

DC gear motor with encoder speed velocity measurement 6V 500rpm FOR mini car balance motor encoder DIY

Item specifics

Efficiency:IE 2
Continuous Current(A): 40ma
Voltage(V): 3-12V
Output Power: 20w
Torque: 0.027 kg.cm-1.5kg.cm
Type:Gear Motor
Construction:Permanent Magnet
Protect Feature: Totally Enclosed
Usage:Car,Electric Bicycle
Certification:CE,ROHS

Speed(RPM):

6V: **1500rpm 500rpm 300rpm 150rpm 100rpm 71rpm 50rpm 39rpm**

Remark: Pls confirm the voltage and speed before ordering.

notice: The speed in voltage of 3 V is half of 6V. The speed in voltage of 12 V is the two times as 6V.

Specifications

1.Standard Operating Conditions

1-1 Rated Voltage: **3v,6v,12v**

1-2 Direction of Rotation:CW when viewed from output shaft side

1-3Operating Temperature and Humidity:Temperature range of **-10C~+50C**,Humidity range of **30%~80%**.

1-4Storage Temperature:Temperature range of **-20C~+60C**

2.Measuring Conditions:

2-1Motor Position:To be place t horizontally when measuring

2-2Power Supply: Regulated DC power supply

--No load speed: **10-1500rpm**.

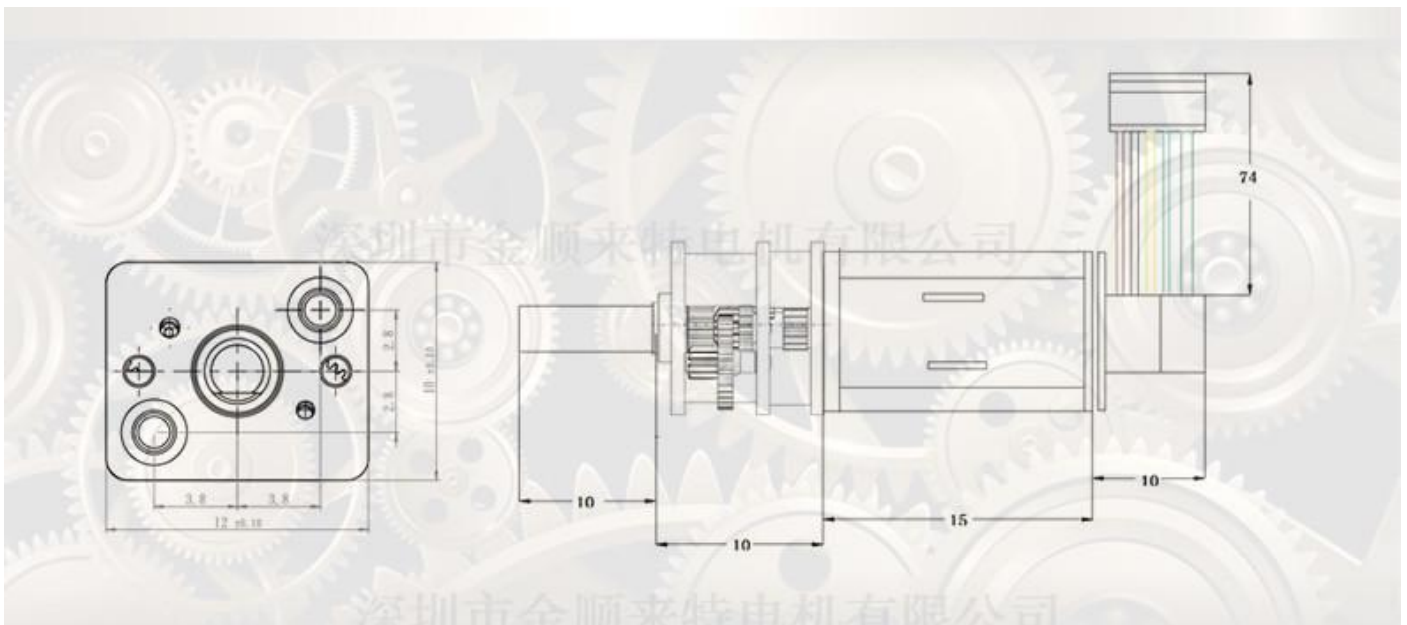
--Robotics, Small Appliance, Fanner, Electric Curtain;

--Medical Pump, Surgery Tools, Medical Stirrer, centrifugal Machine; Electric Valve, Actuator, medical device.

--Electric motor,low noise,low current and no spark.

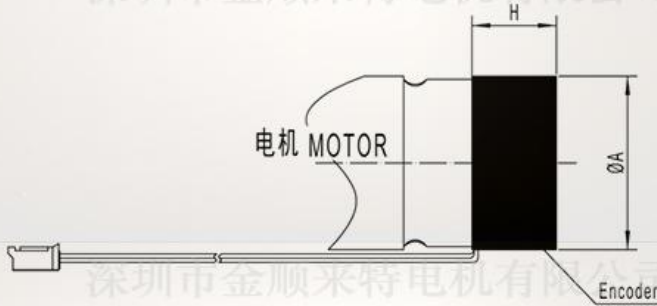
--Reduction ratio: **1/10,1/30,1/50,1/100,1/150,1/210,1/298,1/380**

Size:



磁性式编码器 Magnetic Encoder

- 支持双通道/单通道霍尔编码器 Two channels/Single channel Hall Encoder
- 尺寸规格可以定制, 且各系列均有不同脉冲数供客户选择 Size customized, different to choose from
- 消耗电流型数字输出 Consumption current digital output
- 高速反映频率从 0 KHz~100 KHz High reflection frequency from 0 KHz to 100 KHz
- 适用温度范围:-40 °C~+125 °C Temperature range:-40 °C~+125 °C



编码器尺寸 Appearance.size (mm)

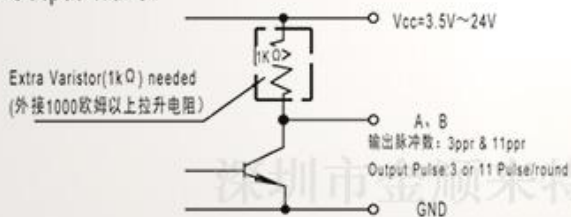
尺寸规格 Dimensions

电机型号 Motor Model	编码器 ØA Encoder ØA	编码器 H Encoder H	输出脉冲数 Output Pulse	引线规格 Wire Type Length	连接头型号 Connector Type	接线方式 Connections
GM12	Ø12mm	6.5mm	3ppr	UL1061 AWG26 100mm	JST ZHP-6 P=1.5-6P	1、黑色引线: 电机负极 Black wire: motor- 2、红色引线: 电机正极 Red wire: motor+ 3、棕色引线: 霍尔信号正极 Brown wire: Hall Sensor Vcc 4、绿色引线: 霍尔信号负极 Green wire: Hall Sensor GND
GM13, GM14, GM16, GMP16	Ø15.5mm	9.0mm	3ppr	UL1007 AWG24 100mm	JST PHR-6 P=2.0-6P	5、蓝色引线: 霍尔信号输出通道A Blue wire: Hall Sensor A Vout 6、紫色引线: 霍尔信号输出通道B Purple wire: Hall Sensor A Vout
GM20	Ø20.3mm	9.0mm	3ppr			
GM25	Ø23mm	9.0mm	11ppr	UL1007 AWG24 100mm	JST XHP-6 P=2.3-6P	
GMP28	Ø28mm	9.0mm	11ppr			
GMP36, GM37, GMP42	Ø36mm	12.0mm	11ppr			

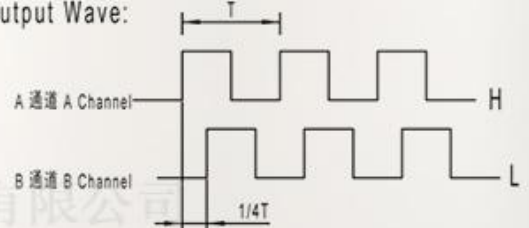
电气性能 Electrical Characteristics

特性 Characteristics	符号 SYMBOL	测试条件 Test conditions	MIN	REF	MAX	单位 UNITS
供应电压 Supply voltage	Vcc	-----	3.5	--	24	V
输出饱和电压 Output saturation voltage	Vce(sat)	Vcc=14V; Ic=20mA	--	300	700	mV
输出漏电流 Output leakage current	Icex	Vce=14V; Vcc=14V	--	<0.1	10	uA
输入电流 Supply current	Ice	Vcc=20V; Output open	--	5	10	mA
输出上升时间 Output rise time	tr	Vcc=14V; RL=820Ω; CL=20pF	--	0.3	1.5	uS
输出下降时间 Output fall time	tr	Vcc=14V; RL=820Ω; CL=20pF	--	0.3	1.5	uS

输出电路 Output Wave:



输出波形 Output Wave:



Relation about Voltage and speed (rpm)

型號: JGA12-N20			參數表									
型號	電壓		空載		最大效率點				堵轉		減速器	
	Voltage		Noload		At Max. Efficiency				Stall		Speedreducer	
	使用範圍	額定值	轉速	電流	轉速	電流	扭矩	功率	扭矩	電流	減速比	長度
Model	Using	The	Speed	Current	Speed	Current	Torque	Power	Torque	Current	Reduction	(L)Size
	Range	Rated	r/min	ma	r/min	ma	kg. cm	W	kg. cm	A	Ratio	mm
JGA12-N20-10	3-12V	6V	1500	40	1050	160	0.027	0.35	0.135	0.55	10	9
JGA12-N20-30	3-12V	6V	500	40	375	160	0.081	0.35	0.4	0.55	30	9
JGA12-N20-50	3-12V	6V	300	40	225	155	0.14	0.35	0.7	0.55	50	9
JGA12-N20-100	3-12V	6V	150	40	120	155	0.35	0.35	1.75	0.55	100	9
JGA12-N20-150	3-12V	6V	100	40	80	150	0.55	0.35	2.75	0.55	150	9
JGA12-N20-210	3-12V	6V	71	40	56	140	0.8	0.35	4	0.55	210	9
JGA12-N20-298	3-12V	6V	50	40	40	140	1.1	0.35	5.5	0.55	298	9
JGA12-N20-380	3-12V	6V	39	40	32	130	1.5	0.35	7.5	0.55	380	9