



# DATA SHEET

## High Accuracy Voltage Sensor

**P/N: CFV40000DVH15D50**

**I<sub>PN</sub>=40000A**

### Feature

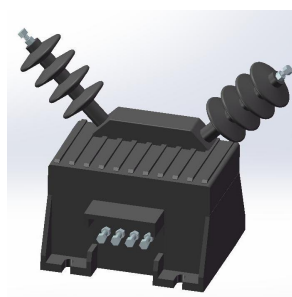
- It is a current sensor, based on the principle of fluxgate principle.
- Electrostatic shield between primary and secondary circuit
- It provides accurate electronic measurement of DC, AC or pulsed voltage.
- Supply voltage:  $\pm 14.5 \sim \pm 26.4$  V

### Advantages

- High accuracy
- Wide frequency bandwidth
- Low temperature drift
- 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: ( $T_A = 25^\circ\text{C} \pm 5^\circ\text{C}$ )

| Type                                             | CFV40000DVH15D50 |          |            |
|--------------------------------------------------|------------------|----------|------------|
| Parameters                                       |                  |          |            |
| Rated Input $I_{PN}(A)$                          | $\pm 40000$      |          |            |
| Measuring Range $I_{PM}(A)$<br>1Min/Hour         | $\pm 48000$      |          |            |
| Current consumption $I_C (mA)$<br>$I_{PM}$ Range | Minimum          | Standard | Maximum    |
|                                                  | $\pm 40$         | $\pm 90$ | $\pm 100$  |
| Power Supply $V_C$                               | $\pm 14.5$       | $\pm 15$ | $\pm 26.4$ |
| Current change Input:Output $K_N$                | 40000V: 50MA     |          |            |
| Rated Output Current( $I_{SN}$ )mA               | --               | 50       | --         |



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|                                                                                     |    |    |            |
|-------------------------------------------------------------------------------------|----|----|------------|
| Measuring Resistance( $\Omega$ )<br>$R_M$                                           | 0  | 60 | 100        |
| Accuracy Xe (A)<br>@0%~50% $I_{PN}$                                                 | -- | -- | 25         |
| Accuracy Xe (V) RD%<br>@50% $I_{PN}$ ~ $I_{PM}$                                     | -- | -- | 0.2        |
| Ratio error $X_{Ge}$ (A)<br>@0%~50% $I_{PN}$                                        | -- | -- | 25         |
| Ratio error $X_{Ge}$ RD%<br>@50% $I_{PN}$ ~ $I_{PM}$                                | -- | -- | 0.2        |
| Angle error $X_{Pe}$ crad                                                           | -- | -- | 0.5        |
| Linearity $\varepsilon_L$ (ppm)                                                     | -- | -- | 200        |
| Temperature drift coefficient<br>TCI ppm/K                                          | -- | -- | 10         |
| Time drift coefficient<br>TT ppm/month                                              | -- | -- | 10         |
| Power supply anti interference<br>TV ppm/V                                          | -- | -- | 20         |
| Zero offset current $I_O$ (mA)<br>$25 \pm 10^\circ C$                               | -- | -- | $\pm 0.05$ |
| Zero offset current $I_{OT}$ (mA)<br>Within the full operating<br>temperature range | -- | -- | $\pm 0.1$  |
| Ripple current $I_n$<br>DC-10Hz (ppm)                                               | -- | -- | 50         |
| Dynamic response time $t_r(us)$<br>$di/dt=100A/us$<br>rise to 90% $I_{PN}$          | -- | -- | 50         |
| Bandwidth(-3dB) F (kHz)                                                             | 0  | -- | 10         |

### Insulation Coordination:

| Item                               | Symbol | Test condition                          | Value | Unit |
|------------------------------------|--------|-----------------------------------------|-------|------|
| RMS voltage for AC insulation test | $V_d$  | 50Hz/1Min between primary and secondary | 50    | KV   |
| Impulse withstand voltage          | $V_w$  | 50us between primary and secondary      | 60    | KV   |

### General data:

| Parameter                              | Value            |
|----------------------------------------|------------------|
| Operating temperature $T_A(^{\circ}C)$ | -40 ~ +85        |
| Storage temperature $T_S(^{\circ}C)$   | -45~ +85         |
| Mass $M(g)$                            | 2500g $\pm$ 300g |



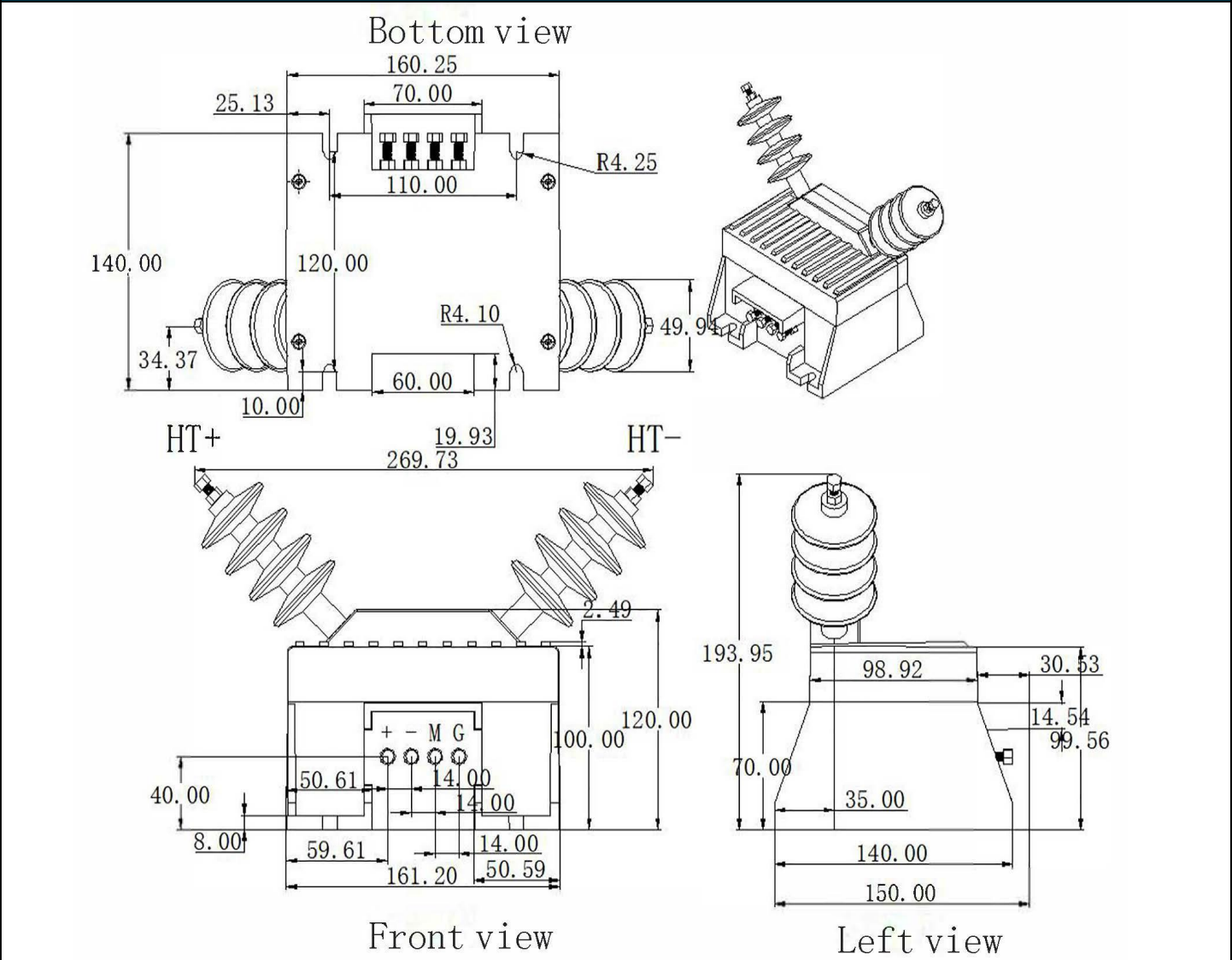
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|           |                 |
|-----------|-----------------|
| Standards | IEC60950-1:2001 |
|           | JB/T7490-2007   |
|           | SJ20790-2000    |
|           | UL94-V0         |
|           | EN60947-1:2004  |

Dimensions(mm):



Remarks:  
1. All dimensions are in mm.  
2. General tolerance  $\pm 2\text{mm}$ .  
Connector: M5 bolt.



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### **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. and If there are any concerns about the safe operation of the equipment, please immediately shut down the equipment and its related accessories, and contact our company's technical support department as soon as possible to communicate and resolve the issue.
- 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.
- 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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