

文件名称 Name	100SX Generation IV cute motor technical manual	出版日期	090801
文件编号 No	Q-R-100SX	版本	5.0
编写 Made By	谢方清 Jack Xie	Modified Date	

100SX 第 4 代酷儿电机技术说明书

100SX Generation IV Cute Motor Technical Manual

产品名称：电动车用永磁直流无刷双级变速高速直流轮毂电机

Product's name: Permanent Magnet brushless double geared high speed DC hub motors for electric bicycles

产品型号：Q-R-100SX

Product's model: Q-R-100SX

制作 Made by: 谢方清

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1、产品介绍 Product instruction

1.1、名称 Name

名称：电动车用永磁直流无刷双级变速高速电机。

Name: Permanent Magnet brushless double geared high speed DC hub motors for electric bicycles.

1.2、产品型号 Product model

产品型号：Q-R-100SX ; Product model: Q-R-100SX

1.3、适用范围 Application

适用范围：后驱动电机（可安装碟刹）。

标准配置：自行车后叉开档尺寸为 135mm；产品可适用于电动车全动力驱动和各比例助力传动系统；可安装碟刹。

Application: Rear-driving motor (can be fixed with disc)。

Standard applicability: Drop Out size is 135 mm, this motor can be used for all e-bike and all kinds assistant system.; Disc brake for option.

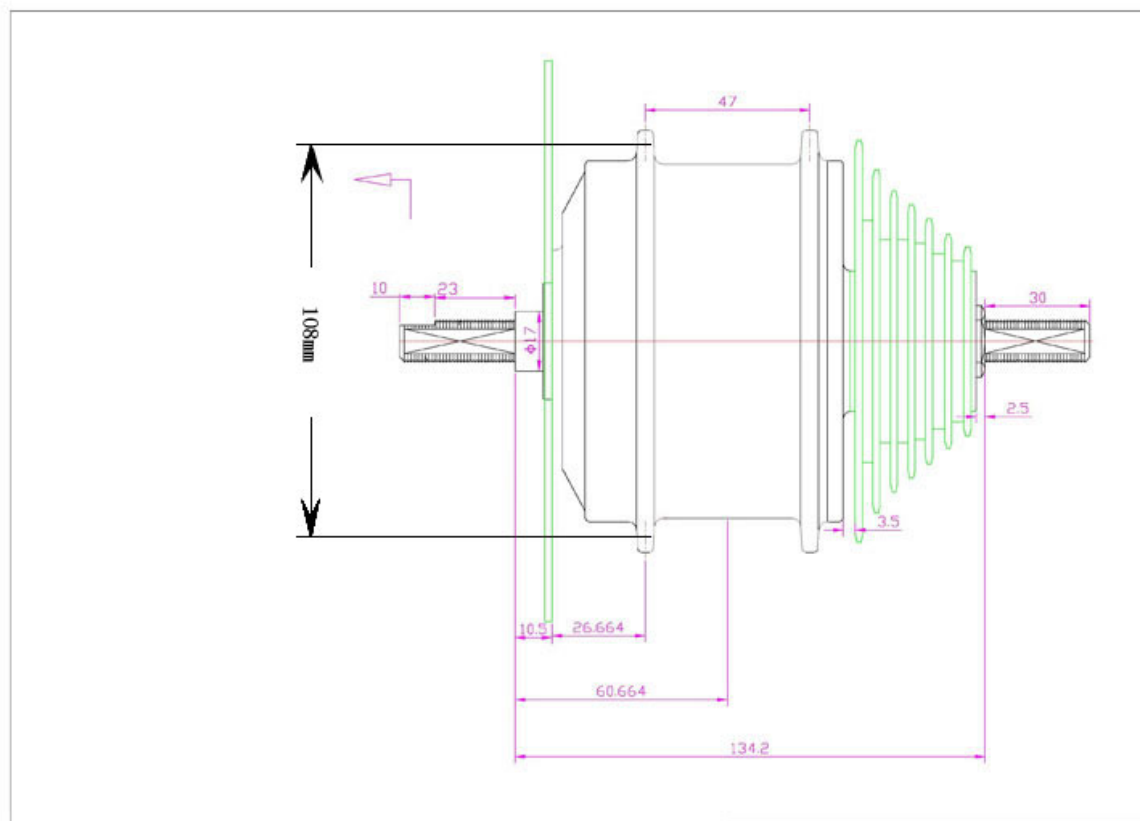
1.4、外观 Appearance



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1.5、外形图 Drawing

单位: mm; Unit: millimeter



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2、产品说明 Product explanation

2.1、技术信息 Technical information

A、电机轴长 198mm，开档 135mm；轮毂直径：108mm；可安装碟刹。

Shaft length of motor: 198mm, Drop Out size: 135mm; Hub Diameter: 108mm; Disc brake for option.

B、引出线长度：L=150cm

Cable length: L=150cm

C、表面处理 Surface treatment:

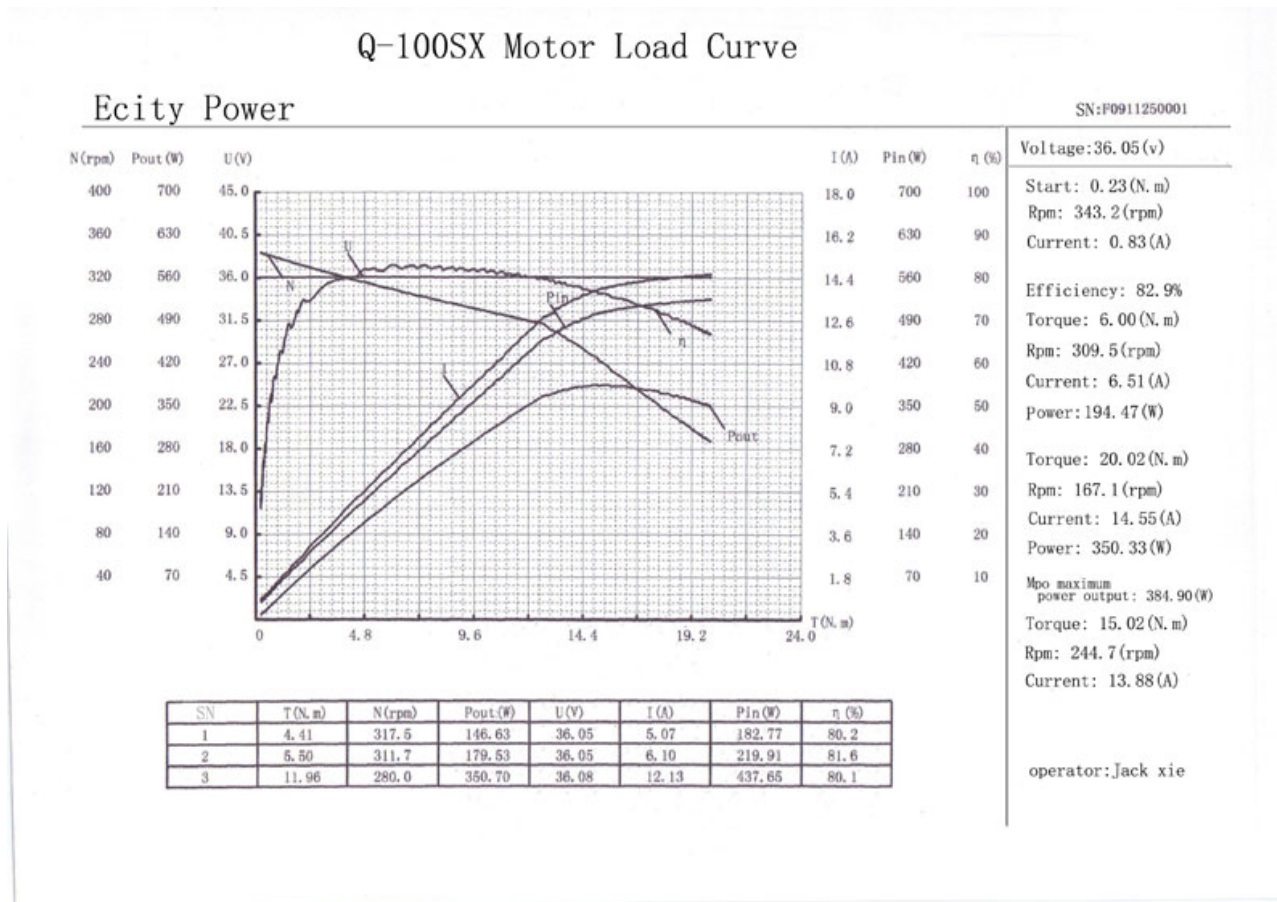
电机表面高速切削，铝合金光亮，无油漆；

The surface of the motor is fast cutting, pure metal bright, no painting.

D、主要技术性能曲线（环境温度-25℃～45℃）

Main technical performance Curve (temperature -25℃~45℃).

36V Curve:



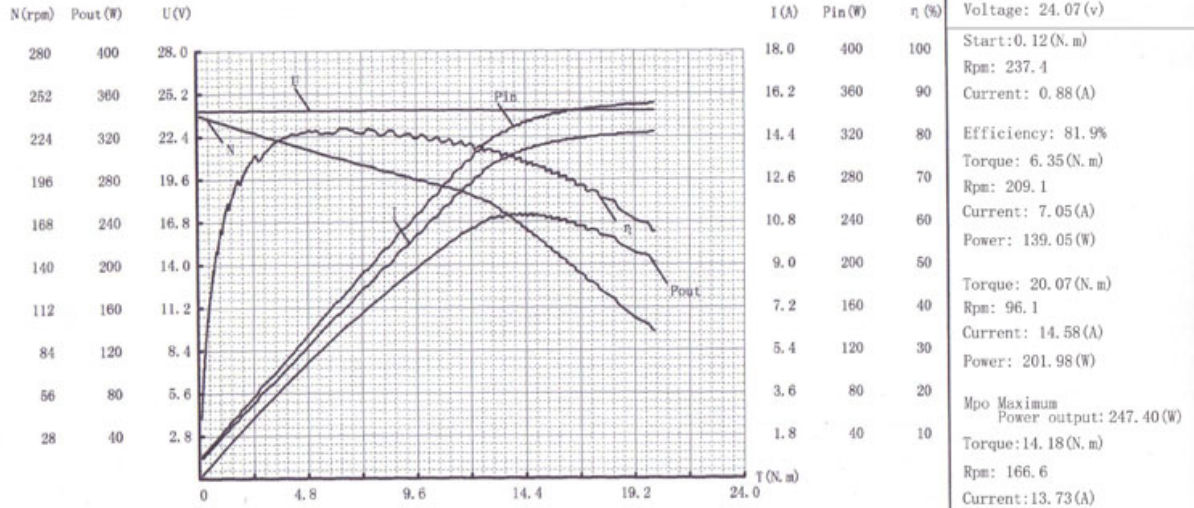
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24V Curve:

Q-100SX Motor Load Curve

Ecity Power

SN:F0912150001



SN	T(N.m)	N(rpm)	Pout(W)	U(V)	I(A)	Pin(W)	η (%)
1	7.02	205.9	151.37	24.09	7.77	187.18	80.9
2	8.60	199.9	180.03	24.09	9.22	222.11	81.1
3	13.91	169.2	246.47	24.07	13.64	328.31	75.1

Voltage: 24.07(v)
 Start: 0.12(N.m)
 Rpm: 237.4
 Current: 0.88(A)
 Efficiency: 81.9%
 Torque: 6.35(N.m)
 Rpm: 209.1
 Current: 7.05(A)
 Power: 139.05(W)
 Torque: 20.07(N.m)
 Rpm: 96.1
 Current: 14.58(A)
 Power: 201.98(W)
 Mpo Maximum Power output: 247.40(W)
 Torque: 14.18(N.m)
 Rpm: 166.6
 Current: 13.73(A)

Operator: jack xie

注：产品性能在不断更新提升，配套前请了解最新数据。可以根据客户要求定制电机。

Remark: We are improving our motor's performance constantly, please refer to the updated data before placing orders. The motor technical performance can be customized according to customer requirements

E、重量 Weight: 2Kg.

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2.2、电机的防腐性能 Corrosion resistance of the motor

参照标准 GB/T2423.17 进行盐雾试验,在常温状态下 5%NaCl 溶液、盐雾箱内温度 35.5℃、饱和桶温度 37.5℃进行连续喷雾 96 个小时后,表面无肉眼可见之腐蚀,满足标准要求,电机内无渗水。

We conduct the salt spray test according to standard GB/T2423.17.The test motor is test according to the condition listed below, Temperature: 35.5±2℃, 5%NaCl solution, Duration:96 hours. No leakage or **corrosion**.

2.3、产品优点 Advantage of the motor

A、可用于后叉开档尺寸为 135mm 的标准配置自行车;可安装碟刹。

The drop out size is 135mm, it is the same with the standard bike. Disc brake for option. .

B、无电刷,长寿命(轴承寿命),免维护;

Brushless, Long life (bearing's life), Free maintenance

C、体积小、重量轻、功率大、结构简洁;

Small in size, Light in weight, Big in power, Simple structure

D、启动性能优越、无磁滞阻尼消耗动能、爬坡能力强;

Excellent starting performance, No magnetic hysteresis is damping energy consumption, Strong climbing capability

E、无火花,不产生电磁干扰;

No spark, No electric magnetic interference

F、效率高,高效率平台宽,耗电低,相对续行里程长;

High efficiency, Wide scope high efficiency, Low electric power consumption, Long distance for driving

G、性能价格比高;

High capacity/price ratio

H、防水性能优越;

Superior water-proof

2.4、注意事项 Attention

①应停放在通风干燥的库房内,不宜停放在潮湿、酸碱处,也不宜与磁性物品共存;

The motor should be kept in the dry and ventilated room, and should be free from moisture, acidic and alkaline .

Please do not put the motor together with magnetic products.

②产品使用时不宜长时间超载,过载,控制器限流必须在 15A 以内;

The products shouldn't be overloaded for long time , the limited current of the controller should be less than 15A.

③产品运行时应避免涉水、浸水。

The motor should be free from water while it is working..