



TBV-LV 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。

TBV-LV 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 voltage.

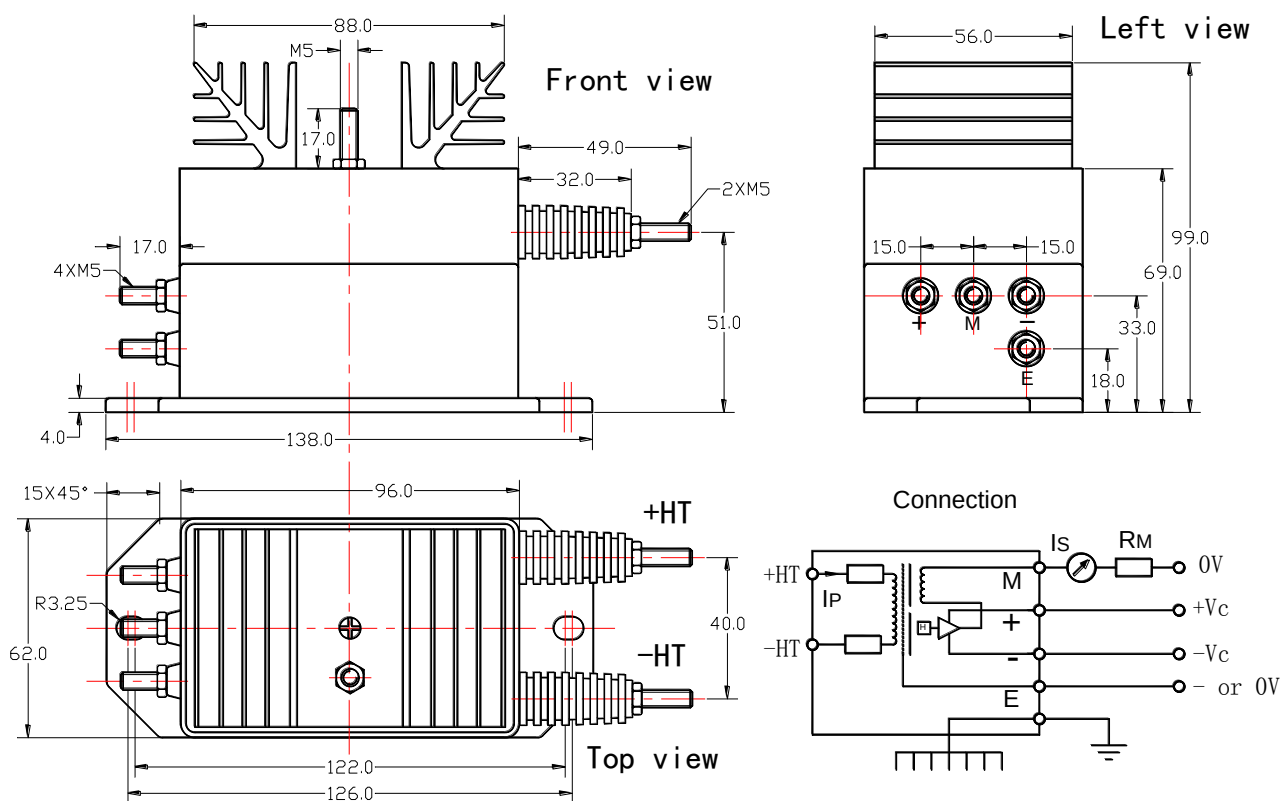
电参数 Electrical data (Ta=25°C ±5°C)

参数 Parameter	型号 Type	TBV 100LV	TBV 300LV	TBV 500LV	TBV 1000LV	TBV 2000LV	TBV 3000LV	TBV 4000LV	TBV 5000LV	单位 Unit
额定输入电压 (V _{pn}) Rated input (V _{pn})		100	300	500	1000	2000	3000	4000	5000	V
测量电压范围 (V _p) Measure range (V _p)		200	600	1000	2000	4000	6000	6000	7500	V
总输入功耗 Total input consumption		1.000	1.500	3.125	2.500	5.000	5.625	10	8	W
额定输入电流 (I _p) Rated input (I _p)		10.000	5.000	6.250	2.500	2.500	1.875	2.500	1.600	mA
匝比 (N _p /N _s) Turns ratio (N _p /N _s)		5000:10 00	10000:1 000	8000:10 00	20000:1 000	20000:1 000	26666:1 000	20000:1 000	30000:9 60	T
次级线圈内阻 Secondary coil resister		@ +85°C 55								Ω
额定输出电流 (I _{sn}) Rated output (I _{sn})		@V _p =±V _{pn} ±50±0.5%								mA
测量电阻 Resister measured	@ ±15V V _{PN}	50 (min), 200 (max)								Ω
	@ ±15V 2XV _{PN}	0 (min), 100 (max)								Ω
	@ ±24V V _{PN}	100 (min), 330 (max)								Ω
	@ ±24V 2XV _{PN}	100 (min), 200 (max)								Ω
电源电压 (±10%) Supply voltage		±15 - ±24								V
功耗电流 Consumption current		20+I _p X (N _p /N _s)								mA
失调电流 Offset current	@ V _p =0	≤±0.2								mA
失调电流温漂 Offset drift	@ -40~+85°C	≤±0.6								mA
线性度 Linearity	@ V _p =0~±V _{pn}	≤0.1								%FS
响应时间 Response time		≤200								μS
绝缘电压 Galvanic isolation	@ 50HZ, AC, 1min Between primary and secondary + shield	12.0								KV
	@ 50HZ, AC, 1min Between secondary and shield	2.0								KV

应用 Applications

- 变频调速系统
Variable speed drives
- 电焊机
Welding machine
- 通讯电源
Battery supplied applications
- 不间断电源 UPS
Uninterruptible Power Supplies (UPS)
- 电化学
Electrochemical

结构参数 Mechanical dimension(for reference only)



Remarks:

1. All dimensions are in mm.
2. General tolerance $\pm 1\text{mm}$

使用说明 Directions for use

1. I_P 加到+HT 端时, I_S 为正向输出; 初级导体的温度不得超过 100°C 。
Is is positive when the I_P is applied to the terminal +HT. Temperature of the primary conductor should not exceed 100°C .
2. 待测电压通过输入电阻从传感器输入端接入, 即可在输出端测得电流大小。(注意: 错误的接线可能导致传感器损坏)
When the voltage will be measured goes through a sensor, the current will be measured at the output end.
(Note: The false wiring may result in the damage of the sensor)

3. 可按用户需求定制不同额定输入电压和输出电流的传感器。
Custom design in the different rated input voltage and the output current available.

执行标准 Standards

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

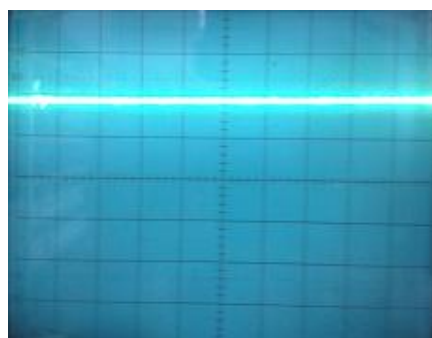
总体参数 General data

	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)	850	g	M

特性图 Characteristics chart

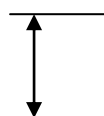
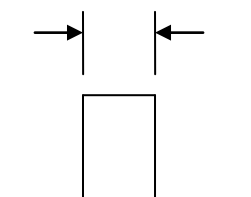
抗脉冲电压干扰特性

Effects of impulse noise



输出电压
(Output voltage)

$\leq 1\mu\text{s}$



$V_{p-p}=2000\text{V}$
 $f=1\text{kHz}$