KEN®

TBC-LXH Series Two-closed Loop Mode High Precision Hall Effect Current Sensor

TBC-LXH 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℃, RL=2KΩ, CL=10000PF)

Type / Parameter	TBC 05LXH	TBC 10LXH	TBC 15LXH	TBC 20LXH	TBC 25LXH	TBC 30LXH	TBC 50LXH	TBC 75LXH	Unit
Rated input (Ipn)	±5	±10	±15	±20	±25	±30	±50	±75	A
Measuring range (Ip)	±15	±30	±45	±60	±75	±90	±150	±150	A
Turns ratio (Np/Ns)	4 : 2000	3 : 3000	2 : 3000	1 : 2000	1 : 2500	1 : 3000	1 : 3125	1 : 3750	T
Inside resistance	400	400	400	400	400	400	250	200	Ω
Rated output	@ Ip=±Ipn ±4±0.5%								V
Supply voltage	±15±5%								V
Power consumption	20+IpX (Np/Ns)								mA
Zero voltage	@ Ip=0 ≤±0.04								V
Zero drift	≤±0.5								mV/℃
Linearity	@ Ip=0-±Ipn ≤0.1								%FS
Response time	@ Ip=Ipn, 50 A/μS ,10%-90% < 1								μS
Galvanic isolation	@ 50(60) HZ, AC,1min 5.0								KV
Bandwidth	@-3dB DC-200								KHz
Dielectric Strength	> 1000								MΩ

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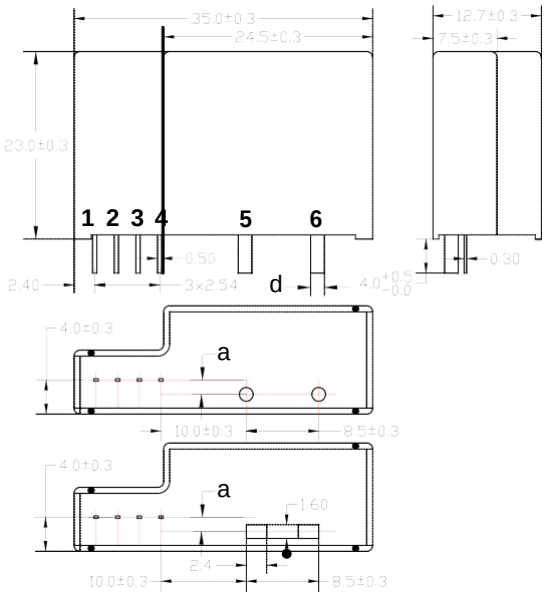
Applications

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

Mechanical dimension (for reference only)

TBC05-50LX

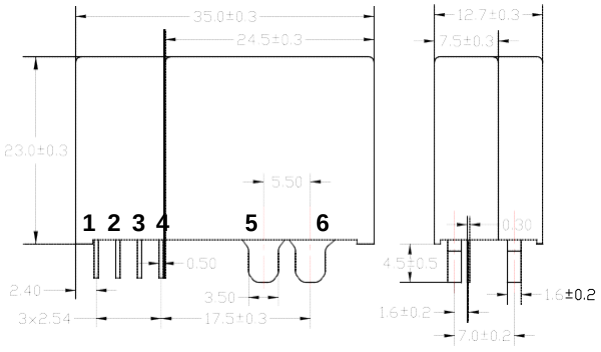


PIN ARRANGEMENT

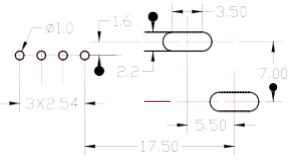
1	+15V
2	-15V
3	OUTPUT
4	0V
5	PRIMARY IN
6	PRIMARY OUT

TYPE	a (mm)	d (mm)
05LX	1.3	ø0.6
10LX	1.4	ø0.8
15LX	1.6	ø1.0
20LX	1.6	ø1.4
25LX	1.6	ø1.4
30LX	1.7	ø1.6
50LX	1.7	ø2.4X1.6

TBC50-75LX



PCB MOUNTNG DIMENSIONS



PIN ARRANGEMENT

1	+15V
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5	PRIMARY IN
6	PRIMARY OUT

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 voltage are available.

Standards

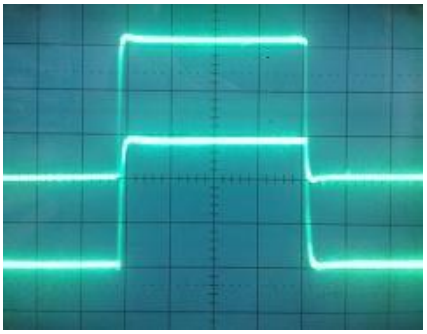
- UL94-V0
- EN60947-1:2004
- IEC60950-1:2001
- EN50178:1998
- SJ 20790-2000

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

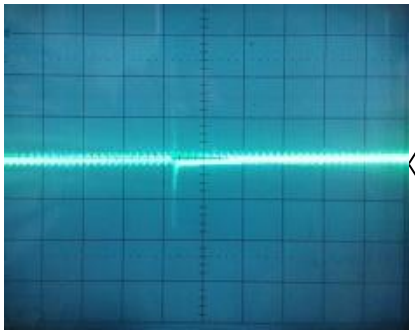
Pulse current signal response characteristic



(Input signal)

(Output signal)

Effects of impulse noise



(Output voltage)

Input current-Output Voltage characteristic