



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.

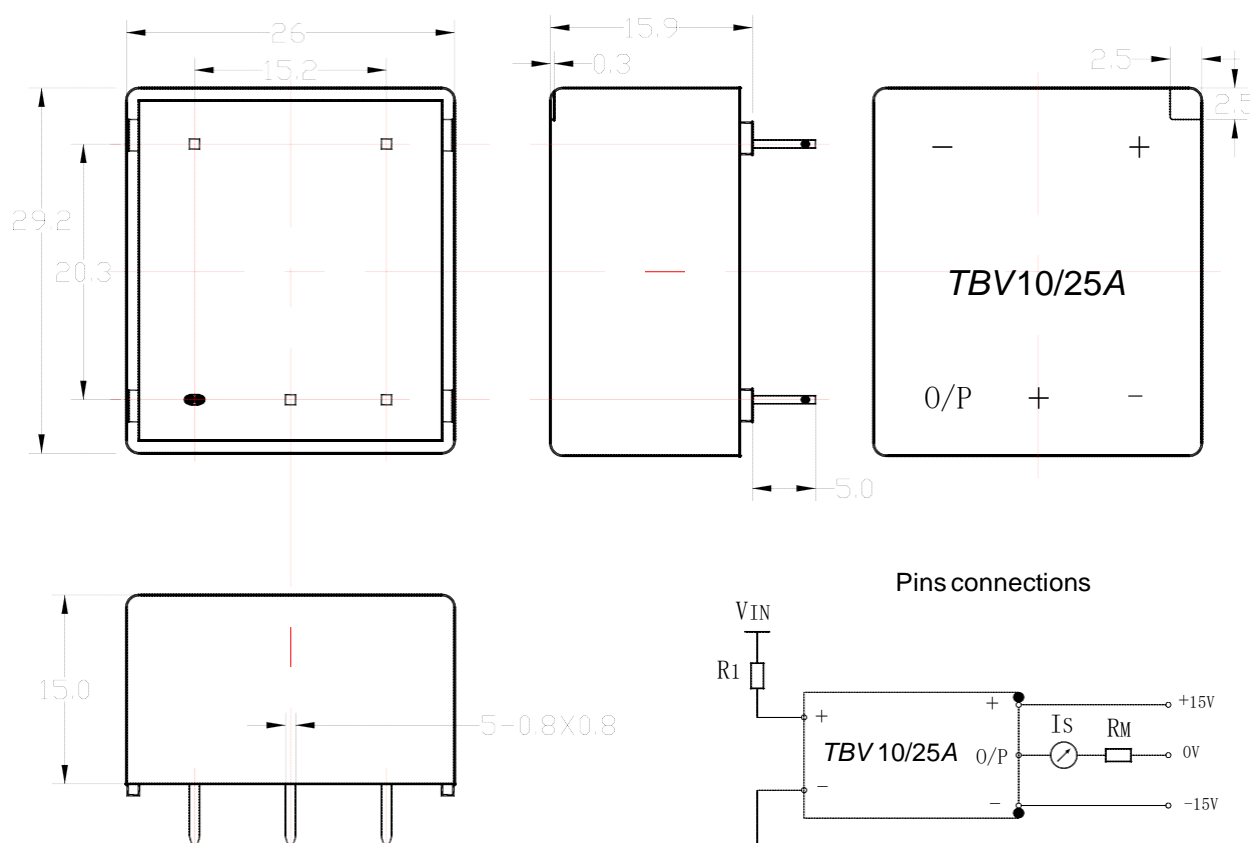
Electrical data (Ta=25°C±5°C)

Parameter \ Type	TBV5/25A	TBV10/25A	Unit
Rated input (I _{pn})	±5	±10	mA
Measure range(I _p)	±7	±14	mA
Turns ratio(N _p /N _s)	5000:1000	2500:1000	T
Primary coil resister	700±10%	200±10%	Ω
Secondary coil resister	45±10%	45±10%	Ω
Measure resister	±15V @ (±5)±10mA _{max} 100(min) 350(max) @ (±7)±14mA _{max} 100(min) 190(max)		Ω
Rated output (I _{sn})	@I _p =±I _{pn} ±25±0.5%		mA
Supply voltage	±15±5%		V
Power consumption	20+I _p X(N _p /N _s)		mA
Zero offset current	@I _p =0 ±0.2		mA
Offset current drift	≤±0.5 (Typ) , ≤±0.7 (Max) ,		mA
Response time	40		μs
Linearity	@I _p =0-±I _{pn} ≤0.2		%FS
Galvanic isolation	@ 50HZ,AC,1min	2.5	KV

Applications

- AC variable speed drives
- Static converters for DC motor drives
- Variable speed drives
- Power supplies for welding applications
- Battery supplied applications
- Uninterruptible Power Supplies (UPS)
- Switched Mode Power Supplies (SMPS)

Mechanical dimension (for reference only)



Remarks :

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

Directions for use

1. The accuracy of sensor will be the best when the current passes through resistor R1 and becomes the rated primary current, and therefore, the current to be measured by sensor should comply with the primary current 10mA.
2. For example, VIN=250V:
 Accuracy = $\pm 0.8\%$ of VIN (@Ta=+25°C) a) R1=25K Ω /10W, IP =10mA
 Accuracy = $\pm 1.6\%$ of VIN (@Ta=+25°C) b) R1=50K Ω / 5W, IP =5mA
3. 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.

Standards

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

General data

	Value	Unit	Symbol
Operating temperature	-40 to +85	°C	TA
Storage temperature	-40 to +125	°C	TS
Mass(approx)	20	g	M

Characteristics chart

Effects of impulse noise

