

CHV-DVL24D50

Isolated Voltage Sensor

Description

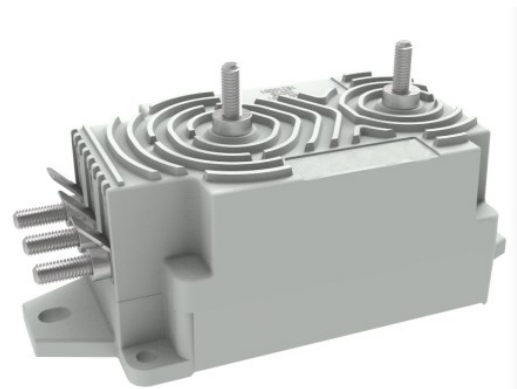
CHV-DVL24D50 series are voltage sensor for accurate measurement of DC, AC, Pulse and arbitrary voltage signal with galvanic isolation between the primary and secondary circuits

Features and Benefits

- Low power
- Compact design
- High accuracy low drift
- Fast response
- High immunity to external interference

Applications

- Single or three phase inverter
- Breaking choppers
- Substation
- High power drive unit



Insulation and Environmental Characteristics

Parameter	Symbol	Typical	Unit
Dielectric strength	U_D	8.5	kV (50Hz/min)
Insulation resistance	R_{IS}	1000	$M\Omega$
Creepage distance	d_{CP}	60	mm
Clearance	d_{CL}	43	mm
Ambient Operating Temperature	T_A	-40 ~ 85	$^{\circ}C$
Ambient Storage Temperature	T_{STG}	-45 ~ 90	$^{\circ}C$
Mass	m	320	g

Specifications

 * $T_A = 25^\circ\text{C}$, $V_{CC} = \pm 24\text{V}$, $R_M = 120\Omega$

Parameter	Symbol	Conditions	Value			Unit
			Min.	Typ.	Max.	
General Electrical Data						
Primary nominal voltage	V_{PN}	CHV50DVL24D50	-	50	-	V
		CHV125DVL24D50	-	125	-	
		CHV150DVL24D50	-	150	-	
		CHV250DVL24D50	-	250	-	
		CHV500DVL24D50	-	500	-	
		CHV750DVL24D50	--	750	-	
		CHV1000DVL24D50	-	1000	-	
		CHV1500DVL24D50	-	1500	-	
		CHV2000DVL24D50	-	2000	-	
Primary measuring range	V_{PM}	CHV50DVL24D50	-75	-	75	V
		CHV125DVL24D50	-125	-	125	
		CHV150DVL24D50	-150	-	150	
		CHV250DVL24D50	-250	-	250	
		CHV500DVL24D50	-500	-	500	
		CHV750DVL24D50	-750	-	750	
		CHV1000DVL24D50	-1500	-	1500	
		CHV1500DVL24D50	-2250	-	2250	
		CHV2000DVL24D50	-3000	-	3000	
Sensitivity $V_P = 0 \sim \pm V_{PN}$	S	CHV50DVL24D50	-	1000	-	$\mu\text{A/V}$
		CHV125DVL24D50	-	400	-	
		CHV150DVL24D50	-	333.33	-	
		CHV250DVL24D50	-	200	-	
		CHV500DVL24D50	-	100	-	
		CHV750DVL24D50	-	66.67	-	
		CHV1000DVL24D50	-	50	-	
		CHV1500DVL24D50	-	33.33	-	
		CHV2000DVL24D50	-	16.67	-	
Supply voltage	V_{CC}	$\pm 5\%$	± 12		± 24	V
Quincent current	I_C	$V_{CC} = \pm 24\text{V}$, $I_P = 0$		20		mA
Secondary nominal output	I_{OUT}			50		mA
Secondary maximum output	I_{OUTMAX}				75	mA
Measuring resistance	R_M	$V_{CC} = \pm 12\text{V}$	0	-	47	Ω
		$V_{CC} = \pm 24\text{V}$	0	-	200	
Power-On time	T_{ON}			190	250	ms
Output noise	I_{NOISE}	1kHz ~ 100kHz		10		μA
Power	P	$V_P = V_{PN}$		0.2		W

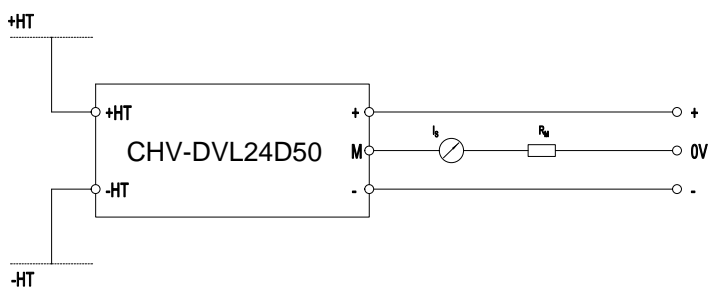
Parameter	Symbol	Conditions	Value			Unit
			Min.	Typ.	Max.	
Static Performance Data						
Accuracy	X_G	$V_P = 0 \sim \pm V_{PN}$		± 0.7		% V_{PN}
Sensitivity Error	ϵ_G	$T_A = -40^\circ\text{C} \sim +85^\circ\text{C}, V_P = 0 \sim \pm V_{PN}$		± 0.5		% V_{PN}
Linearity	ϵ_L	$V_P = 0 \sim \pm V_{PN}$		0.5		%
Dynamic Performance Data						
Response Time	t_R	10% to 90% of V_{PN}		30		us
Bandwidth	BW	-3dB		14		kHz
		-1dB		8		
		-0.1dB		2		
Following Accuracy	di/dt		100			A/ μs

Application Information

Electrical Connection

Primary connection dimension: 2xM5 thread post

Secondary connection: 3xM5 thread post or 6.3X0.8mm terminal.



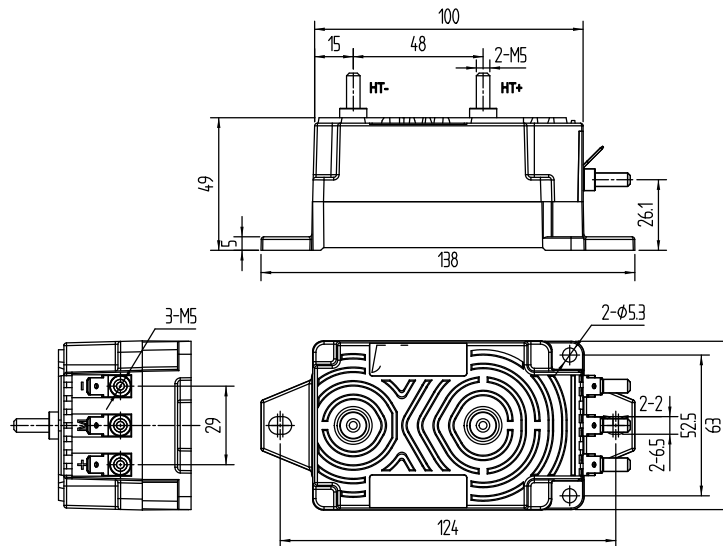
Mounting method:

2 x 6.5mm slotted holes

2 × M6 copper or SS304 screws

Recommended torque: 2.5N·m

Dimension



Tolerance for unmarked dimension = $\pm 0.5\text{mm}$

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The product(s) in this document need to be handed over to a qualified solid waste management services company for recycling in accordance with relevant regulations on waste classification after the end of the product(s) life.