mm}$
- Connector: $6.3\text{mm}\times 0.8\text{mm}$ inserting piece

NOTE

- When the direction of the input current I_P is consistent with the direction indicated by the arrow in the outline drawing, the output current I_S is in the forward direction.
- Please try to locate the primary conductor at the center of the probe aperture as much as possible.
- The through-hole is made of metal material, so the through-hole wire cannot be an exposed cable. The through-hole wire must be insulated.
- This module is a standard sensor, please contact us for special applications.
- We reserve the right to modify this sensor manual without prior notice.