TBC-SYHASeries Two-closed Loop Hall Effect Current Sensor

The TBC-SYHA series current sensor is a two-closed loop device based on the measuring principle of the hall effect, with a galvanic isolation between primary and secondary circuit. It has strong anti-jamming ability and provides accurate electronic measurement of DC, AC or pulsed currents.

Electrical data (Ta=25℃±5℃)

Parameter \ Type	TBC05SYHA	TBC7.5SYHA	TBC10SYHA	TBC15SYHA	TBC20SYHA	TBC25SYHA	TBC30SYHA	TBC50SYHA	Unit
Rated input (Ipn)	±5	±7.5	±10	±15	±20	±25	±30	±50	A
Measuring range (Ip)	±15	±22.5	±30	±45	±60	±75	±90	±125	A
Size of input pins	ø 0.6	ø 0.8	ø 0.8	ø 1.0	ø 1.4	ø 1.4	ø 1.6	ø1.6 × 1.5×2	mm
Turns ratio (Np/Ns)	5 : 1250	3 : 1125	3 : 1500	2 : 1500	1 : 1000	1 : 1250	1 : 1500	1 : 2500	T
Measuring resistance range	100-300								Ω
Rated output (Isn)	@ Ip=±Ipn	±20±0.5%							mA
Supply voltage	±15±5%								V
Power consumption	20+IpX(Np/Ns)								mA
Zero current	@ Ip=0	≤±0.2							mA
Offset drift	≤±0.5								mA
Linearity	@ Ip=0-±Ipn	≤0.1							%FS
Response time	@ Ip=Ipn, 50 A/μS ,10%-90%	< 1.0							μS
Band-width	@-3dB	DC-200							KHz
Galvanic isolation	@ 50Hz,AC,1min	5.0							KV

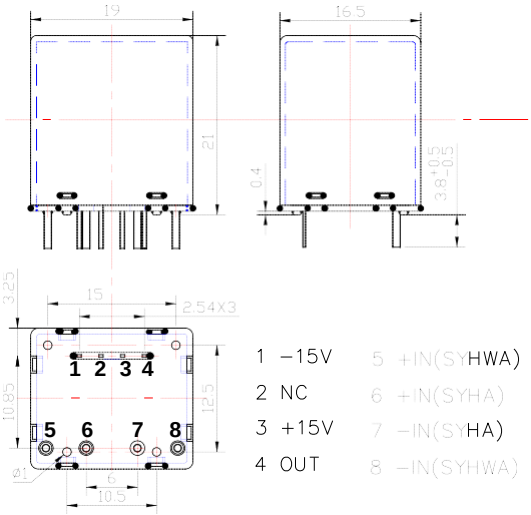
TBC-SYHA Series Two-closed Loop Hall Effect Current Sensor

Applications

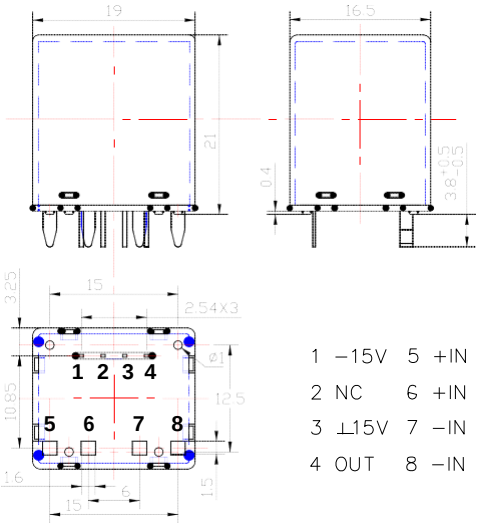
- Variable speed drives
- Welding machine
- Battery supplied applications
- Uninterruptible Power Supplies (UPS)
- Electrochemical

Mechanical dimension (for reference only)

TBC05-30SYHA



TBC50SYHA



Remarks：

1. All dimensions are in mm.
2. Secondary pin size and tolerance: width:0.5±0.1mm; thickness:0.25±0.05mm
3. General tolerance ±1mm.

Directions for use

1. When the current will be measured goes through the primary pin of a sensor, the current will be measured at the output end. (Note: The false wiring may result in the damage of the sensor).
2. Custom design in the different rated input current and the output current are available.

Standards

UL94-V0.

EN60947-1:2004

IEC60950-1:2001

EN50178:1998

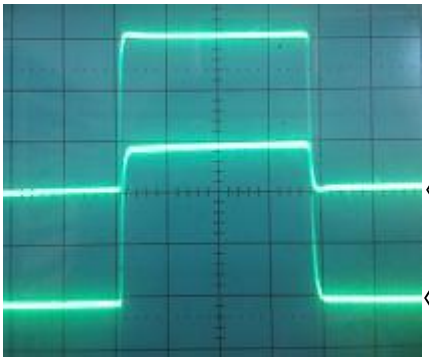
SJ 20790-2000

General data

	Value	Unit	Symbol
Operating temperature	-40 to +85	ºC	TA
Storage temperature	-40 to +125	ºC	TS
Mass(approx)	11	g	M

Characteristics chart

Pulse current signal response characteristic



Effects of impulse noise