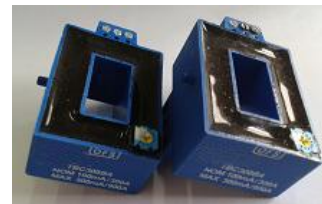




TBC-BA/BS/BR 系列闭环型霍尔电流传感器

TBC-BA/BS/BR Series Closed Loop Mode Hall Effect Current Sensor

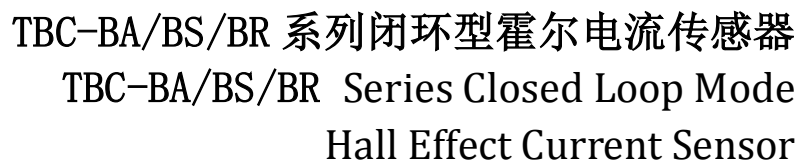


TBC- BA/BS/BR 系列闭环型霍尔电流传感器的初、次级之间是绝缘的，可用于测量直流、交流和脉冲电流。

The TBC- BA/BS/BR series current sensor is a closed loop device based on the measuring principle of the hall effect and null balance method, with a galvanic isolation between primary and secondary circuit. It provides accurate electronic measurement of DC, AC or pulsed currents.

电参数 Electrical data (Ta=25℃±5℃)

型号 Type 参数 Parameter	TBC50 BA/BS/BR	TBC100 BA/BS/BR	TBC200 BA/BS/BR	TBC300 BA/BS/BR	TBC400 BA/BS/BR	单位 Unit
额定输入电流 (I _{pn}) Rated input (I _{pn})	50	100	200	300	400	A
测量电流范围 (I _p) Measure range (I _p)	150 (±18V, 90 Ω)	300 (±18V, 30 Ω)	600 (±18V, 30 Ω)	900 (±18V, 15 Ω)	1200 (±18V, 2 Ω)	A
匝比 (N _p /N _s) Turns ratio (N _p /N _s)	1:1000	1:1000	1:2000	1:3000	1: 4000	T
额定输出电流 (I _{sn}) Rated output (I _{sn})	50±0.5%	100±0.5%	100±0.5%	100±0.5%	100±0.5%	mA
线圈内阻@70℃ Coil resister @70℃	20	20	25	40	54	Ω
测量电阻 Measure resister	2~50					Ω
电源电压 Supply voltage	±12 ~±18					V
功耗电流 Power consumption	≤20+I _p X (N _p /N _s)					mA
失调电流 Zero offset	@I _p =0	≤±0.15				mA
零点温漂 Zero drift	@ -40~+85℃	≤±0.4				mA
线性度 Linearity	@I _p =0~±I _{pn}	≤0.1				%FS
带宽 Bandwidth	@ -1dB	0~150				KHz
响应时间 Response time	@100A/ μS, 10%-90%	≤1				μS
绝缘电压 Galvanic isolation	@ 50HZ, AC, 1min	3				KV



- 交流变速驱动器
AC variable speed drives
- 直流电机驱动静态转换器
Static converters for DC motor drives
- 变频调速系统
Variable speed drives
- 电焊机
Power supplies for welding applications
- 通讯电源
Battery supplied applications
- 不间断电源 UPS
Uninterruptible Power Supplies (UPS)
- 开关电源
Switched Mode Power Supplies(SMPS)

BA

Top view dimensions: 40 (width), 30 (height), 20.5 (cutout width), 10.5 (cutout height), 7 (left edge), 6 (bottom edge), 0FS (offset).

Side view dimensions: 12.8 (height), 3 (thickness), 4.5 (bottom flange), 20 (width), 29 (total width).

Bottom view dimensions: 10 (height), $\phi 4.5$ (mounting hole), $\phi 2.5$ (center hole).

BS

Top view dimensions: 40 (width), 30 (height), 20.5 (cutout width), 10.5 (cutout height), 1 (left edge), 4 (left edge), 0FS (offset).

Side view dimensions: 12.8 (height), 3 (thickness), 4.5 (bottom flange), 20 (width), 29 (total width).

Bottom view dimensions: 10 (height), $\phi 4.5$ (mounting hole), $\phi 2.5$ (center hole).

BR

Top view dimensions: 40 (width), 30 (height), 20.5 (cutout width), 10.5 (cutout height), 0.65m (connector length), 18 (width), 0FS (offset).

Side view dimensions: 9.75 (height), 10 (width), 29 (total width).

Bottom view dimensions: 20 (height), 4.5 (thickness), $\phi 4.5$ (mounting hole), $\phi 2.5$ (center hole).

Terminal Pin Identification

+ +15V
 - -15V
 M IOUT

Terminal Pin Identification

1 +15V
 2 -15V
 3 IOUT
 4 NC

pins	connected
red	+15V
yellow	-15V
blue	OUT
black	NC

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



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使用说明 Directions for use

1. 当测量电流按传感器箭头方向时，输出端获得同相电流。
When measure current flows according to the direction of the arrowhead, Output terminal gets the same phase current.
2. 当待测电流从传感器穿过，即可在输出端测得电流大小。(注意：错误的接线可能导致传感器损坏)
When the current will be measured goes through a sensor, the current will be measured at the output end.
(Note: The false wiring may result in the damage of the sensor)
3. 可按用户需求定制不同额定输入电流和输出电流的传感器。
Custom design in the different rated input current and the output current are available.

执行标准 Standards

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

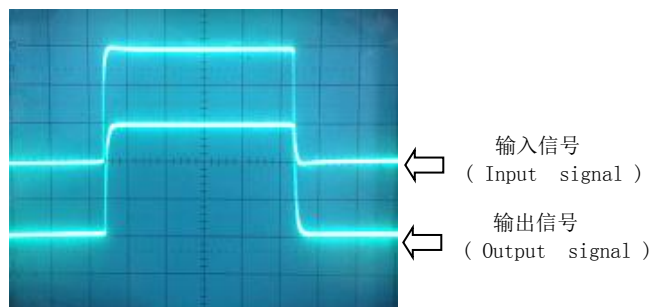
总体参数 General data

	数值 Value	单位 Unit	符号 Symbol
工作温度 Operating temperature	-40 to +85	°C	TA
储存温度 Storage temperature	-40 to +125	°C	TS
毛重(约) Mass(approx)	40	g	M

特性图 Characteristics chart

脉冲电流信号响应特性

Pulse current signal response characteristic



抗脉冲电压干扰特性

Effects of impulse noise

