

Rongtech Industry (ShangHai) Inc.,

RTNT1000-C3 High Precision Closed Loop Mode Hall Effect Current Sensor



Rongtech®



The RTNT1000-C3 current sensor is a closed loop device based on the measuring principle of the hall effect and null balance method, with a galvanic isolation between primary and secondary circuit, the size of primary not affect test precision, no matter the location of primary in the hole of current sensor, It can really measure resolution 1000:1 and it uses for precision measurement of DC, AC and pulse current.

Electrical data (Ta=25°C±5°C)			
Type Parameter	RTNT1000-C3		Unit
Rated input I _{pn})	10-1000		A
Measure range (I _p)	2000		A
coil resister	@ 85°C	47	Ω
Measure resister	with±15V @±1000Amax	0(min) 20(max)	Ω
	with±15V @±1200Amax	0(min) 7.5(max)	Ω
	with±24V @±1000Amax	0(min) 65(max)	Ω
	with±24V @±2000Amax	0(min) 7.5(max)	Ω
Turns ratio (N _p /N _s)	1:5000		T
Rated output (I _{sn})	2±0.1%FS(10A), 200±0.1%FS(1000A)		mA
Supply voltage	±15~±24		V
Power consumption	≤20+I _p X (N _p /N _s)		mA
Zero offset	@I _p =0	≤±0.2	mA
Offset drift	@ -40°C~85°C	≤±0.5	mA
Response time	@100A/ μ S, 10%-90%	<1	μs
Linearity	@I _p =0-±I _{pn}	≤0.05	%FS
Galvanic isolation	@ 50HZ, AC, 1min	6	KV
di/dt accurately followed	>100		A/μs
Bandwidth	@ -3dB	DC...150	KHz

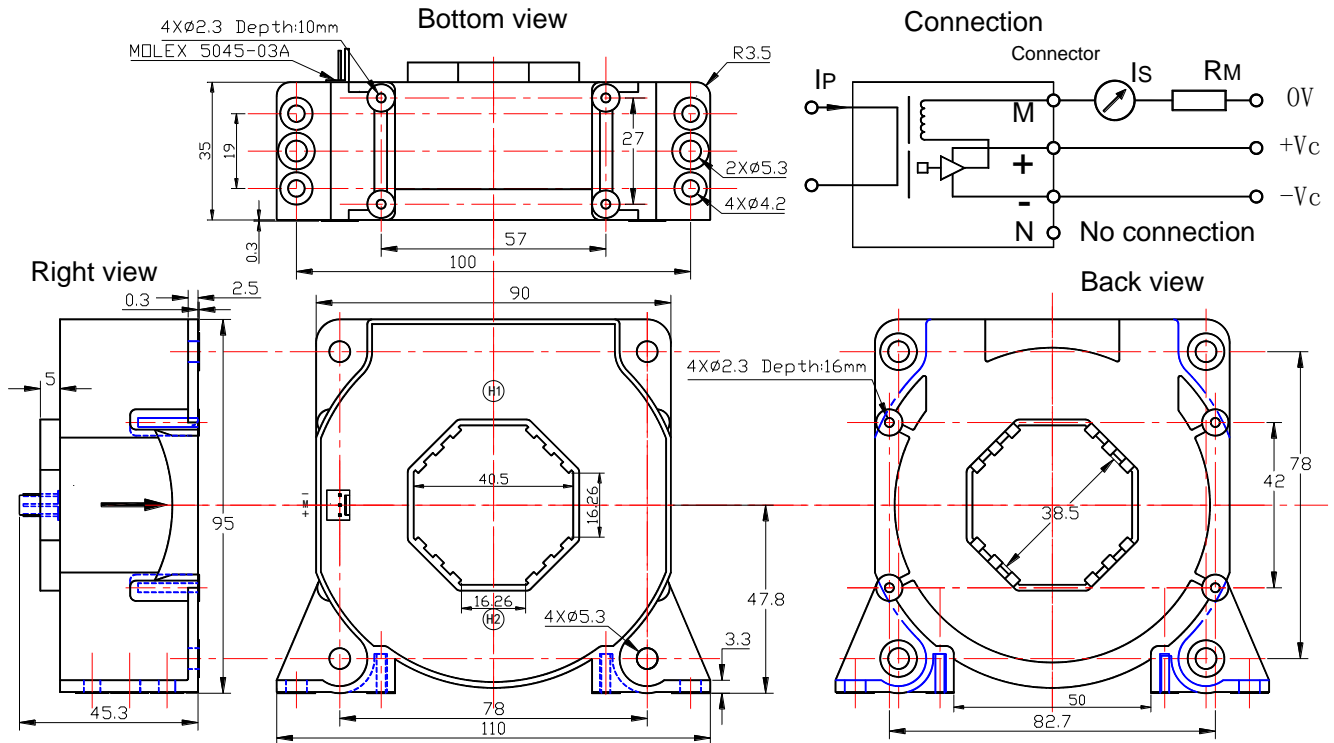
Applications

- 1.AC variable speed drives and servo motor drives
- 2.Static converters for DC motor drives
- 3.attery supplied applications
- 4.Uninterruptible Power Supplies (UPS)
- 5.witched Mode Power Supplies (SMPS)
- 6.Power supplies for welding applications.

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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. Is will be in a forward direction when the Ip flows according to the direction of the arrowhead.
2. The primary conductor should be $\leq 120^\circ\text{C}$.
3. The dynamic performance (di/dt and the response time) is the best when the primary hole is fully filled with the bus bar.

Standards

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

General date

	Value	Unit	Symbol
Operating temperature	-40~+85	$^\circ\text{C}$	TA
Storage temperature	-40~+125	$^\circ\text{C}$	TS
Mass (approx)	570	g	M

Characteristics chart

Pulse current signal response characteristic

Effects of impulse noise

