DATA SHEET
Hall Effect Voltage Sensor

P/N: CHFV3000DV15D50	V_{PN}=3000V

Feature

- It is a current mode voltage sensor, based on the principle of the based on fluxgate principle.
- Electrostatic shield between primary and secondary circuit
- It provides accurate electronic measurement of DC, AC or pulsed voltage.
- Supply voltage: ±15~±24 V

Advantages

- High accuracy
- Wide frequency bandwidth
- Low temperature drift
- High immunity to external interference
- Very good linearity
- Optimized response time

Applications

- Metrological verification and calibration
- Laboratory current measurement
- Instrumentation (e.g. power analyzer)
- Medical equipment (e.g. MRI)
- Battery pack detection
- Power control

RoHS

Electrical data：（T_A=25℃±5℃）

Parameters \ Type	CHFV3000DV15D50		
Rated Input V_{PN}(V)	3000		
Measuring Range V_{PM}(V) 1Min/Hour	4500		
Current consumption I_C (mA) I_{PM} Range	Minimum	Standard	Maximum
	±40	±90	±115
Power Supply V_C	±14.5	±15	±26.4
Current change Input:Output K_N	3000V/50mA		
Measuring Resistance(Ω) R_M	0	60	100

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Accuracy Xe (V) @0%~25%I_{PN}	--	--	3
Accuracy Xe (V) RD% @25%I_{PN}~I_{PM}	--	--	0.4
Ratio error X_{Ge} (V) @0%~25%I_{PN}	--	--	3
Ratio error X_{Ge} RD% @25%I_{PN}~I_{PM}	--	--	0.4
Angle error X_{Pe} crad	--	--	0.5
Linearity ε_L (ppm)	--	--	200
Temperature drift coefficient TCI ppm/K	--	--	10
Time drift coefficient TT ppm/month	--	--	10
Power supply anti interference TV ppm/V	--	--	20
Zero offset current I_O （mA） 25±10℃	--	--	±0.050
Zero offset current I_{OT} （mA） Within the full operating temperature range	--	--	±0.100
Ripple current In DC-10Hz (ppm)	--	--	50
Dynamic response time tr(us) di/dt=6KV/us rise to 90%I_{PN}	--	--	50
Bandwidth(- 3dB) F (kHz)	0	--	12.8

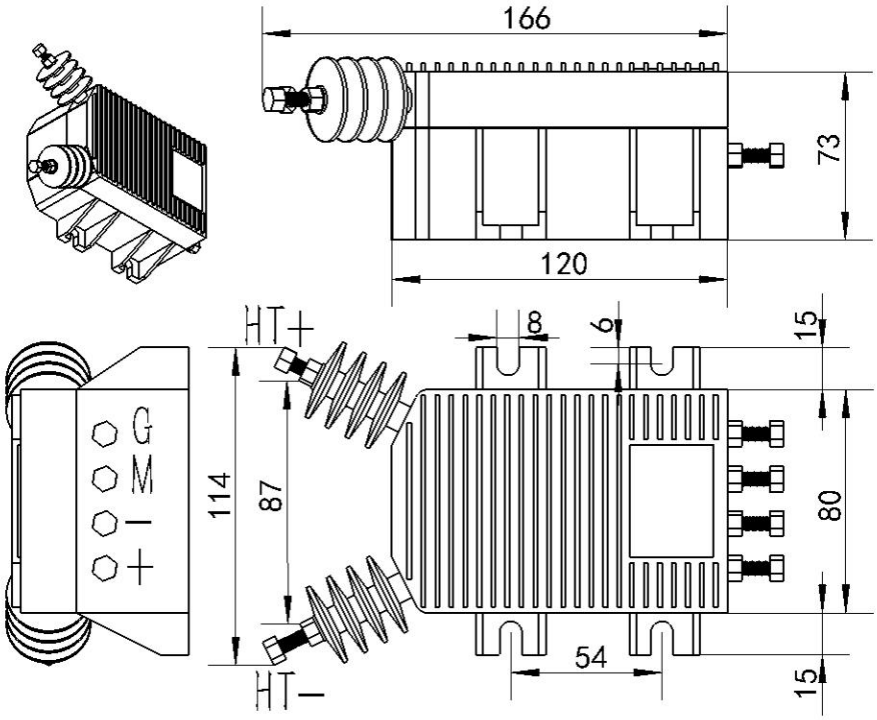
Insulation Coordination：

Item	Symbol	Test condition	Value	Unit
RMS voltage for AC insulation test	V_d	50Hz/1Min between primary and secondary	20	KV
Impulse withstand voltage	V_w	50us between primary and secondary	30	KV
Clearance	d_{CI}	Shortest distance through air between primary and ground	45	mm
Creepage distance	d_{CP}	Shortest path along device body between primary and ground	140	mm
Clearance	d_{CI}	Shortest distance through air between secondary and ground	25	mm
Creepage distance	d_{CP}	Shortest path along device body between secondary and ground	25	mm

General data：

Parameter	Value
Operating temperature TA(°C)	-40 ~ +85
Storage temperature TS(°C)	-45~ +85
Mass M(g)	1000g±200g
Standards	IEC60950-1:2001
	EN50178:1998；EN50155:2021
	SJ20790-2000
	UL94-V0
	EN60947-1:2004

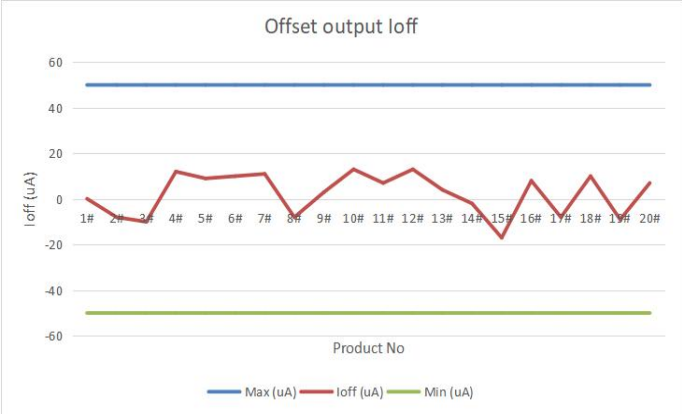
Dimensions(mm):



Remarks:
1. All dimensions are in mm.
2. General tolerance ±2mm.
3. Connector M5 Bolt

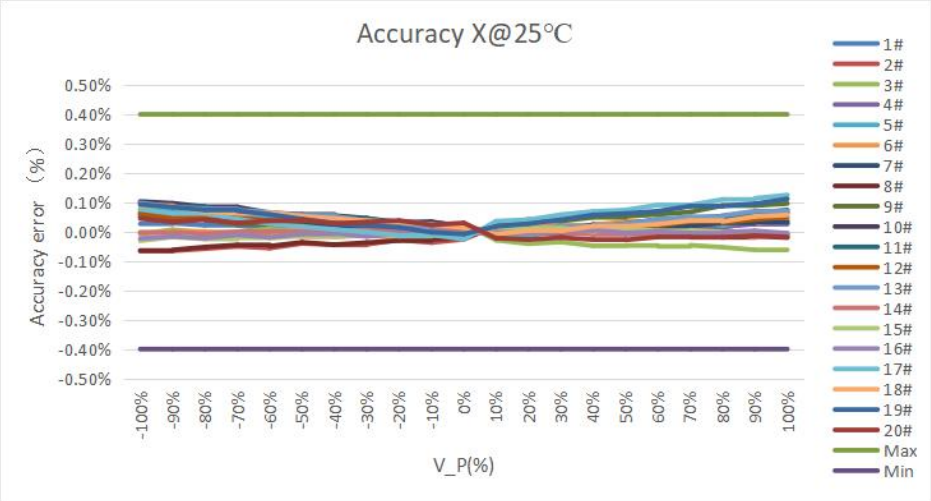
Characteristic Diagram
:

Offset Output Current(@Ambient Temperature 25℃)

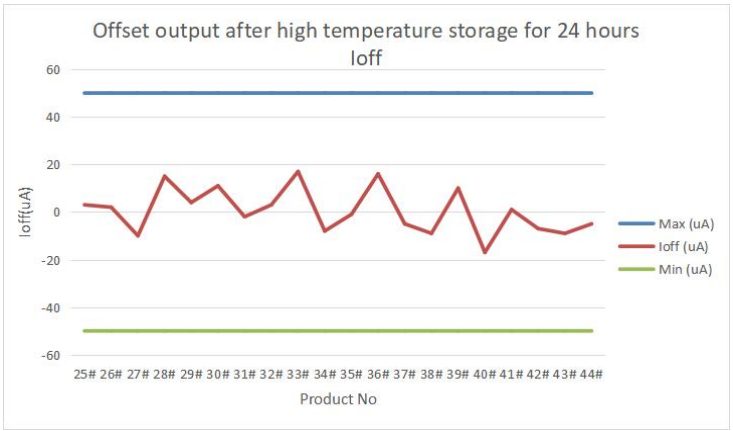


Rated Output Current(@Ambient Temperature 25℃)

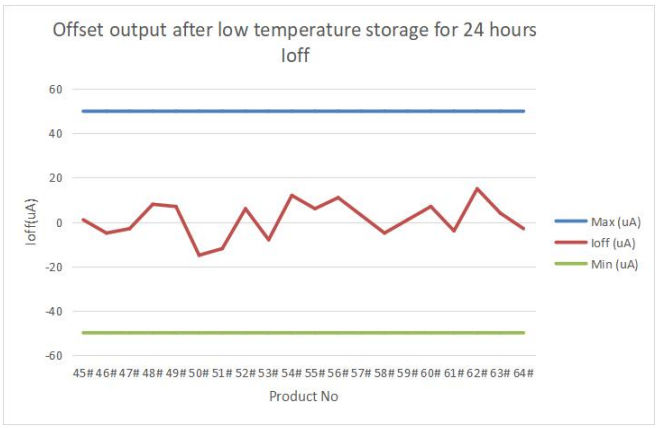
Accuracy(@Ambient Temperature 25℃)



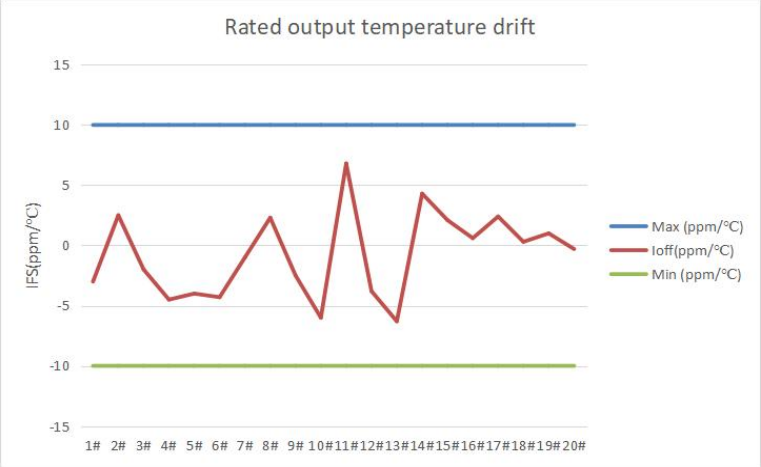
Offset Current After 24 Hours High Temperature Storage



Offset Current After 24 Hours Low Temperature Storage



Rated Current Output Temperature Drift



Remarks:

- Before using the product, please make sure to carefully read the user manual.When moving the product, please make sure to turn off the power first and unplug all the connecting cables that are connected to it.If any damage is found to the casing, firmware, power cord, connecting cable, or connected equipment, please immediately disconnect the device from the power supply.
- When the direction of the input current IP is consistent with the direction indicated by the arrow in the outline drawing, the output current IS 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.

WARNING : Incorrect wiring may cause damage to the sensor.