



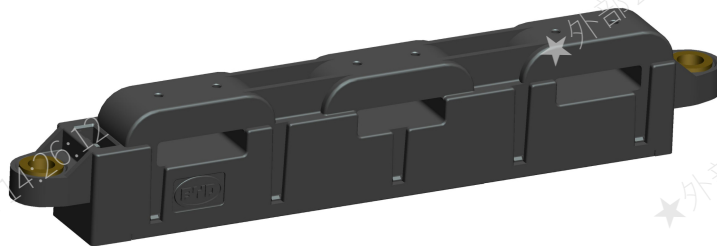
BCT1-IOV1WT Current Sensors

Description

For the electronic measurement of currents: DC, AC, pulsed, mixed, with a galvanic isolation between the primary circuit and the secondary circuit.

Features

- ◆ Open loop transducer using the Hall effect
- ◆ Low voltage application
- ◆ Unipolar +5VDC power supply
- ◆ Primary current measuring range up to $\pm 200 \sim \pm 1200\text{A}$
- ◆ Operating temperature range: $-40^{\circ}\text{C} < T_A < +125^{\circ}\text{C}$
- ◆ Output voltage: fully ratio-metric(gain and offset)



$I_{PN} = 200 \sim 1200\text{A}$

Advantages

- ◆ High accuracy
- ◆ Excellent linearity
- ◆ Low temperature drift
- ◆ Hermetic package

Industrial Applications

- ◆ Standard battery monitoring
- ◆ Hybrid and EV battery pack current sensing
- ◆ Fuel cell current control
- ◆ DC/DC converters and AC/DC inverters
- ◆ Hybrid and EV motor inverter drive
- ◆ EPS and X-by-wire applications
- ◆ Electric compressors for air conditionin

TYPES OF PRODUCTS

Type	Primary nominal current I_{PN} (A)	Primary current measuring range I_P (A)
BCT1-200IOV1WT	200	± 200
BCT1-300IOV1WT	300	± 300
BCT1-400IOV1WT	400	± 400
BCT1-500IOV1WT	500	± 500
BCT1-600IOV1WT	600	± 600
BCT1-700IOV1WT	700	± 700
BCT1-800IOV1WT	800	± 800
BCT1-900IOV1WT	900	± 900
BCT1-1000IOV1WT	1000	± 1000
BCT1-1100IOV1WT	1100	± 1100
BCT1-1200IOV1WT	1200	± 1200



Parameters Table

PARAMETERS	SYMBOL	UNIT	VALUE			CONDITIONS
			Min.	Typ.	Max.	
Electrical data						
Primary current, measuring range	I _{PM}	A	-		-	
Supply voltage	V _{CC}	V	4.75	5	5.25	
Current consumption	I _{CC}	mA	-	30	48	@T _A = 25°C
Output Load Resistance	R _L	kΩ	4.7	-	-	@V _{OUT} to GND
Output Load Capacitance	C _L	nF	-	1	-	@V _{OUT} to GND
Performance data						
Output voltage	V _{OUT}	V	V _{OUT} =V _{CC} /5×(2.5+2/I _{PM} ×I _P)			@T _A = 25°C
Output Linearity	ε _L	%	-1%	-	1%	@T _A = 25°C
Accuracy	X _A	%	-1%	-	1%	@T _A = 25°C
Quiescent Output Voltage ⁽¹⁾	V _{OUTQ}	V	2.5±10mV			@T _A = 25°C @U _C =5v @I _P =0A
Magnetic offset voltage	V _{OM}	mV	±3mV			@T _A = 25°C @U _C =5v
Quiescent Output Voltage Temperature Coefficient	TC _{OUTQ}	mV/°C	-0.15	-	0.15	
Sensitivity Temperature Coefficient	TC _{SENS}	%/°C	-0.04	-	0.04	
Output Bandwidth	BW	KHz	40	-	-	@Small signal -3dB
Response time	t _r	μs	-	-	8	
Rms voltage isolation test	V _d	KV	-	-	3	@AC 50Hz 1Min
General data						
Ambient operating temperature	T _A	°C	-40~+125			
Ambient storage temperature	T _S	°C	-40~+125			

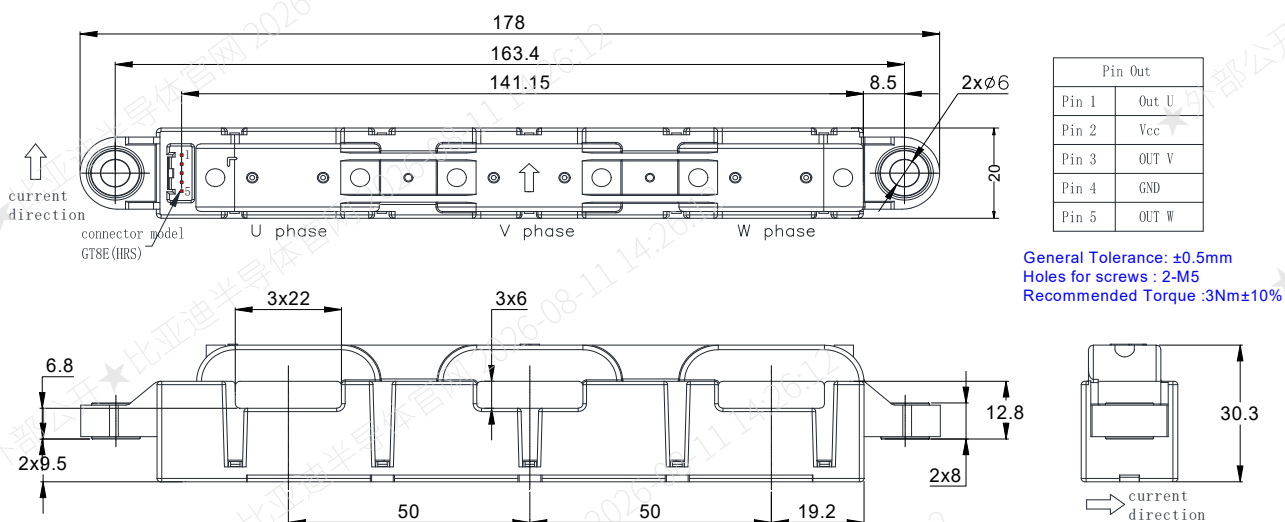
Notes:

(1) The indicated offset voltage is the one after the core hysteresis is removed.



BCT1-IOV1WT Current Sensors

Dimensions BCT1-IOV1WT (in mm. 1 mm = 0.0394 inch)



◆ Instructions of use

When the test current passes through the sensors, you can get the size of the output voltage.

(Warning: wrong connection may lead to sensors damage).

1. Based on user needs, the output range of the sensors can be appropriately regulated.
2. According to user needs, different rated input currents and output voltages of the sensors can be customized.



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