

Rongtech Industry (ShangHai) Inc.,

RTL4000 Series Hall Effect Voltage Sensor



Rongtech®



RTL4000 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°C ±5°C)									
Type	RTL4000	RTL2000	RTL1000	RTL500	RTL300	RTL200	RTL100	RTL50	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°C 55								Ω
Rated output (Isn)	@Vp=±Vpn ±50±0.5%								mA
Resister measured	@ ±15V VpN 50 (min), 200 (max)								Ω
	@ ±15V 2XVpN 0 (min), 100 (max)								Ω
	@ ±24V VpN 100 (min), 330 (max)								Ω
	@ ±24V 2XVpN 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°C ≤±0.6								mA
Linearity	@ Vp =0-±Vpn ≤0.1								%FS
Response time	≤200								μS
Galvanic isolation	@ 50HZ, AC, lmin Between primary and secondary + shield						12.0		KV
	@ 50HZ, AC, lmin 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 | |

General date

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

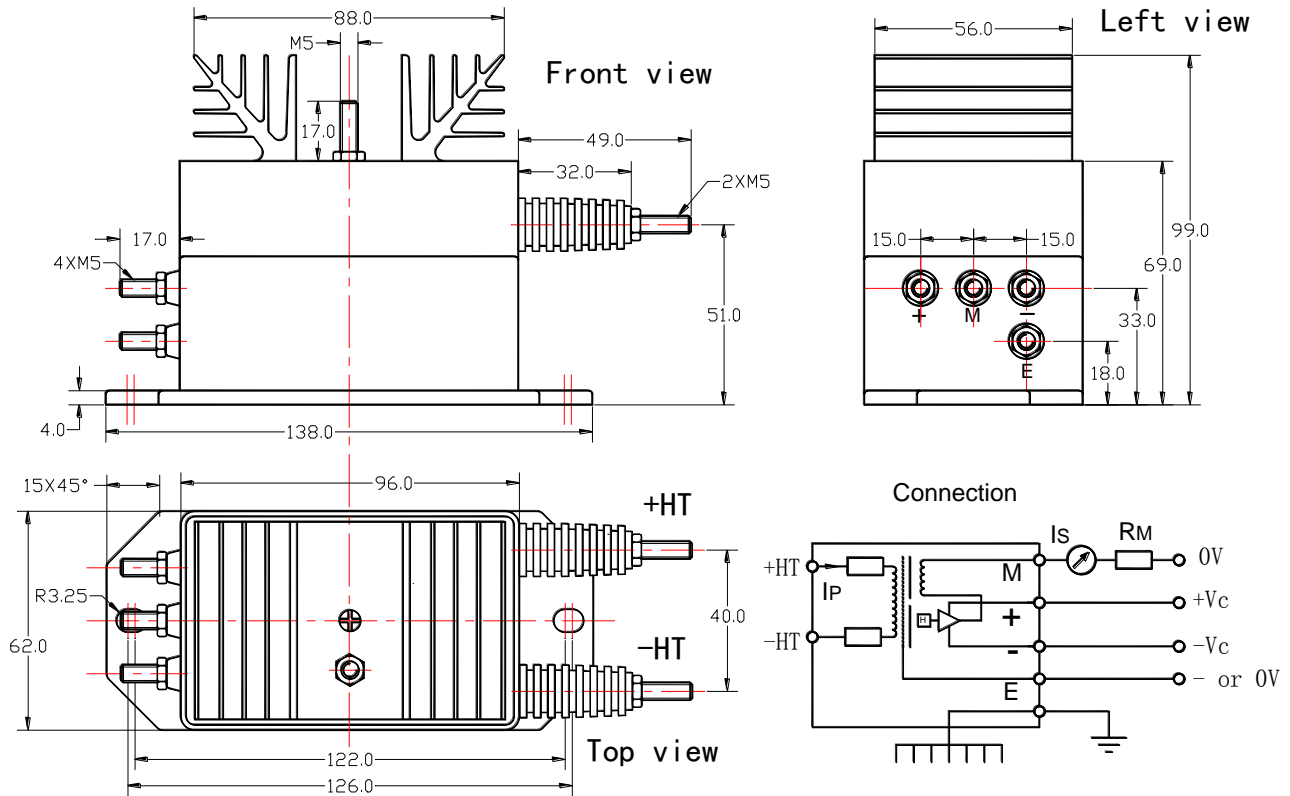
Standards

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

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Mechanical dimension(for reference only)



Remarks: 1. All dimensions are in mm.

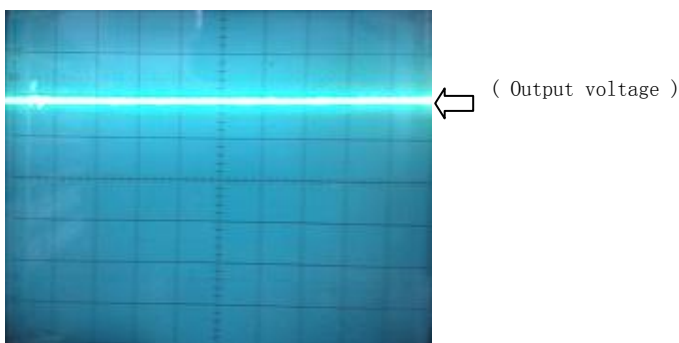
2. General tolerance $\pm 1\text{mm}$

Directions for use

1. It is positive when the I_p is applied to the terminal +HT. Temperature of the primary conductor should not exceed 100°C .
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



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

