Cheemi Technology Co., Ltd



DATA SHEET Hall Effect Voltage Sensor

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PN: CHV_AS12S4

IPN=05/10mA

Supply voltage: DC +12.0V

Feature

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

Advantages

- High accuracy
- Easy installation
- Low temperature drift
- High immunity to external interference

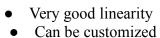
Applications

- 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=+5.0VDC, RL=2K Ω)		
Parmeter Ref	CHV05AS12S4	CHV10AS12S4
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)	2500:1250	1250:1250
Primary coil resistance RP (Ω)	170	80
Secondary coil resistance RS (Ω)	70	70
Inside resistance RM (Ω)	5100±0.1%	100±0.1%
Output voltage VO(V)	+4.0*(IP/IPN)	
Supply voltage VC(V)	+12.0 ±5%	
Accuracy XG(%)	@IPN,T=25°C <±0.5	
Offset voltage VOE(mV)	@IP=0,T=25°C <+40	
Temperature variation of VOE VOT(mV/°C)	$@IP=0,-40 \sim +85^{\circ}C$ < ± 1.0	
Linearity error $\epsilon r(\%FS)$	< 0.1	
Response time $tra(\mu s)$	@90% of IPN <40.0	
Power consumption IC(mA)	15+Is	
Insulation voltage Vd(KV)	@50/60Hz, 1min,AC 2.5	



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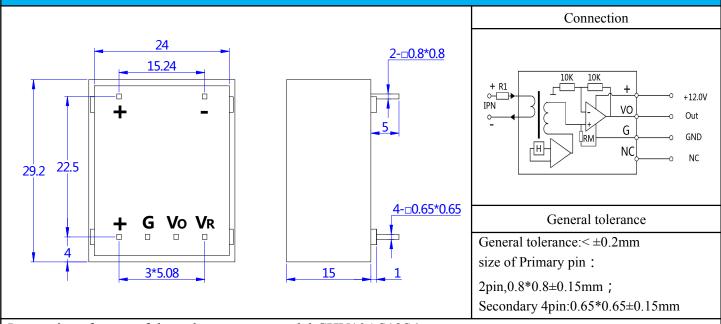
RoHS

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

Dimensions(mm):



Instructions for use of the voltage sensor model CHV10AS12S4:

- 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 VPN=250V:

a) R1=25K/2.5W,IP=10mA Accuracy=±0.5% of VPN; b) R1=50K/1.25W,IP=05mA Accuracy=±1.0% of VPN;

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.



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