Rongtech Industry (ShangHai) Inc.,

RTLT2000SH High Precision Closed Loop Mode Hall Effect Current Sensor

RTLT2000SH series 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 doesn't 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℃±5℃)

Parameter \ Type	RTLT2000SH	Unit
Rated input Ipn)	20-2000	A
Measure range(Ip)	3000(±24V, 3.0Ω)	A
Measure resister	with±15V @±2000Amax 0(min) 1.0(max)	Ω
	with±24V @±2000Amax 0(min) 20(max)	Ω
	with±24V @±3000Amax 0(min) 3.0(max)	Ω
Turns ratio(Np/Ns)	1:5000	T
coil resister	@ 85℃ 34	Ω
Rated output (Isn)	4(20A)-400(2000A)±0.2%FS	mA
Supply voltage	±15～±24	V
Power consumption	≤20+IpX(Np/Ns)	mA
Zero offset current	@Ip=0 ≤±0.2	mA
Offset current drift	@ -40℃～85℃ ±0.5	mA
Response time	@100A/μS,10%-90% ＜1	μs
Linearity	@Ip=0-±Ipn ≤0.1	%FS
Galvanic isolation	@ 50HZ, AC, 1min 6	KV
di/dt accurately followed	>100	A/μs
Bandwidth	@ -3dB DC…150	KHz

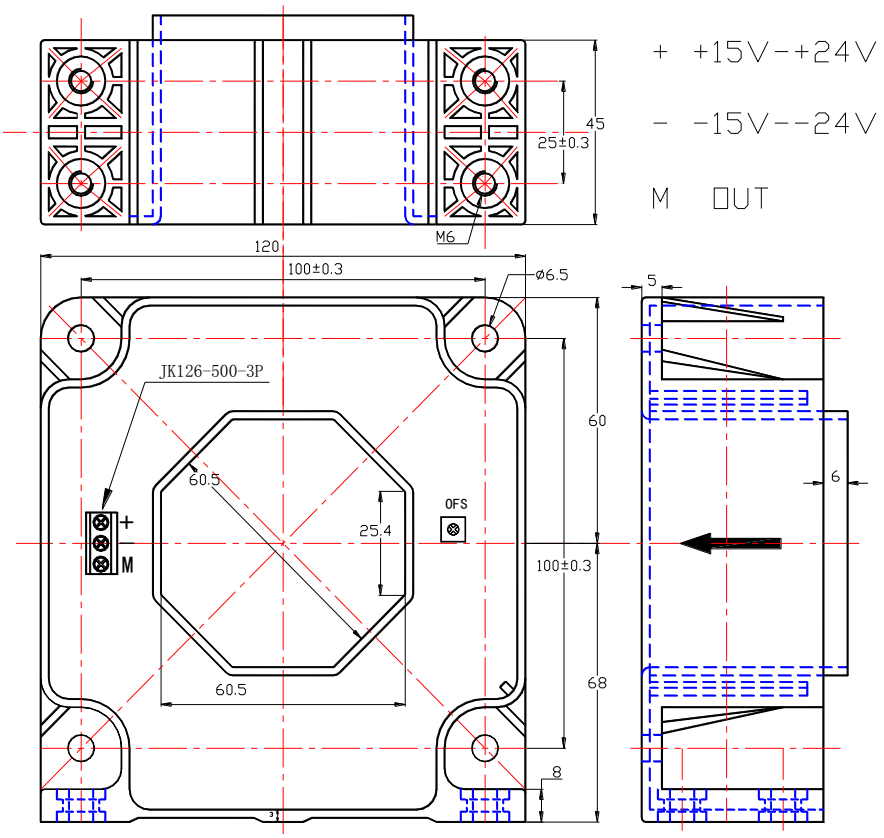
Applications

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

Standards

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

Mechanical dimension(for reference only)



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

Directions for use

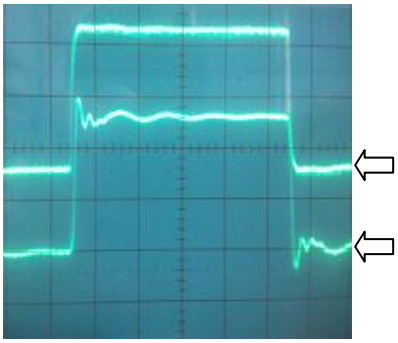
1. Is will be in a forward direction when the Ip flows according to the direction of the arrowhead.
2. The primary conductor should be≤120℃.
3. The dynamic performance (di/dt and the response time) is the best when the primary hole is fully filled with the bus bar.

General date

	Value	Unit	Symbol
Operating temperature	-40～+85	°C	TA
Storage temperature	-40～+125	°C	TS
Mass(approx)	1820	g	M

Characteristics chart

Pulse current signal response characteristic



Effects of impulse noise