



# DATA SHEET

## Hall Effect Voltage Sensor

**P/N: CHFV2000DV15D50**

**$V_{PN}=2000V$**

### 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:  $\pm 15 \sim \pm 24 V$

### 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:** ( $T_A=25^{\circ}C \pm 5^{\circ}C$ )

Type	CHFV2000DV15D50		
Parameters			
Rated Input $V_{PN}(V)$	2000		
Measuring Range $V_{PM}(V)$ 1Min/Hour	3500		
Current consumption $I_C (mA)$ $I_{PM}$ Range	Minimum	Standard	Maximum
	$\pm 40$	$\pm 90$	$\pm 130$
Power Supply $V_C$	$\pm 14.5$	$\pm 15$	$\pm 26.4$
Current change Input:Output $K_N$	2000V/50mA		
Measuring Resistance( $\Omega$ ) $R_M$	0	60	100



Cheemi Technology Co., Ltd

Tel: 025-85560520 E-mail: [info@cheemi-tech.com](mailto:info@cheemi-tech.com) [www.cheemi-tech.com](http://www.cheemi-tech.com)  
Add: 3/F, Building 6, Jingang Science and Technology Innovation Park,  
No.1 Kechuang Road, Qixia District, Nanjing City, Jiangsu Province, China.

Accuracy Xe (V) @0%~25%I <sub>PN</sub>	--	--	2
Accuracy Xe (V) RD% @25%I <sub>PN</sub> ~I <sub>PM</sub>	--	--	0.4
Ratio error X <sub>Ge</sub> (V) @0%~25%I <sub>PN</sub>	--	--	2
Ratio error X <sub>Ge</sub> RD% @25%I <sub>PN</sub> ~I <sub>PM</sub>	--	--	0.4
Angle error X <sub>Pe</sub> crad	--	--	0.5
Linearity $\varepsilon_L$ (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 <sub>O</sub> (mA) 25±10℃	--	--	±0.050
Zero offset current I <sub>OT</sub> (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 <sub>PN</sub>	--	--	50
Bandwidth(-3dB) F (kHz)	0	--	12.8

## Insulation Coordination:

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



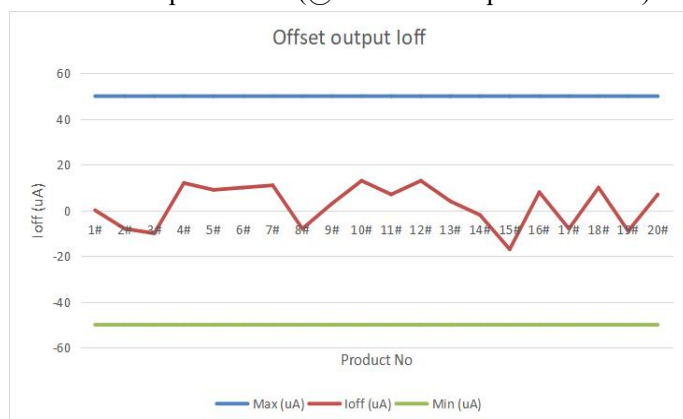
General data:	
Parameter	Value
Operating temperature TA(°C)	-40 ~ +85
Storage temperature TS(°C )	-45~ +85
Mass M(g )	1000g±200g
Standards	IEC60950-1:2001
	EN50178:1998; EN50155:2021
	SJ20790-2000
	UL94-V0
	EN60947-1:2004

Dimensions(mm):

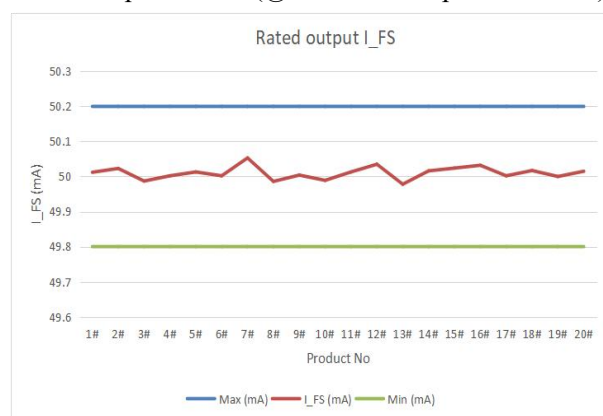
Remarks:  
1. All dimensions are in mm.  
2. General tolerance ±2mm.  
3. Connector M5 Bolt

Characteristic Diagram

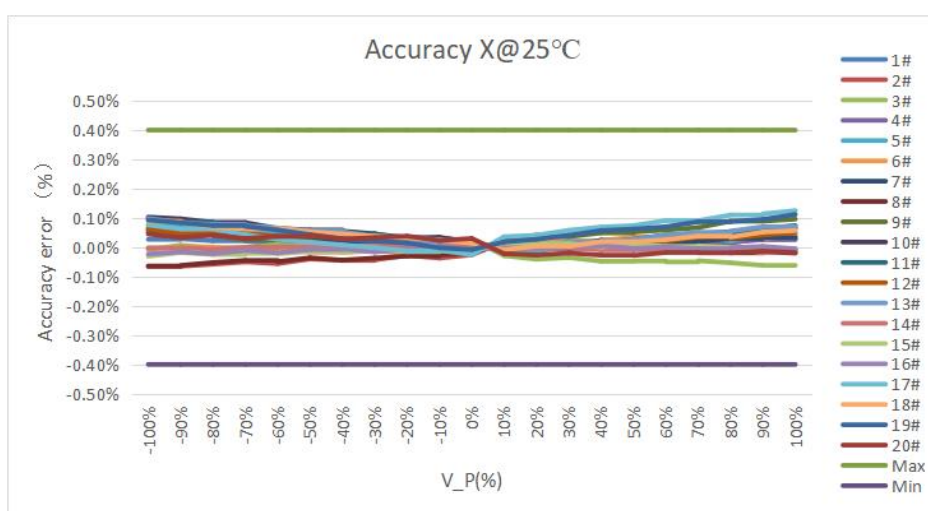
Offset Output Current(@Ambient Temperature 25°C)



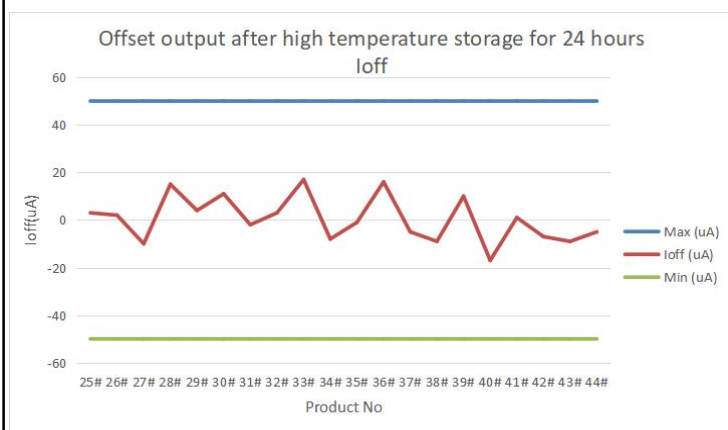
Rated Output Current(@Ambient Temperature 25°C)



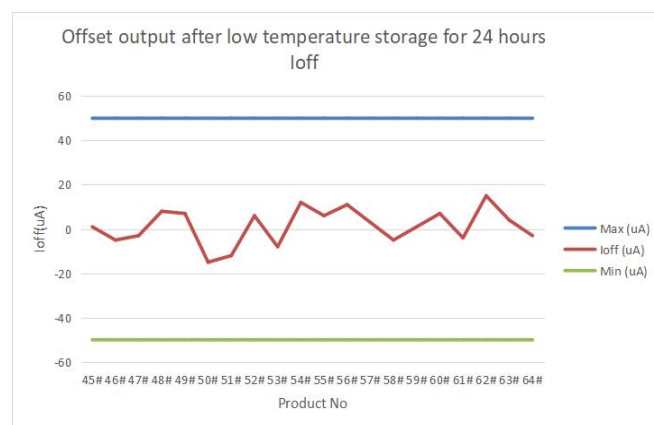
Accuracy(@Ambient Temperature 25°C)



Offset Current After 24 Hours High Temperature Storage



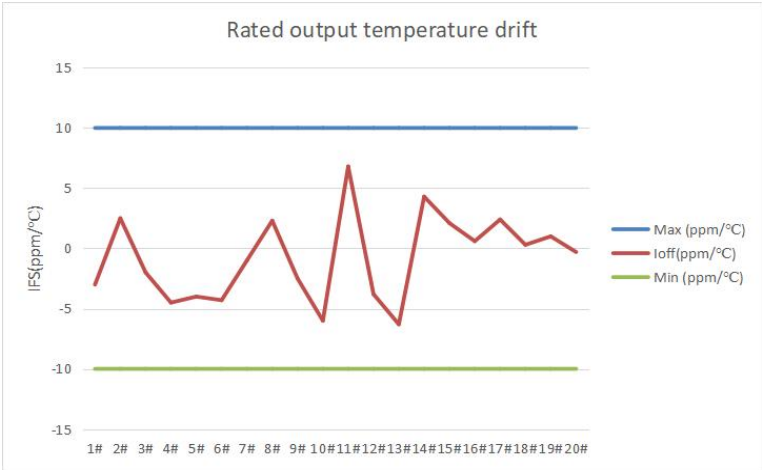
Offset Current After 24 Hours Low Temperature Storage



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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.**



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