



TBC-XD series current sensor is 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.

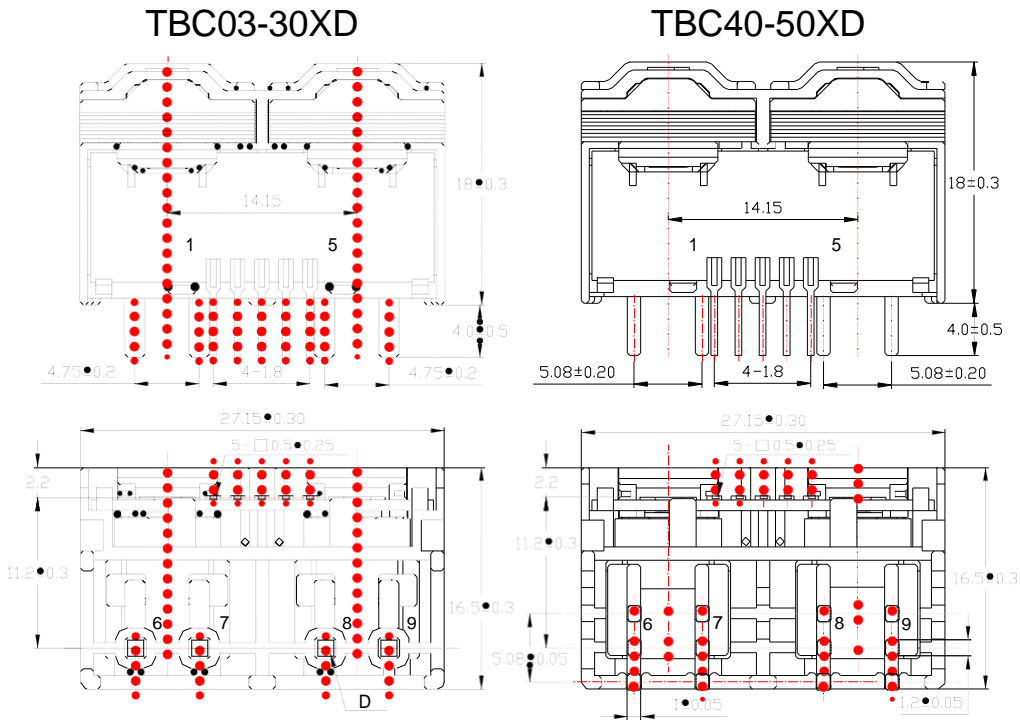
Electrical data ((Ta=25°C±5°C, RL=2KΩ, CL=1000PF)

Type Parameter	TBC 03XD	TBC 05XD	TBC 10XD	TBC 15XD	TBC 20XD	TBC 25XD	TBC 30XD	TBC 40XD	TBC 50XD	Unit
Rated input (I _{pn})	±3	±5	±10	±15	±20	±25	±30	±40	±50	A
Measuring range (I _p)	±9	±15	±30	±45	±60	±75	±90	±120	±150	A
Turns ratio (N _p /N _s)	7 : 2100	7 : 2187	2 : 2000	2 : 2160	1 : 2000	1 : 2000	1 : 2160	1 : 2000	1 : 2000	T
Size of input pins	∅0.8	∅0.8	∅1.1	∅1.1	□1.5 ×1.5	□1.5 ×1.5	□1.5 ×1.5	□6.28 ×1.0	□6.28 ×1.0	mm
Inside resistance	100 ±0.1%	50 ±0.1%	100 ±0.1%	36 ±0.1%	100 ±0.1%	40 ±0.1%	36 ±0.1%	25 ±0.1%	20 ±0.1%	Ω
Rated output	@ I _p =±I _{pn} ±4±0.5%									V
Supply voltage	±15±5%									V
Power consumption	20+I _p X (N _p /N _s)									mA
Zero voltage	@I _p =0 ≤±0.03									V
Offset drift	≤0.5									mV/°C
Output drift	≤0.5									mV/°C
Linearity	@ I _p =0-±I _{pn} ≤0.1									%FS
Response time	@ I _p =I _{pn} , 50 A/μS ,10%-90% 1.0									μs
Bandwidth	@-3dB DC-200									KHz
Galvanic isolation	@ 50/60HZ , AC , 1min 3.0									KV
Dielectric strength	> 1000									MΩ

Applications

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

Mechanical dimension (for reference only)



Terminal Pin Identification

- 1.....+15V
- 2.....-15V
- 3.....Output1
- 4.....Output2
- 5.....0V
- 6.....primary input current(+)
- 7.....primary input current(--)
- 8.....primary input current(+)
- 9.....primary input current(--)

Primary conductor diameter

TBC	03/05XD	10/15XD
D	∅0.8	∅1.1
TBC	20/25/30XD	40/50XD
D	1.5X1.5	6.28X1.0

Remarks :

1. All dimensions are in mm.
2. General tolerance $\pm 1\text{mm}$.

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 available.

Standards

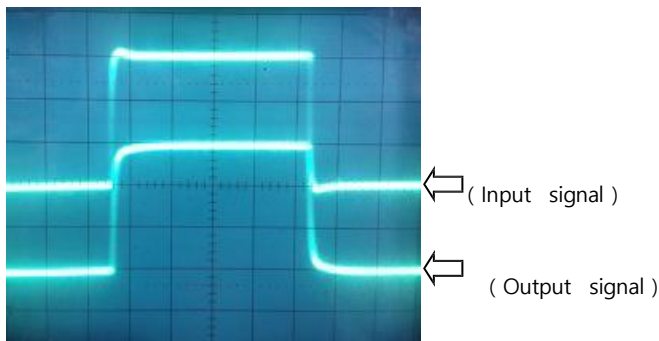
- UL94-V0
- EN60947-1:2004
- IEC60950-1:2001
- EN50178:1998
- SJ 20790-2000

General data

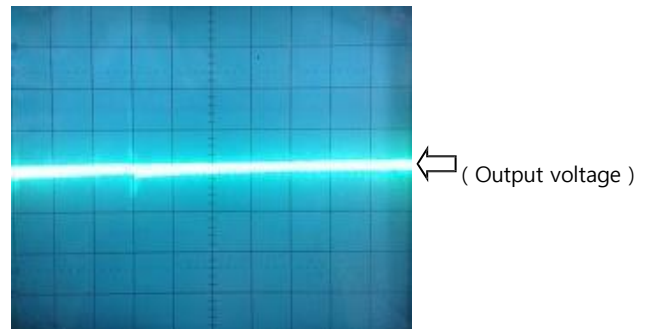
	Value	Unit	Symbol
Operating temperature	-40 to +85	°C	TA
Storage temperature	-40 to +125	°C	TS
Mass(approx)	16	g	M

Characteristics chart

Pulse current signal response characteristic



Effects of impulse noise



Input current-Output Voltage characteristic

