TBV5、10/25A 系列霍尔电压传感器
TBV5、10/25A Series Hall Effect Voltage Sensor

TBV5、10/25A 系列电压传感器的初、次级之间是绝缘的，可用于测量直流、交流和脉冲电压。

The TBV5、10/25A series current mode voltage sensor is a device based on the principle of the hall effect, with a galvanic isolation between primary and secondary circuit. It provides accurate electronic measurement of DC AC or pulsed currents.

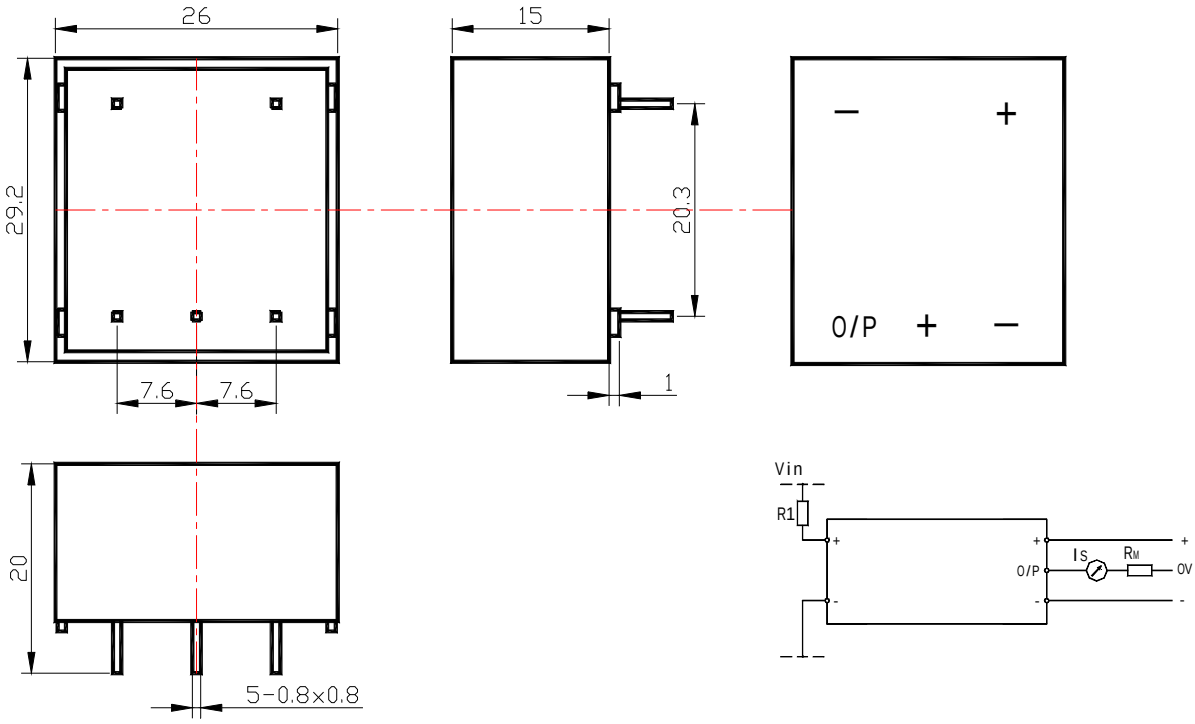
电参数 Electrical data(Ta=25℃±5℃)

型号 Type 参数 Parameter	TBV5/25A	TBV10/25A	单位 Unit
额定输入电流(Ipn) Rated input (Ipn)	5	10	mA
测量电流范围(Ip) Measure range(Ip)	7	14	mA
匝 比 (Np/Ns) Turns ratio(Np/Ns)	5000:1000	2500:1000	T
初级线圈电阻 Primary coil resister	650	200	Ω
次级线圈电阻 Secondary coil resister	110	110	Ω
测量电阻 Measure resister	±15V @(±5)±10mAmax 100(min) 350(max) @(±7)±14mAmax 100(min) 190(max)		Ω
额定输出电流(Isn) Rated output (Isn)	@Ip=±Ipn	±25±0.5%	mA
电源电压 Supply voltage	±15±5%		V
功耗电流 Power consumption	20+IpX(Np/Ns)		mA
零点失调电流 Zero offset current	@Ip=0	±0.2	mA
失调电流温漂 Offset current drift	@ -40℃～+85℃	±0.5	mA
响应时间 Response time	40		μs
线性度 Linearity	@Ip=0-±Ipn	≤0.2	%FS
绝缘电压 Galvanic isolation	@ 50HZ,AC,1min	2.5	KV

应用 Applications

- 交流变速与伺服马达驱动器
AC variable speed drives and servo motor drives
- 直流电机驱动静态转换器
Static converters for DC motor drives
- 变频调速系统
Variable speed drives
- 电焊机
Power supplies for welding applications
- 通讯电源
Battery supplied applications
- 不间断电源 UPS
Uninterruptible Power Supplies (UPS)
- 开关电源
Switched Mode Power Supplies(SMPS)

结构参数 Mechanical dimension(for reference only)



Remarks:

1. All dimensions are in mm.
2. General tolerance ±1mm

使用说明 Directions for use

1. 电阻 R1 使传感器输入电流为额定初级电流时传感器有最佳精度，因此传感器应尽量测量与 10mA 的初级电流相对应的电压。
The accuracy of sensor will be the best when the current passes through resister R1 and becomes the rated primary current, and therefore the current to be measured by sensor should comply with the primary current

10mA.

2. 例如：测电压 VIN=250V For example, VIN=250V:
   精度（Accuracy ）=±0.8%ofVIN（@Ta=+25℃） a) R1=25KΩ/10W,IP =10mA
   精度（Accuracy ）=±1.6%ofVIN（@Ta=+25℃） b) R1=50KΩ/ 5W,IP =5mA
3. 操作范围（推荐的）考虑到初级线圈的电阻（与 R1 相比，为保持温度差异近可能低）和隔离，此传感器适用于测量电压。
   Considering resistance of primary coil (compared with R1 and temperature difference kept as low as possible) and electrical isolation within measure range (recommended), this sensor is suitable for measuring voltage.

执行标准 Standards

- UL94-V0.
- EN60947-1:2004
- IEC60950-1:2001
- EN50178:1998
- SJ 20790-2000

总体参数 General date

	数值 Value	单位 Unit	符号 Symbol
工作温度 Operating temperature	-40 to +85	°C	TA
储存温度 Storage temperature	-40 to +125	°C	TS
毛重(约) Mass(approx)	20	g	M

特性图 Characteristics chart

抗脉冲电压干扰特性

Effects of impulse noise