LV VSxxI25015S

Hall Effect Voltage Sensor

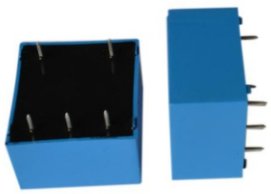
IPN= 05/10mA Supply Voltage : DC ± 12~15V

Feature

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

Advantages

- High accuracy
- Easy installation
- Can be customized
- 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)
- Inverter applications

Electrical data：（Ta=25℃， Vc= ±15VDC）

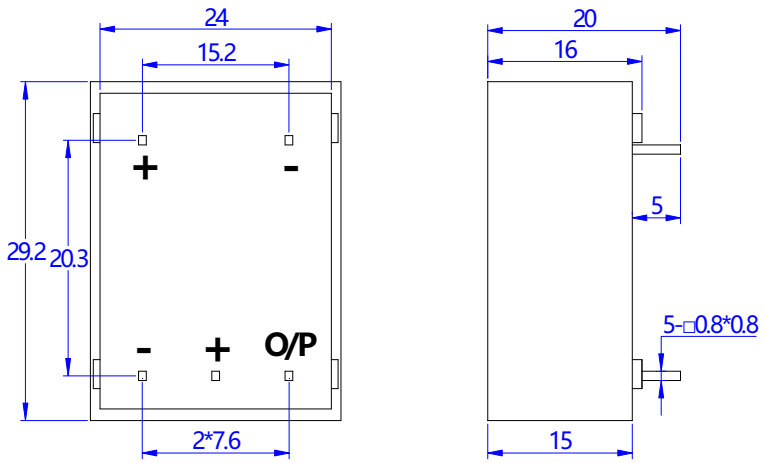
Parmeter / Ref	LV VS05I25O15S	LV VS10I25O15S
Rated input Ipn(mA)	05	10
Measuring range Ip(mA)	0～±07	0～±14
Rated input voltage VPN(V)	5～±1200	10～±500
Turns ratio Np/NS (T)	5000:1000	2500:1000
Primary coil resistance RP (Ω)	650	170
Secondary coil resistance RS (Ω)	60	60
Output current rms IS(mA)	±25*IP/IPN	±25*IP/IPN
Inside resistance RM (Ω)	[(VC-3.0V)/（IS*0.001）]-RS	
Supply voltage VC(V)	（±12～±15） ±5%	
Accuracy XG(%)	@IPN,T=25°C	< ±0.5
Offset current IOE(mA)	@IP=0,T=25°C	< ±0.15
Temperature variation of IOE IOT(mA/°C)	@IP=0,-40 ~ +85°C	< ±0.5
Linearity error εr(%FS)	< 0.2	
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

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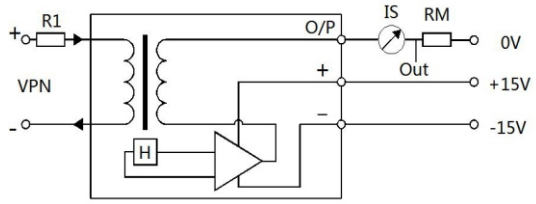
General data:

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):



Connection



General tolerance

General tolerance:< ±0.2mm

size of Primary pin:

2pin,0.8*0.8±0.15mm;

Secondary 3pin:0.8*0.8±0.15mm

Instruction for use of the voltage sensor model

- 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.