

文件名称 Name	85SX Generation IV cute motor technical manual	出版日期	090801
文件编号 No	Q-F-85SX	版本	4.0
编写 Make By	谢方清 Jack Xie	Modify Date	

85SX 第 4 代酷儿电机技术说明书

85SX 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-F-85SX

Product's model: Q-F-85SX

制作 Made by: 谢方清

审核 Checked: 雷海燕

Email: ecitypower@gmail.com

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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-F-85SX ; Product model: Q-F-85SX

1.3、.适用范围 Application

适用范围：前驱动电机（可选碟刹型和罗拉刹型）。

标准配置：自行车前叉开档尺寸为 83mm ~ 100mm；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。可为客户定制前叉开档 83mm ~ 100mm。V 刹类型电机的开叉尺寸：83mm；碟刹类型电机开叉尺寸：100mm；罗拉刹类型电机开叉尺寸：93mm。

Application: Front-driving motor (Disc brake type and Roller brake type for option).

Standard applicability: Front fork size is 83mm ~ 100 mm, this motor can be used for all e-bike and all kinds assistant system.; Disc brake for option. Customizing fork size 83mm ~ 100mm. Rim brake type motor fork size: 83mm; Disc brake type motor fork size: 100mm; Roller brake type motor fork size: 93mm.

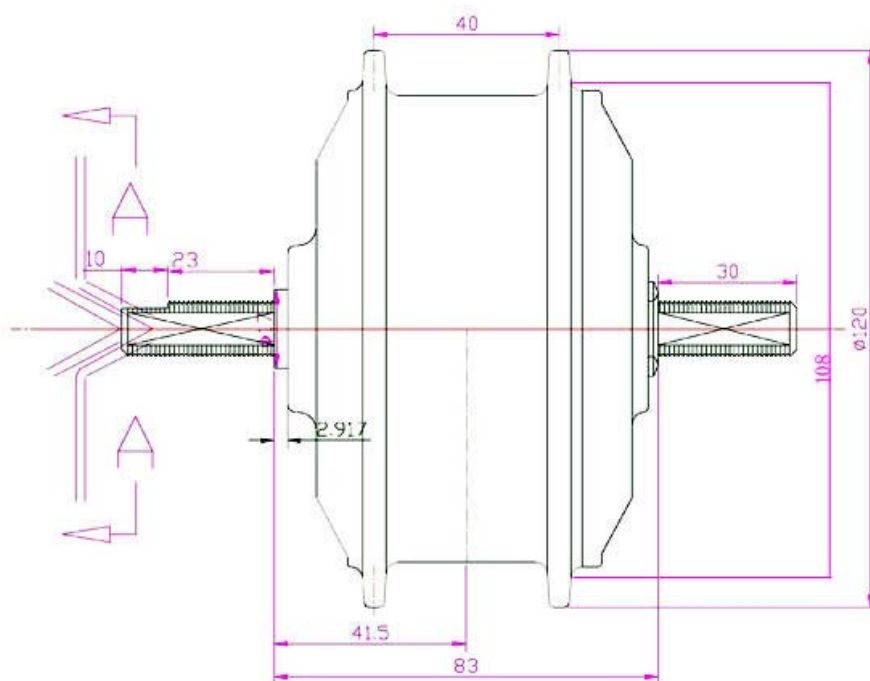
1.4、.外观 Appearance



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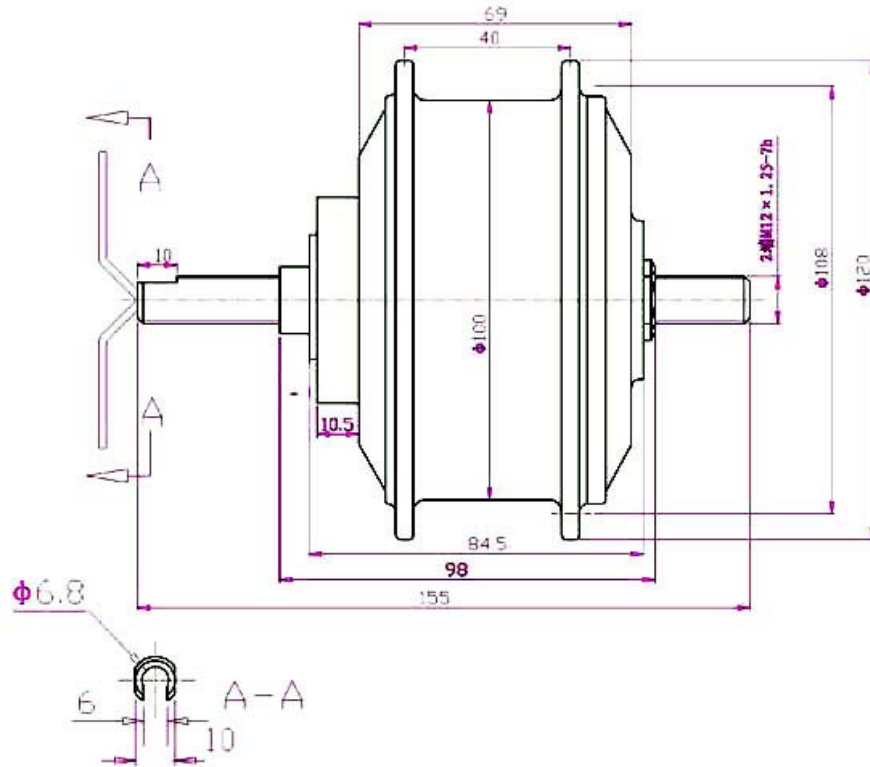
1.5、外形图 Drawing

V-刹 85 型前驱电机外形图 Rim Brake Type Q-F-85SX Front Driving Hub Motor Drawing:



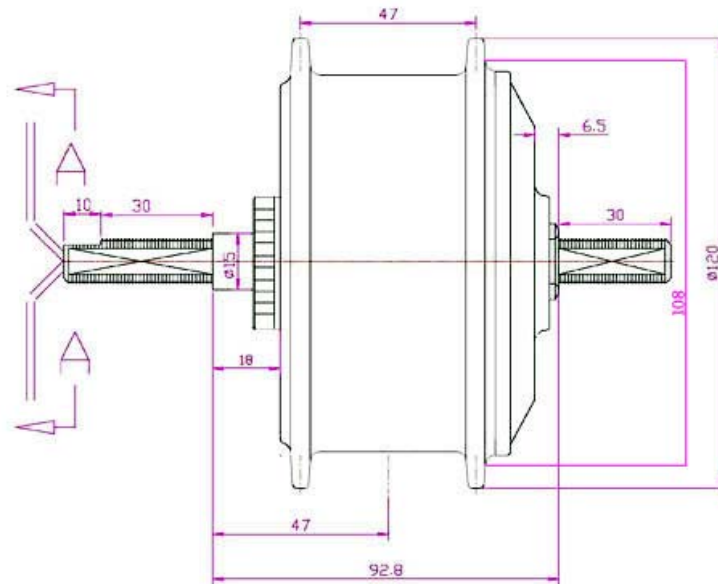
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碟刹 85 型前驱电机外形图 Disk Brake Type Q-F-85SX Front Driving Hub Motor Drawing:



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罗拉刹 85 型前驱电机外形图 Roller Brake Type Q-F-85SX Front Driving Hub Motor Drawing:



2、产品说明 Product explanation

2.1、技术信息 Technical information

A、电机轴长 155mm，开档 83mm ~ 100mm（V 刹类型电机的开叉尺寸：83mm；碟刹类型电机开叉尺寸：100mm；罗拉刹类型电机开叉尺寸：93mm。）；轮毂直径：108mm；可选碟刹和罗拉刹类型。

Shaft length of motor: 155mm, fork size: 83mm ~ 100mm(Rim brake type motor fork size: 83mm; Disc brake type motor fork size: 100mm; Roller brake type motor fork size: 93mm.); Hub Diameter: 108mm; Disc brake type and roller brake type 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；可选颜色。

The surface of the motor is fast cutting, pure metal bright, no painting. Other colors for option.

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D、主要技术性能 (环境温度-25 °C ~ 45 °C)

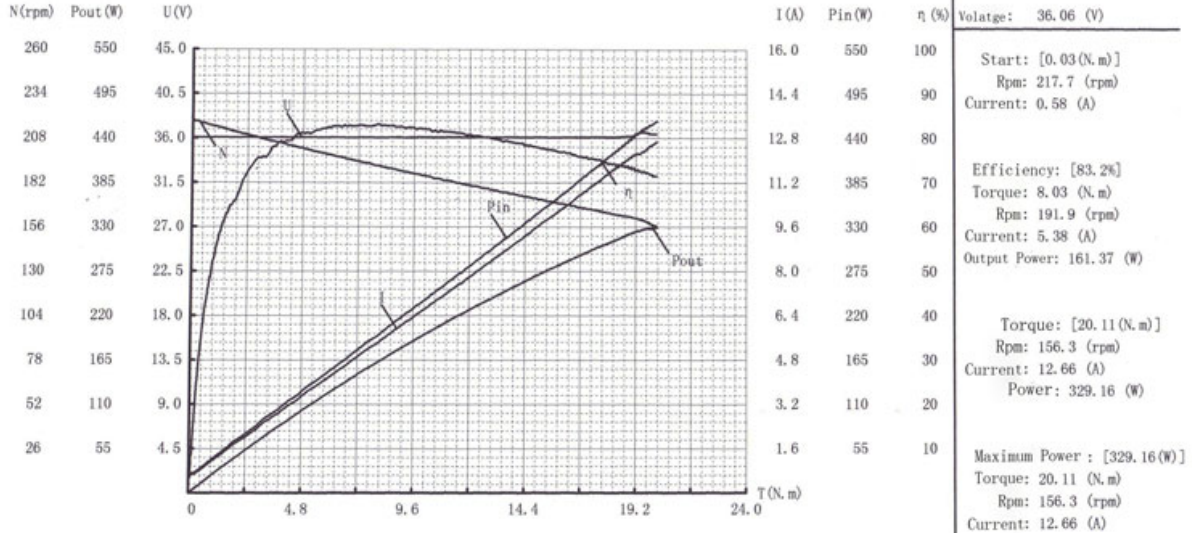
Main technical performance(temperature -25°C~45°C).

36V 电机性能曲线 36Volts Curve

Q-85SX Motor Load Curve

ECITY POWER CO., LTD

Serial Number:F1006130087



Serial	T(N.m)	N(rpm)	Pout(W)	U(V)	I(A)	Pin(W)	η (%)
1	7.39	193.7	149.91	36.08	5.02	181.12	82.8
2	9.03	188.8	178.54	36.08	5.99	216.12	82.6
3	13.61	176.1	250.99	36.08	8.76	316.06	79.4

Velatge: 36.06 (V)

Start: [0.03(N.m)]
Rpm: 217.7 (rpm)
Current: 0.58 (A)

Efficiency: [83.2%]
Torque: 8.03 (N.m)
Rpm: 191.9 (rpm)
Current: 5.38 (A)
Output Power: 161.37 (W)

Torque: [20.11(N.m)]
Rpm: 156.3 (rpm)
Current: 12.66 (A)
Power: 329.16 (W)

Maximum Power : [329.16(W)]
Torque: 20.11 (N.m)
Rpm: 156.3 (rpm)
Current: 12.66 (A)

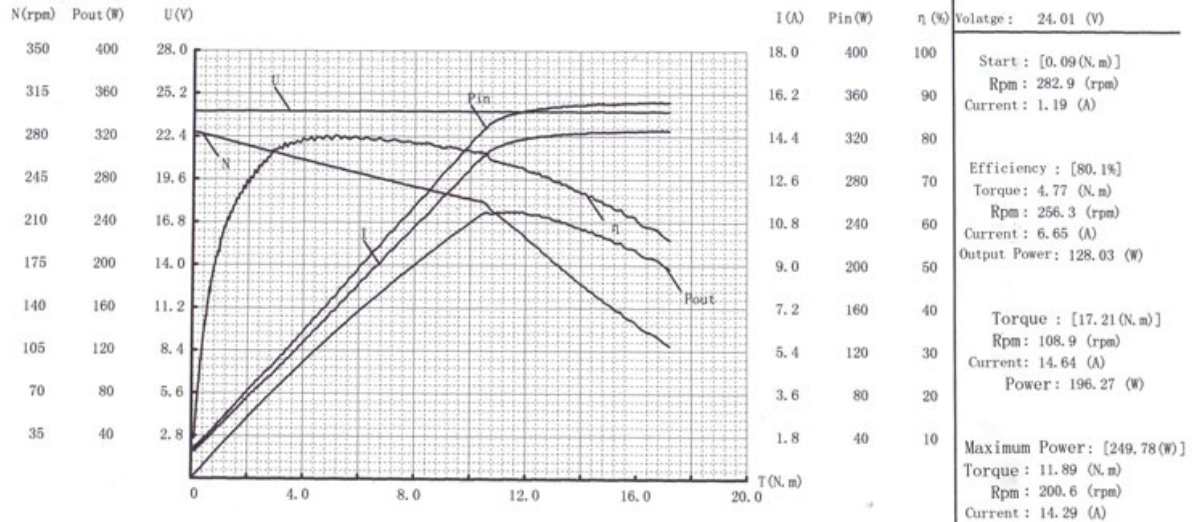
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24V 电机性能曲线 24Volts Curve

Q-85SX Motor Load Curve

ECITY POWER CO., LTD

Serial Number:F1006100023



Serial	T (N.m)	N (rpm)	Pout (W)	U (V)	I (A)	Pin (W)	η (%)
1	4.87	255.7	130.41	24.03	6.79	163.16	79.9
2	5.79	250.8	152.07	24.03	7.92	190.32	79.9
3	10.58	225.1	249.40	24.03	13.63	327.53	76.1

E、重量 Weight:

1.6Kg.

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 tested 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、可用于前叉开档尺寸为 83mm ~ 100mm 的标准配置自行车; 可选碟刹和罗拉刹类型。

The fork size is 83mm ~ 100mm, it is the same with the standard bike. Disc brake type and roller brake type for option. .

B、无电刷, 长寿命 (轴承寿命), 免维护;

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

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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 13A 以内;

The products shouldn't be overloaded for long time , the limited current of the controller should be less than 10A.

③产品运行时应避免涉水、浸水。

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