Rongtech Industry (ShangHai) Inc.,

RTVS4000 Series Hall Effect Voltage Sensor

RTVS4000 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.

Electrical data(Ta=25℃±5℃)

Parameter \ Type	RTVS 100	RTVS 200	RTVS 300	RTVS 500	RTVS 1000	RTVS 2000	RTVS 3000	RTVS 4000	Unit
Rated input (Vpn)	100	200	300	500	1000	2000	3000	4000	V
Measure range(Vp)	200	400	600	1000	2000	4000	6000	6000	V
Total input consumption	0.25	0.50	0.75	1.25	2.5	5.0	7.5	10	W
Rated input (Ip)	2.5								mA
Turns ratio(Np/Ns)	20000：1000								T
Secondary coil resister	@ +85℃ 55								Ω
Rated output (Isn)	@Vp=±Vpn ±50±0.5%								mA
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
Supply voltage	±15 - ±24								V
Consumption current	20+IpX(Np/Ns)								mA
Offset current	@ Vp=0 ≤±0.2								mA
Offset drift	@ -40～+85℃ ≤±0.6								mA
Linearity	@ Vp =0-±Vpn ≤0.1								%FS
Response time	≤200								uS
Galvanic isolation	@ 50HZ,AC,1min Between primary and secondary + shield 12.0								KV
	@ 50HZ,AC,1min Between secondary and shield 2.0								KV

Applications

1. Variable speed drives
2. Welding machine
3. Battery supplied applications
4. Uninterruptible Power Supplies (UPS)
5. Electrochemical

Standards

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

General date

	Value	Unit	Symbol
Operating temperature	-40 to +85	°C	TA
Storage temperature	-40 to +125	°C	TS
Mass(approx)	850	g	M

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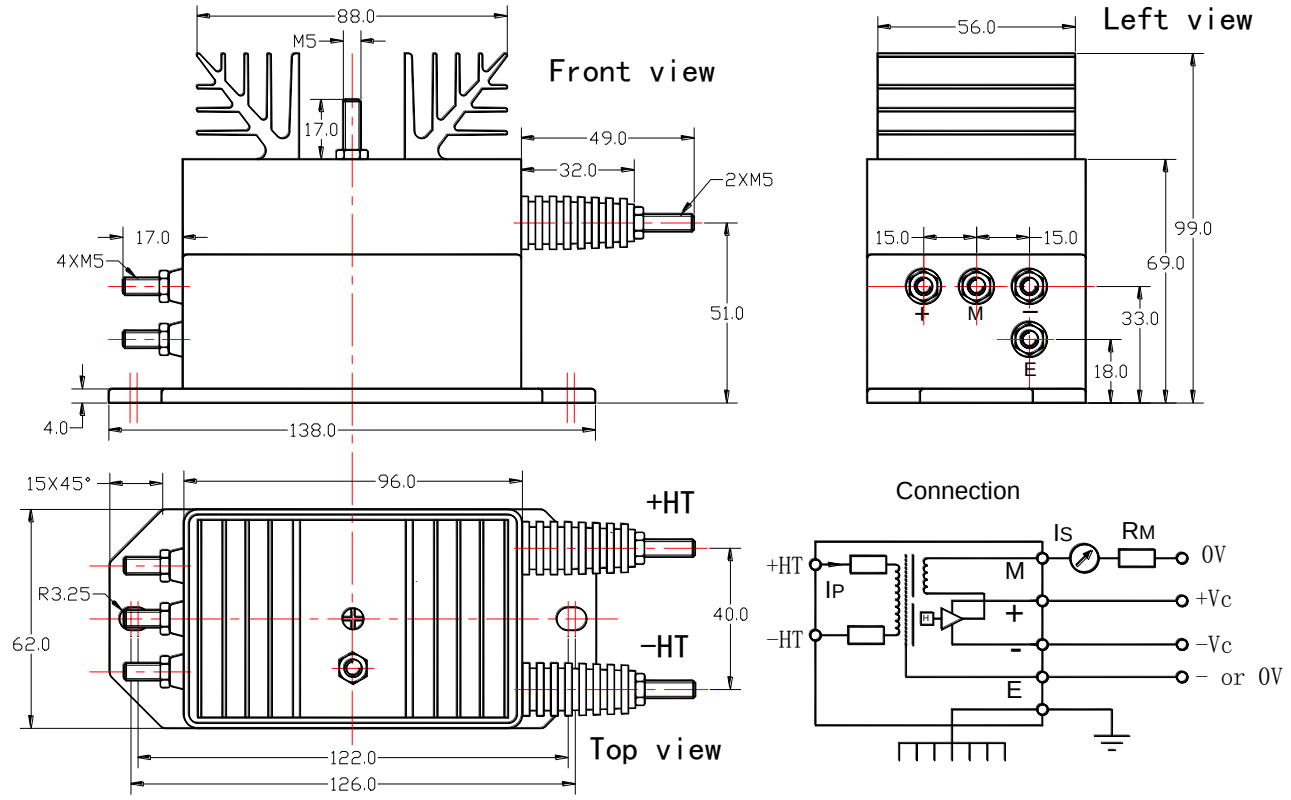
Mechanical dimension(for reference only)



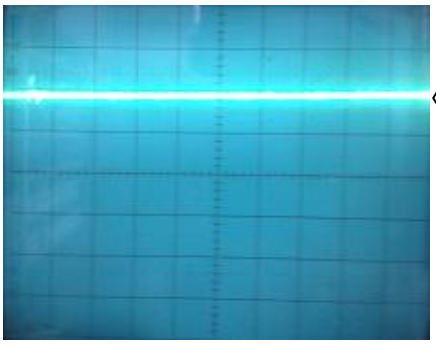
Remarks: 1. All dimensions are in mm. 2. General tolerance ±1mm

Directions for use

1. Is is positive when the Ip is applied to the terminal +HT. Temperature of the primary conductor should not exceed 100℃.
2. 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. Custom design in the different rated input voltage and the output current available.

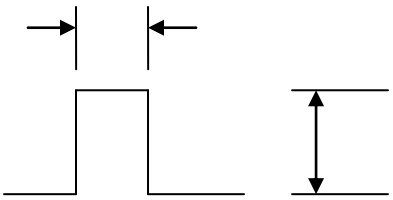
Characteristics chart

Effects of impulse noise



(Output voltage)

≤1uS



Vp-p=2000V
f=1kHz