TBC-LXA Series Two-closed Loop Mode Hall Effect Current Sensor

TBC-LXA 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.

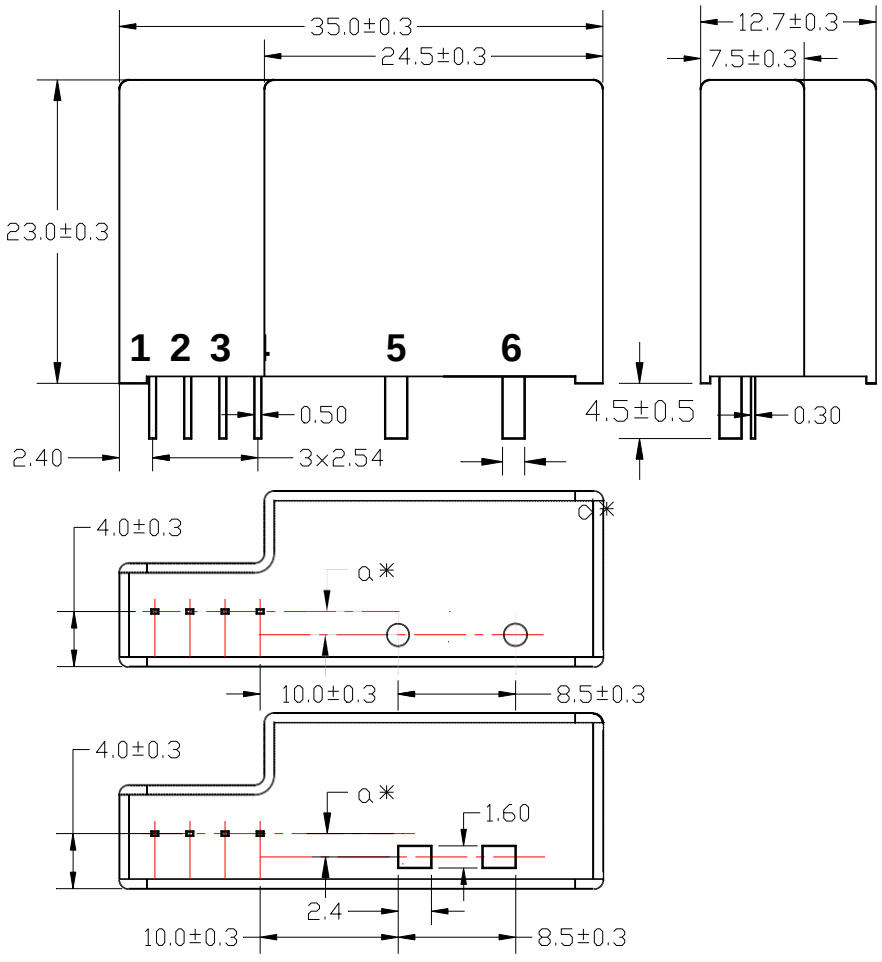
Electrical data (Ta=25℃±5℃)

Parameter \ Type	TBC05 LXA	TBC7.5 LXA	TBC10 LXA	TBC15 LXA	TBC20 LXA	TBC25 LXA	TBC30 LXA	TBC50 LXA	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	□2.4 ×1.6	mm
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
Bandwidth	@-3dB	DC-200							KHz
Galvanic isolation	@ 50Hz, AC,1min	5.0							KV

Applications

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

Mechanical dimension (for reference only)



PIN ARRANGEMENT

1	+15V
2	-15V
3	OUTPUT
4	0V
5	PRIMARY IN
6	PRIMARY OUT

TYPE	a*(mm)	d*(mm)
05LXA	1.3	0.6
7.5LXA	1.4	∅0.8
10LXA	1.4	∅0.8
15LXA	1.6	∅1.0
20LXA	1.6	∅1.4
25LXA	1.6	∅1.4
30LXA	1.7	∅1.6
50LXA	1.7	∅2.4X1.6 □

Remarks :

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

Directions for use

1. When the current will be measured goes through a sensor, the voltage 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

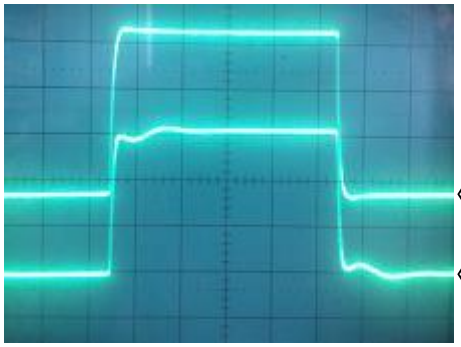
- UL94-V0
- EN60947-1:2004
- IEC60950-1:2001
- EN50178:1998
- SJ 20790-2000

General data

	Value	Unit	Symbol
Operating temperature	-40 to +85	ºC	TA
Storage temperature	-40 to +125	ºC	TS
Mass(approx)	15	g	M

Characteristics chart

Pulse current signal response characteristic



Effects of impulse noise