

## 1. Description

The TB Series Current Sensors are closed loop Hall effect current sensors that accurately measure DC and AC current and provide electrical isolation between the primary current and the output of the sensor.

## 2. Electrical Specifications

Type		See Table 1
Primary nominal current	AT	See Table 1
Primary current,measuring range	AT	See Table 1
Nominal analog output current	V	4
Supply Voltage	V	$\pm 14V$ to $\pm 17V$
Overall Accuracy at 25°C		$\pm (1\% + \text{Zero current offset})$
Dielectric strength r.m.s / 60Hz / 1 min	kV	2.5

## 3. Accuracy-Dynamic Performance

Zero current offset at 25°C	mV	$\pm 30$
Offset current temperature drift Between -20~80°C	mV	$\pm 30$
Linearity	%	better than 0.25
Response time	ms	less than 1
Bandwidth between 0 to 50kHz between 0 to 100kHz	%	$\pm 5$ $\pm 10$

## 4. General information

Operating temperature	°C	-20~+80
Storage temperature	°C	-40~+80
Current drain	mA	See Table 1
Weight	grams	18~22
Package		Flame retarded plastic case UL94-V0
Mounting		Designed to mount on PCB via thru hole connection pins
Aperture	mm	13×8
Output reference		To obtain a positive output on the terminal marked "M" primary current must flow in the direction of the arrow

Table 1

Type	Nominal current [AT]	Measuring range [AT]	Current drain [mA]
TB 045F	$\pm 45$	$\pm 120$	$\pm 10$ to $\pm 56$
TB 100F	$\pm 100$	$\pm 250$	$\pm 10$ to $\pm 106$
TB 100R	$\pm 100$	$\pm 250$	$\pm 10$ to $\pm 106$
TB 064F	$\pm 64$	$\pm 72$	$\pm 10$ to $\pm 72$
TB 073F	$\pm 73$	$\pm 182.5$	$\pm 10$ to $\pm 72$
TB 099F	$\pm 99.2$	$\pm 248$	$\pm 10$ to $\pm 106$
TB 101F	$\pm 101$	$\pm 252$	$\pm 10$ to $\pm 106$
TB 122F	$\pm 122$	$\pm 305$	$\pm 10$ to $\pm 106$
TB 145F	$\pm 145$	$\pm 362.5$	$\pm 10$ to $\pm 130$



①	Case	Glass-filled PBT UL94-V0 Mitubisi 5010GN3-15	See 7-1
②	Moistureproof coatings	Polyurethane UL94-V0 HUMISEAL 1A27	See 7-2
③	Core Support	Glass-filled PBT UL94-V0 Mitubisi 5010GN3-15	See 7-1
④	P.C.B	FR-4 0.8t UL94-V0 CMK.CORP CMK-G2X	See 7-3
⑤	Core	Permalloy	
⑥	Adhesive	Silicone rubber UL94-V0 SHIN-ETSU CHEMICAL KE-3494GY	See 7-4
⑦	Magnet Wire	Polyurethane UL TI 130°C DAIICHI DENKO UEWU	See 7-5

