9 DEALER MANUAL FOR SR PA2X2.32.ST

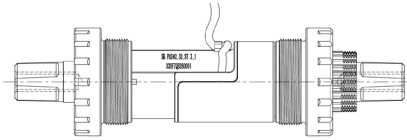
CONTENT

9.1 INTRODUCTION OF SENSOR

- Name: Torque and speed sensor
- Model: SR PA262.32.ST
  SR PA252.32.ST
  SR PA242.32.ST
  SR PA232.32.ST
  SR PA222.32.ST

- Scope: These sensors are apply to the Bottom Bracket length for 68mm,73mm,84mm,100mm,110mm,120mm, and different lengths can also be customized.
- The internal thread of BB is BC1.37 "×24T.
- Identification:

  There are the unique identification of the product on the housing, as shown in figure:



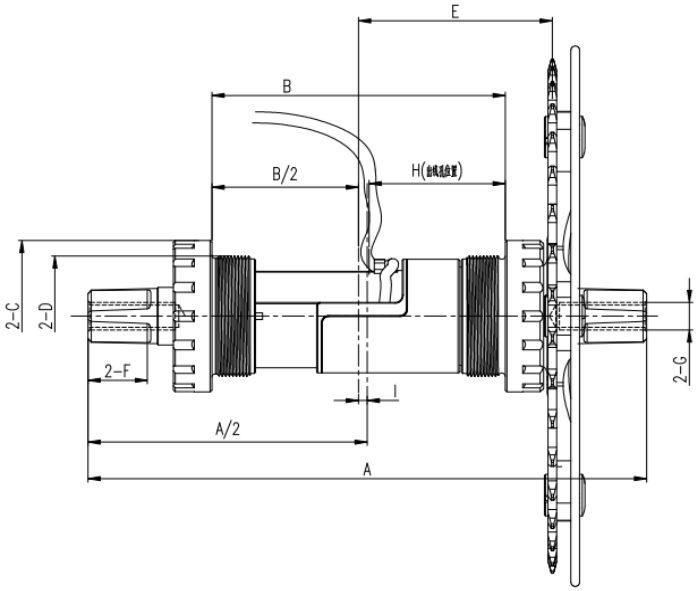
Note: Content in the label is important information about this product. Please do not remove the information from the sensor.

9.2 SPECIFICATIONS

Model: SR PA 2X2.32.ST

Input voltage (V DC)	5±0.5
Input power (W)	< 0.15
Number of speed pulses	32
Measuring range of torque signal (N.m)	0.5-80
Output voltage of torque signal (V)	0.75-3.2
Slope of output torque signal (mV/ N.m)	35
Bilateral precision	< ±1.5%
Protection grade	IPx6
Storage temperature	0℃ ~ 60℃
Certification	CE , EN15194/14764/14766
Operating environment	-20℃~45℃

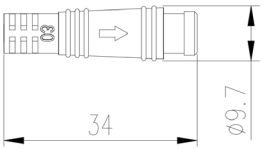
9.2.1 Outline and geometric size

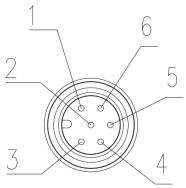


Model	Shaft Length / A	Bottom Bracket / B	Chain Line / E	I
SR PA222.32.ST	176±1mm	100±0.5mm	63.5±0.8mm	2.5±0.5mm
SR PA232.32.ST	148±1mm	73±0.5mm	50±0.8mm	3.0±0.5mm
SR PA242.32.ST	160±1mm	84±0.5mm	55.5±0.8mm	2.5±0.5mm
SR PA252.32.ST	186±1mm	110±0.5mm	68.5±0.8mm	2.5±0.5mm
SR PA262.32.ST	196±1mm	120±0.5mm	73.5±0.8mm	2.5±0.5mm

C= φ 44±0.15mm D: BC1.37''×24 F= 17±0.3mm G= M8xP1x25 H= 39mm

9.2.2 Connector definition





Name	Cable Definition		
G6.4.3	1	orange	5V [power +]
	2	purple	TX / speed signal 1 (input)
	3	black	GND [power -]
	4	green	Speed signal
	5	brown	Torque signal
	6	white	TX / Speed signal 2 (input)

9.2.3 Cautions

- The sensor should be stored in a ventilated dry room. Avoid storing near strong magnetic objects.
- Should not be used for a long time overload.
- Should avoid wading to use.

Do not contact magnetic materials with products (mainly axes)

It is forbidden to be knocked during product transportation and installation.

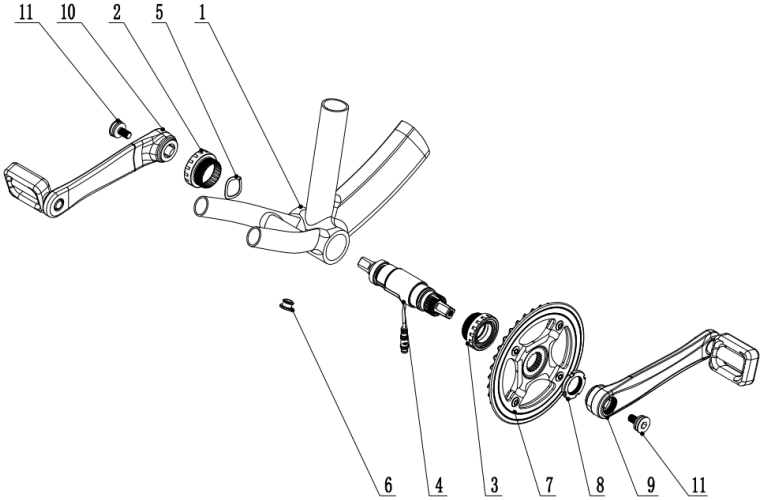
At installation and disassembly it shall be carried out in accordance with the prescribed procedures to prevent break line.

9.3 SENSOR INSTALLATION

9.3.1 List of Tools to be used

Use of the Tools	Tools	
To fasten or remove lock cap on sensor		Spanner
To fasten or remove locking ring on chain ring		Special tools
Check BB		GO - NO GO GAUGES

9.3.2 Installation Drawing



1. Bottom bracket
2. Left cap
3. Right cap
4. Shaft Sensor
5. Wave washer
6. Retainer
7. Chain wheel
8. Locking ring
9. Right crank
10. Left crank
11. M8x15 inner hexagon screw

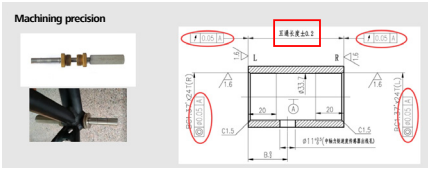
9.3.3 Check BB

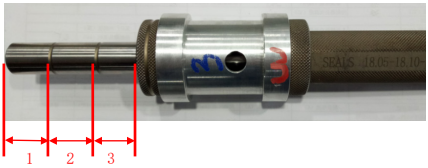
① Check whether there are any iron chips, paint or burrs on the inner thread of the BB. If any, please clean it up.

② The spec. of the inner thread of the BB is BC1.37''×24, please must use the tool (GO - NO GO GAUGES) to test.

③ Must check the parallelism and concentricity of the BB, the requirement refer to the figure below:

④ Check the length of the BB, it shall meet the requirement of the tolerance (±0.2mm).





Section1: 0.15mm

Section2: 0.10mm

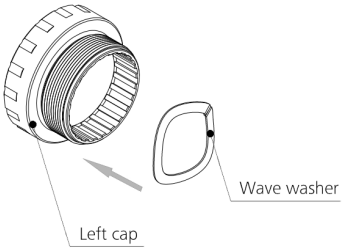
Section3: 0.05mm

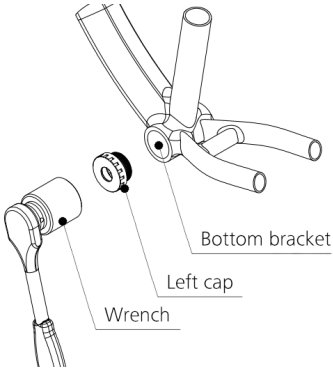
Section4: 0.01mm

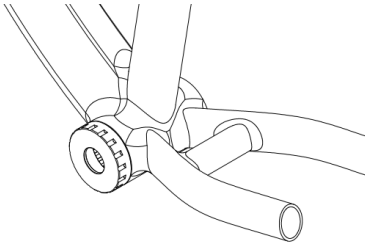
The concentricity of BB must meet requirement of section 3 (0.05mm)

9.3.4 Install the Sensor

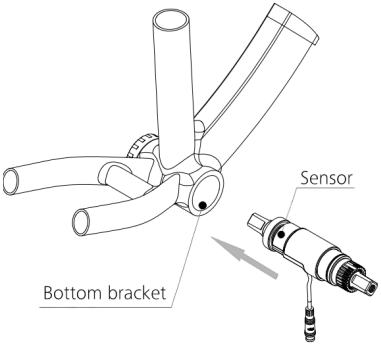
1. Snap the wave washer into the left lock cap, adjust the torque of the constant torque wrench to 40Nm, use the wrench to screw the left lock cap into the bottom bracket (The non-sprocket side), and tighten the The lock cap as shown below:

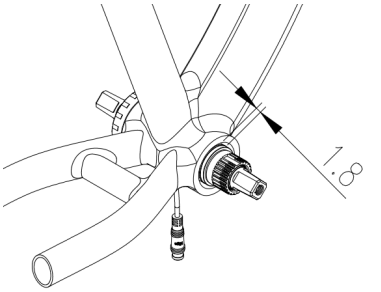




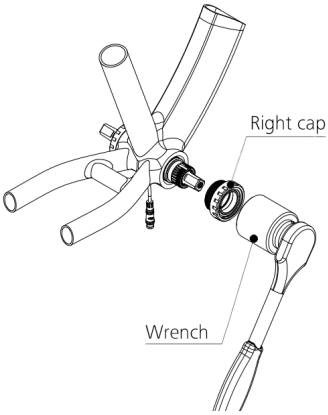


2. Enclose the sensor by the bottom bracket (the sprocket side): pass the lead through (to ensure the lead is not cut off as it runs through the outlet hole), enclose the sensor when the lead is pulled out (paying attention to the match between the positioning step and the slot), and push onto the step face on the sensor about 1.8mm higher than sprocket end face of the bottom bracket, which is shown below:

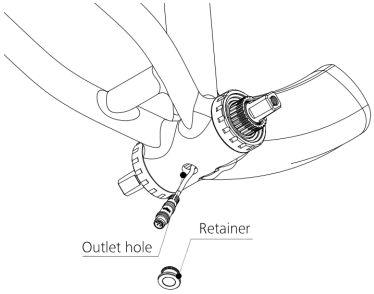


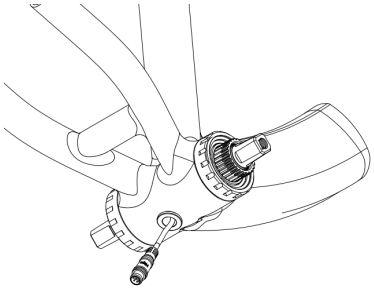


3. Adjust the constant torque wrench to 40Nm, use the wrench to screw the right lock cap into the bottom bracket (the sprocket side), and tighten the lock cap as shown below:

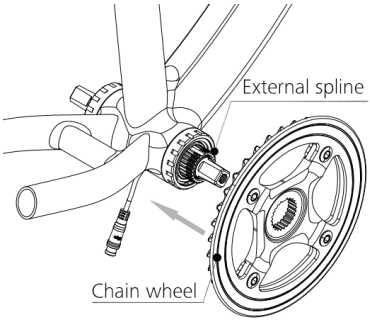


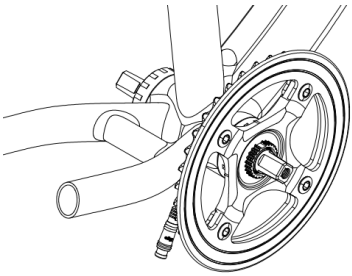
4. Sleeve the outlet retainer to the outlet of the bottom bracket along the sensor lead, as shown below:



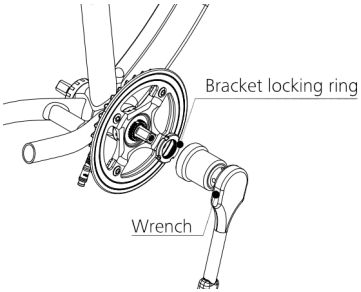


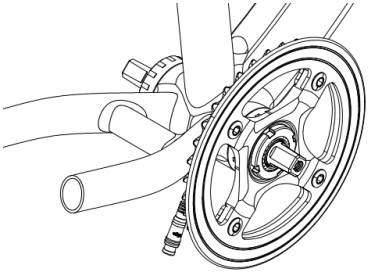
5. Align the spline keyway of the crank set assembly with that in the sensor sleeve and slowly push it into the end as shown below.





6. Adjust the torque on the constant torque wrench to 35Nm, and use it to screw the bracket locking ring into the external thread of the torque body, and tighten the bracket locking ring as shown below.





7. Use a pneumatic torque wrench to fix the right crank group and left crank group with M8x15 screws (torque ≤ 35Nm) respectively at both ends of the central shaft.