



DATA SHEET

Hall Effect Voltage Sensor

PN: CHV_AS3S6

IPN=05/10mA

Feature

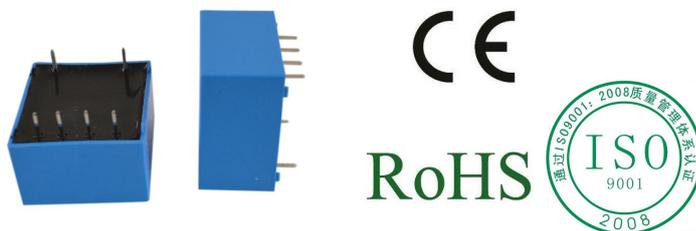
- Closed- loop (compensated) voltage transducer
- Capable measurement of DC and AC voltage with galvanic isolation between primary circuit and secondary circuit.
- Supply voltage: DC +3.3V

Advantages

- High accuracy
- Easy installation
- Low temperature drift
- High immunity to external interference
- Very good linearity
- Can be customized

Applications

- The application of induction cooker
- AC/DC variable-speed drive
- Uninterruptible Power Supplies (UPS)
- Switched Mode Power Supplies (SMPS)



Electrical data: (Ta=25°C, Vc= +3.3VDC, RL=2KΩ)

| Parmeter \ Ref | CHV05AS3S6 | CHV10AS3S6 |
|---|--------------------------|------------|
| Rated input Ipn(mA) | 05 | 10 |
| Measuring range Ip(mA) | 0 ~ ±10 | 0 ~ ±20 |
| Rated input voltage VPN(V) | 5 ~ ±1200 | 10 ~ ±500 |
| Turns ratio Np/NS (T) | 2500:1000 | 1250:1000 |
| Primary coil resistance RP (Ω) | 170 | 80 |
| Secondary coil resistance RS (Ω) | 60 | 60 |
| Inside resistance RM (Ω) | 50±0.1% | 50±0.1% |
| Output voltage VO(V) | 1.650±0.625*(IP/IPN) | |
| Output voltage VO(V) | @IP=0,T=25°C 1.650 | |
| Supply voltage VC(V) | +3.3 ±5% | |
| Accuracy XG(%) | @IPN,T=25°C < ±0.5 | |
| Offset voltage VOE(mV) | @IP=0,T=25°C < ±15 | |
| Temperature variation of VOE VOT(mV/°C) | @IP=0,-40 ~ +85°C < ±1.0 | |
| Linearity error εr(%FS) | < 0.1 | |
| Response time tra(μs) | @90% of IPN < 40.0 | |
| Power consumption IC(mA) | 15+Is | |



| | | |
|---------------------------|-------------------|-----|
| Insulation voltage Vd(KV) | @50/60Hz, 1min,AC | 2.5 |
|---------------------------|-------------------|-----|

General data:

| Parameter | Value |
|------------------------------|------------------------|
| Operating temperature TA(°C) | -40 ~ +85 |
| Storage temperature TS(°C) | -55 ~ +125 |
| Mass M(g) | 22 |
| Plastic material | PBT G30/G15, UL94- V0; |
| Standards | IEC60950-1:2001 |
| | EN50178:1998 |
| | SJ20790-2000 |

Dimensions(mm):

| | |
|--|---|
| | <p style="text-align: center;">Connection</p> |
| | <p>General tolerance</p> |
| | <p>General tolerance: <math>\pm 0.2\text{mm}</math> size of Primary pin : 2pin, $0.8*0.8 \pm 0.15\text{mm}$; Secondary pin: $0.8*0.8 \pm 0.15\text{mm}$</p> |

Instructions for use of the voltage sensor model CHV10AS3S6:

- ◆ Primary resistance R1: the sensor's optimum accuracy is obtained at the rated current. So R1 should be calculated so that the rated voltage to be measured corresponds to a primary current of 10mA.
- ◆ For example: Measuring rated voltage $V_{PN}=250\text{V}$:
a) $R1=25\text{K}/2.5\text{W}, IP=10\text{mA}$ Accuracy= $\pm 0.5\%$ of V_{PN} ; b) $R1=50\text{K}/1.25\text{W}, IP=05\text{mA}$ Accuracy= $\pm 1.0\%$ of V_{PN} ;
Operating range(recommended):taking into the resistance of the primary windings(which must remain low compared to R1.in order to keep thermal deviation as low as possible) and the isolation,the sensor is suitable for measuring nominal voltage from 10 to 500V.

Remarks:

- When the current goes through the primary pin of a sensor, the voltage will be measured at the output end.
- Custom design is available for the different rated input current and the output voltage.

WARNING : Incorrect wiring may cause damage to the sensor.



Cheemi Technology Co., Ltd
Tel: 025-85996365 E-mail: info@cheemi-tech.com www.cheemi-tech.com
Add: N22, Xianlongwan, Xianyin South Road, Qixia District, Nanjing - China.



Cheemi Technology Co., Ltd
Tel: 025-85996365 E-mail: info@cheemi-tech.com www.cheemi-tech.com
Add: N22, Xianlongwan, Xianyin South Road, Qixia District, Nanjing - China.