TBV10/20X series voltage sensor is a closed loop device based on the measuring principle of the hall effect, with a galvanic isolation between primary and secondary circuit, it can measure DC, AC and pulse voltage.

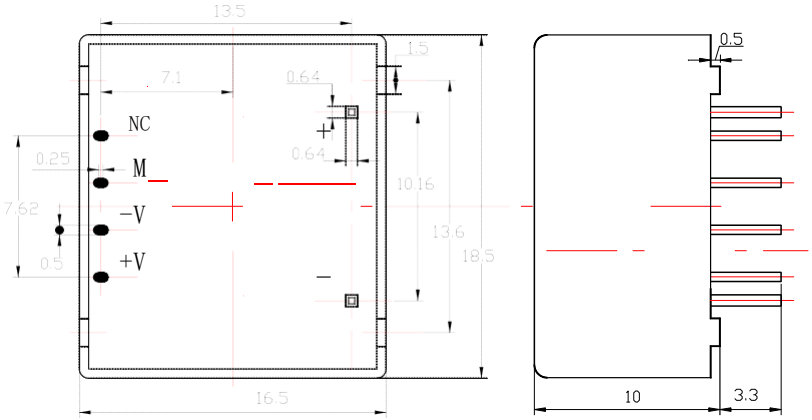
Electrical data (Ta=25℃±5℃)

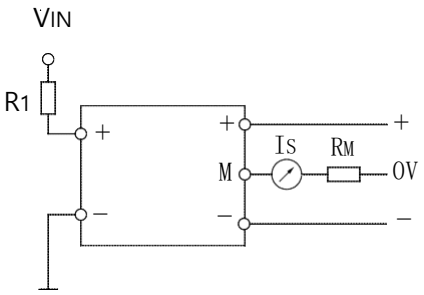
Parameter \ Type	TBV10/20X		Unit
Rated input (Ipn)	±10		mA
Measuring range (Ip)	±20		mA
Primary coil resister	200		Ω
Secondary coil resister	100		Ω
Turns ratio (Np/Ns)	2000:1000		T
Measure resister	±15V @±5mA	300(min) 750(max)	Ω
	±15V @±10mA	150(min) 500(max)	
Rated output (Isn)	@ Ip=±Ipn	±20±0.5%	mA
Supply voltage	±15±5%		V
Zero offset current	@ Ip=0	≤±0.2	mA
Offset current drift	≤±0.5（Typ），≤±0.75（Max），		mA
Response time	@ Ip=Ipn	≤40	μs
Linearity	@ Ip=0-±Ipn	≤0.1	%FS
Galvanic isolation	@ 50Hz, AC,1min	2.5	KV

Applications

- Variable speed drives
- Welding machine
- Battery supplied applications
- Uninterruptible Power Supplies (UPS)
- Electrochemical

Mechanical dimension (for reference only)





Remarks :

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

Directions for use

1. 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. For example: VIN=250V:
precision =±1.0%ofVIN (@Ta=+25℃) ,R1=25KΩ/ 10W,IP = 10mA

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

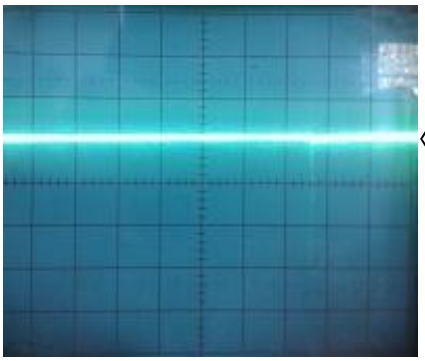
SJ 20790-2000

General data

	Value	Unit	Symbol
Operating temperature	-40 to +85	ºC	TA
Storage temperature	-40 to +125	ºC	TS
Mass (approx)	6	g	M

Characteristics chart

Effects of impulse noise



⇦ (Output voltage)