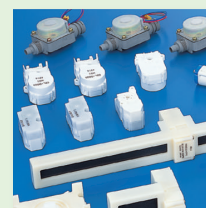


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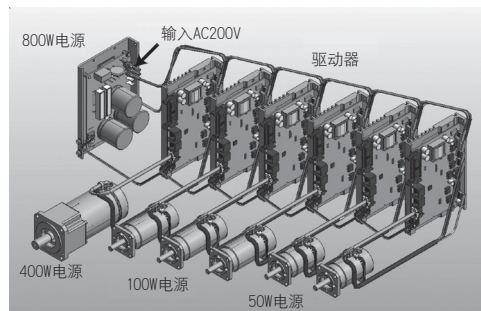
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Contact for listed products	

AC伺服马达

AC SERVO MOTOR



用途
Applications

- 缝制设备・纺织设备。
- 搬送设备・包装设备。
- 单轴机械手・多轴机械手。
- 印刷设备・金属加工设备。
- Sewing machines, textile machineries
- Carrier machines, packing machines
- Single axis robots, multi axis robots
- Printing machine, press working machine

特点
Features

- 马达/驱动器/电源组件分离结构。
- 配备独自开发的磁式绝对值编码器。
- 1台电源组件可同时驱动6套马达和驱动器。
- 用选件方式对应低成本要求。
- Motors, Drivers, Separated power supply unit
- Built-in self-developed magnetic absolute encoder
- 1 power supply unit drives 6 motors/drivers
- Variety of lineups for low cost

马达 Motors

A200V系列 AC200V Series

马达机型 Motor model name	MP500□2□W**	MP101□2□W**	MP201□2□W**	MP401□2□W**	MP751□2□W**
电源规格 Power supply specifications	AC200~230V	AC200~230V	AC200~230V	AC200~230V	AC200~230V
安装尺寸 Installation size	□42		□62		□80
额定输出 (W) Rated output	50	100	200	400	750
匹配驱动器 Applicable driver	DJ23D11/DJ23D12				
额定转矩 (N·m) Rated torque	0.159	0.318	0.637	1.273	2.387
瞬间最大转矩 Instantaneous max. torque	0.477	0.955	1.910	3.820	7.162
额定转速 (rpm) Rated speed	3000	3000	3000	3000	3000
瞬间最大转速 (rpm) Max. rated speed	5000	5000	5000	5000	4500
惯量 (kg·m ² ×10 ⁻⁴) Moment of inertia	无制动器 No brake	0.020	0.034	0.127	0.196
	带制动器 With brake	0.027	0.041	0.175	0.244

DC24V・DC48V系列 DC24V・DC48V Series

马达机型 Motor model name	MP500□3□W**	MP500□4□W**	MP101□3□W**	MP101□4□W**	MP201□4□W**	MP401□4□W**
电源规格 Power supply specifications	DC24V	DC48V	DC24V	DC48V	DC48V	DC48V
安装尺寸 Installation size	□42		□42		□62	□62
额定输出 (W) Rated output	50		100		200	400
匹配驱动器 Applicable driver	-					
额定转矩 (N·m) Rated torque	0.159		0.318		0.637	1.273
瞬间最大转矩 (N·m) Instantaneous max. torque	0.477		0.955		1.910	3.820
额定转速 (rpm) Rated speed	3000		3000		3000	
瞬间最大转速 (rpm) Max. rated speed	3500	5000	3500	5000	5000	3500
惯量 (kg·m ² ×10 ⁻⁴) Moment of inertia	无制动器 No brake		0.034		0.127	0.196
	带制动器 With brake		0.041		0.175	0.244

环境规格 Environmental specifications

使用周围温度 Operating temperature	0°C~40°C (无冻结) Prevent freezing
使用周围湿度 Operating humidity	20~85%Rh (无结露) Prevent condensation
额定时间 Rated time	连续 Continuation
振动等级 Vibration class	V15(JEC2121)
承受振动 Durability vibration	10~150Hz 加速度100m/s ² Acceleration
承受冲击 Durability impact	马达本体 200m/s ² XYZ各方向 3回 Motor itself XYZ each direction 3times
保护结构 Protection structure	IP50
使用保存环境 Ambient conditions	无腐蚀性气体 No corrosive gas
保存环境温度 Ambient temperature for storage	-20°C~65°C (无结露) Prevent condensation

AC200V系列、DC24V・DC48V系列的环境规格相同。
Environmental specifications are common to both AC200V series and DC24V・DC48V series.

马达机型的识别方法 How to find motor model numbers

MP101	N	2	S	W	01
马达额定输出 Motor rated output	保持制动器 Protection brake	电压规格 Voltage specification	轴端规格 Shaft-end specification	管理号码 Control number	
符号 Symbol 额定输出 Rated output MP500 50W(□42) MP101 100W(□42) MP201 200W(□62) MP401 400W(□62) MP751 750W(□80)	符号 Symbol 制动器 Brake N 无制动器 No brake A 24V制动器 24V brake	符号 Symbol 电压 Voltage 2 DC280~320V (AC200~230V) 3 DC24V 4 DC48V	符号 Symbol 轴端规格 Shaft-end specifications S 直轴 Straight K 键槽 Keyway D D型轴 D shaft A A型轴 A shaft	编码器 Encoder	
				符号 Symbol 规格 Specifications W 绝对值 14Bit Absolute value	

● 咨询相关产品、请看封底的联系方式。
For additional information, please contact the offices listed on the back cover.

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驱动器・电源组件 Drivers · Power supply unit

驱动器基本规格 Basic specifications of drivers

基本规格 Basic specifications	机型 Model name		DJ23D11		DJ23D12	
	适用马达 Applicable motors		AC200V规格电机全机种 All motors specified AC200V			
	输入电源 Input power supply	主电路电源 Main circuit power supply	DC280~320V (-15~+10%)			
		控制电源 control power supply	DC24V±10% 100mA (Typ.)			
	控制方式 control system		三相PWM逆变器正弦波驱动 Sinusoidal waveform for three-phase PWM inverter drive			
	编码器回应 Encoder feedback		绝对值编码器 (加外接电池可多圈测定) Absolute encoder (adaptable to multi-rotation use with additional batteries)			
	控制信号 Control signals	输入 Input	光电耦合器输入 (2 4 V系绝缘、5点) Photo isolated input			
		输出 output	集电极开路输出 (2 4 V、5点) Open collector output (24V, 5point)			
	模拟量 / 数码信号 Analog/ Digital signal	输入 Input	模拟量输入 (± 10V、1点) Analog input (±10V, 1point)			
		输出 output	-			
	脉冲信号 Pulse signal	输入 Input	位置指令信号 (1点) Position command signal (1point), EIA-422差动 EIA-422 differential	集电极开路 Open collector		
		输出 output	编码器信号 (1点) Encoder signal (1point), EIA-422差动 EIA-422 differential			
	通信功能 communication function		半双工异步串行通信 1Ch (多点对应) Half duplex, asynchronous serial communication 1ch (applicable to multidrop) EIA-485差动 EIA-485 differential			
	安全功能 Safety function		-			
	显示功能 Indicating function		用LED灯的闪灭提示错误 LED error indications			
	动态制动器 Dinamic braking		软件控制 Software control			
	控制模式 Control mode		位置控制、模拟量输入速度控制 Position control, analog input deceleration control → Speed control			
	控制输入 Control input		伺服ON Servo on、错误复位 Error reset、电源RDY Power supply RDY、禁止输入指令 No command input、偏差计数清零 Deviation counter clear、P/P1控制切换 changeover P/P1 control			
	控制输出 control output		伺服状态 servo mode、错误 Error、定位结束 Complete positioning			
功能 Function	位置控制 Position control	脉冲输入 Pulse input	最大指令脉冲周波数 Maximum command pulse frequency	2Mpps	200Kpps	
			输入脉冲信号形态 Input pulse signal form	位置指令脉冲/方向、AB相直角位相脉冲信号 Position command pulse/ Direction, AB phase quadrature pulse signal		
			指令脉冲分倍频 Command pulse division/ multiplication	有 Enabled		
			平滑化方式 Smoothing method	FIR滤波器 FIR filter		
		脉冲输出 pulse output	输出脉冲信号形态 Output pulse signal form	编码器位置脉冲 Encoder position pulse (AB相直角位相脉冲信号、Z相索引脉冲信号) (AB phase quadrature pulse signal, Z index pulse signal)		
	通用 Same	模拟量输入 Analog input	转矩限制指令输入 Torque limit input	有 Enabled		
		制振控制 Damping control		有 Enabled		
		调试/功能设定 Tuning/ Function setup		用专用软件「HPSMT」进行调试		
		保护功能 Protection function	硬件错误 Hardware error	过电压、超速、过电流、超负荷、过热、编码器异常 Over voltage, over speed, over current, overload, overheat, encoder error		
			软件错误 Software error	位置偏差过大、参数异常 Excessive position deviation, parameter error		
警报数据跟踪功能 Traceback function on alarm data		可参照警报数据履历 Error alarm log function				

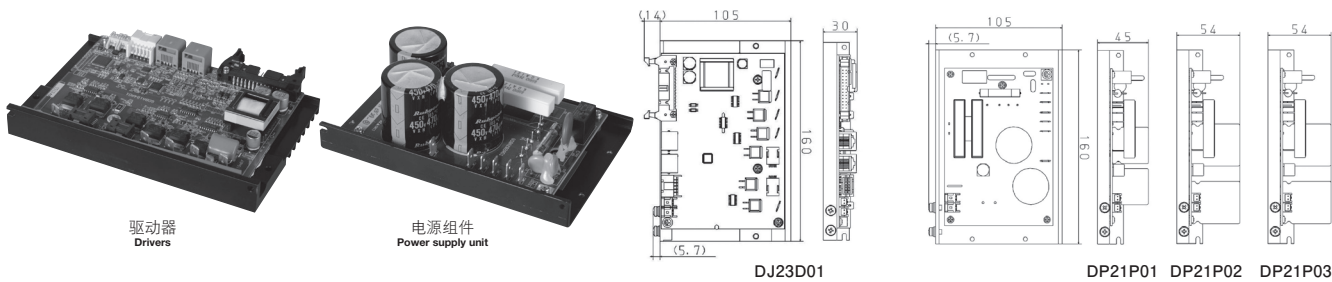
电源组件基本规格 Power supply unit basic specification

项目 Item		规格 Specification			
机型 Model name		DP21P01	DP21P02	DP21P03	DP22P14
适用马达 Applicable motors		输出到200W合计 Total output 200W	输出到400W合计 Total output 400W	输出到800W合计 Total output 800W	输出到1200W合计 Total output 1200W
输入 input	电压 Voltage	AC200~230V			
	周波数 Frequency	50Hz/60Hz			
	电源容量 (额定电流) Power supply capacity	约0.5KVA Approximately 0.5KVA	约0.9KVA Approximately 0.9KVA	约1.5KVA Approximately 1.5KVA	约2.6KVA Approximately 2.6KVA
	推荐漏断路器 Recommended circuit braker	10A	10A	15A	30A
输出 output	额定直流输出电流 Rated output current	1.5A	2.5A	4A	4A
可连接的再生抗阻值 Connectable regenerative resistance		-	-	-	30~50Ω
容许再生电力 Regenerative power capacity		-	-	-	60W

环境规格通用 Common environmental specification

环境规格 Environmental specification	使用周围温度 Ambient temperature for operation	0~55℃(无结露) Prevent condensation
	使用周围湿度 Ambient humidity for operation	20~85%Rh以下 (无结露) Prevent condensation
	标高 Altitude	海拔1000m以下 Equal and below 1000 meters ASL
	振动 Vibration	5.8m/s2(0.6G)以下10~60Hz (不可在共振周波数下连续使用) Unable to use continuously at resonance frequency
	保存周围温度 Ambient temperature for storage	-20~65℃(无结露) Prevent condensation
	保存周围湿度 Ambient humidity for preservation	20~85%Rh以下 (无结露) Prevent condensation

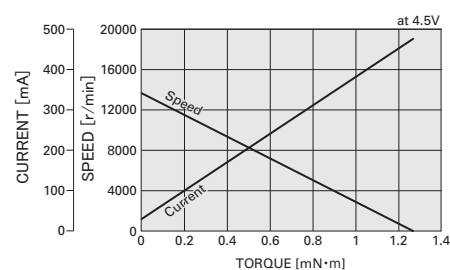
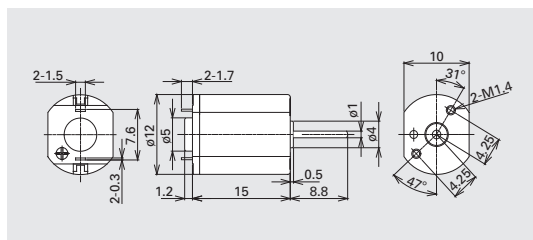
驱动器・电源组件外形尺寸 (单位: mm) Drivers · Power supply unit outside diameter (mm)



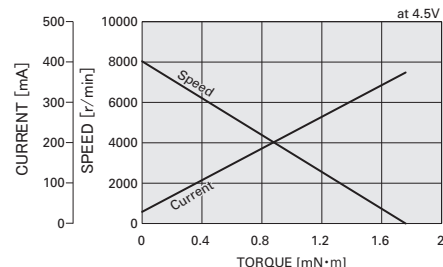
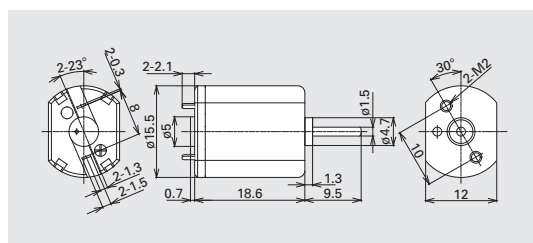
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DC MOTORS Brush type

■ NAW Type



■ NAX Type

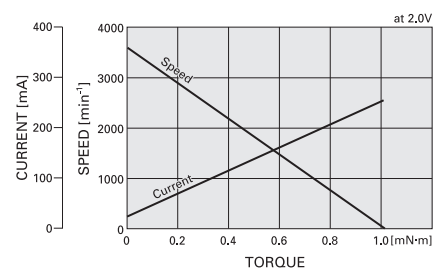
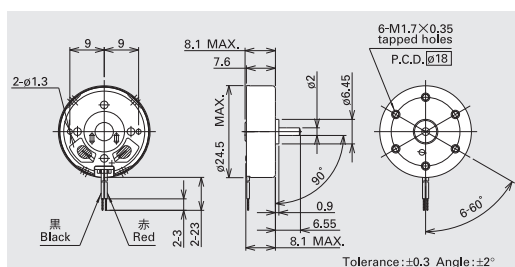


以4极6槽的构造实现高扭力 High Torque in 4 Pole-6 Slot Structure

J系列 J series

JCR Type

两轴
Double
Sintered
Metal

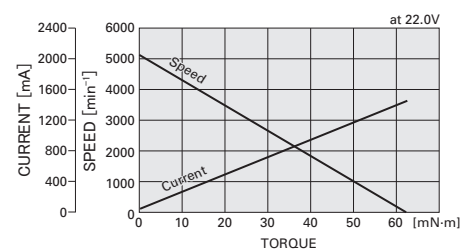
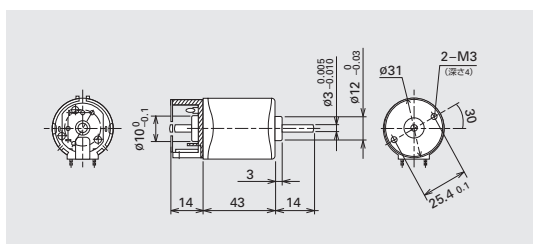


高扭力可适用于多种用途 High Torque, for various application

动力辅助用途 For Power Assist

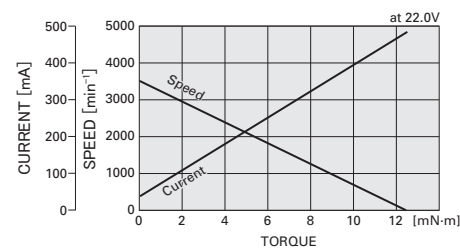
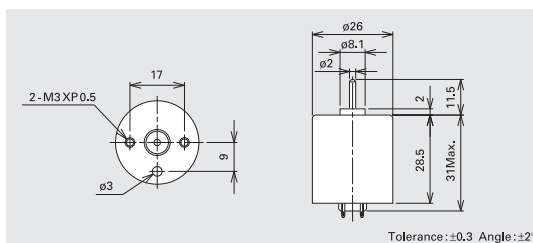
■ JHA Type

两轴
Double
Sintered
Metal



■ MDB Type

两轴
Double
Sintered ed
Metal



上記有负载时的回転数及電流測定値は其代表特性。如有確認到您希望の特性、还请隨時問詢。

Above curves show typical characteristics, but we can customize to your requests.

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步进马达

STEPPING MOTORS

步进马达种类 Stepping Motors Line-up

PM型 PM Type

Model	Size mm	Voltage (/Phase) V	Step angle DEG	Step accuracy %	Resistance (/Phase) Ω	Holding torque mN·m {gf·cm}	Rotor inertia g·cm ²	Weight g	Feeding method			
									FPC	Lead wire	Pin connector	
	Optical instrument	Computer peripherals										
MSDU	Ø3.4×4.8	3	18	5	25	0.04 {0.4}	0.00016	0.35	○			
MSBU	Ø4×5.24	5	22.5	5	40	0.1 {1.0}	0.00054	0.55	○			
MSEU	Ø5×4.2	33	18	5	26	0.12 {1.2}	0.00042	0.45	○			
MSLT	Ø6×4	5	18	5	50	0.14 {1.4}	0.00145	0.74	○			
MSKR	Ø6×5.33	4	18	5	30	0.14 {1.4}	0.00174	0.85	○			
MSMR	Ø6×5	4	18	5	21	0.16 {1.6}	0.00174	1.29	○			
MSAT	Ø6.5×5.5	3	18	5	40	0.15 {1.5}	0.002	2	○			
MSHR	Ø6.5×7.5	4	18	5	40	0.35 {3.5}	0.004	3	○			
MSMW	Ø7×3	3	18	5	20	0.33 {3.3}	0.003	1.2	○			
MSKW	Ø7×6×3.9	3	18	5	30	0.18 {1.8}	0.005	1.4	○			
MSLR	Ø7×4.7	3	18	5	40	0.26 {2.6}	0.005	1.4	○			
MSEV	Ø8×8.5	3	18	5	40	0.20 {2.0}	0.012	3	○			
MSBV	Ø8×8	3	18	5	40	0.35 {3.5}	0.012	3	○			
MSCV	Ø10×10	5	18	5	60	0.34 {3.5}	0.012	8	○			
MSCT·MSCTS	Ø7×5×14	4	22.5	5	14.5	0.43 {4.4}	0.02	6	○			
MSAW·MSAWS	Ø7.5×6×14	4	22.5	5	13	0.68 {7}	0.025	8	○			
MSGN	Ø10×11.4	7	18	5	18	1.76 {18}	0.05	7	○			
MSDN	Ø10×10	5	18	5	14	1.18 {12}	0.03	4.3	○			
MSDP	Ø15×12.2	5	18	5	20	2.74 {28}	0.08	11	○			
MSCA	Ø15×10.5	5	18	5	18	3.43 {35}	0.06	10	○			
MSGB	Ø25×12.2	12	48	5	28	30 {306}	1.2	29	○			

PM齿轮型 PM with Gear Box Type

Model	Size mm	Voltage (/Phase) V	Step angle DEG	Gear ratio	Resistance (/Phase) Ω	Detent Torque mN·m {gf·cm}	Weight g	Feeding method		
								FPC	Lead wire	Pin connector
For Home Appliances										
MSBPC	Ø20×19	12	7.5/85	1/85	300	29.4 {300}	20		○	○
MSKPC	Ø24×19	12	5.625/64	1/64	380	49 {500}	30		○	○
MSFJC	Ø25×19	12	5.625/64	1/64	380	39.2 {400}	35		○	○
MSFBC	Ø30×17	12	7.5/85	1/85.25	400	58.8 {600}	50		○	○
MSCRB	Ø35×30	12	7.5/12.9	1/12.9	25	39.2 {400}	80		○	○
MSRPC	Ø24×19	12	5.625/64	1/64	300	39.2 {400}	32			○
MSJS	Ø35×17	12	7.5/85	1/85	250	29.4 {300}	55			○
MSKS	Ø35×27	12	7.5/42.5	1/425	150	68.6 {700}	85		(○)	○

车载马达

Model	Size mm	Voltage (/Phase) V	Step angle DEG	Gear ratio	Resistance (/Phase) Ω	Holding torque mN·m (gf·cm)	Weight g	Feeding method		
								FPC	Lead wire	Pin connector
MSXB	Ø31×9.55	5	0.5		227	4.2	7			
EM20	Ø28×25	12	18		80	—	36			○
EM28	Ø30×46.5	12	15		48	—	62			○

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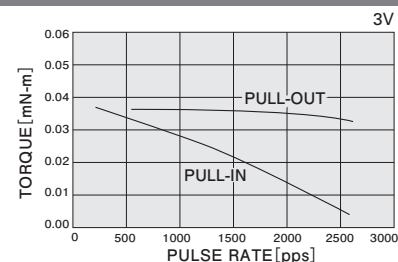
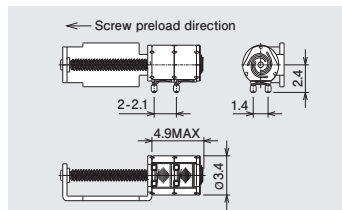
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步进马达 STEPPING MOTORS

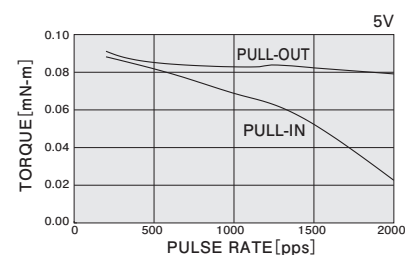
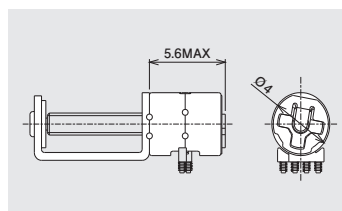
光学设备·信息设备用
FOR OPTICAL INSTRUMENT, COMPUTER PERIPHERALS

PM型 PM Type

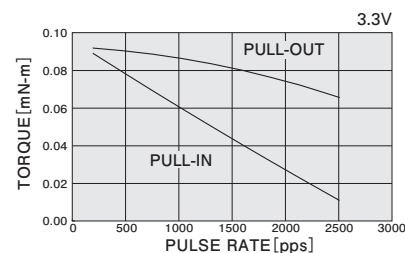
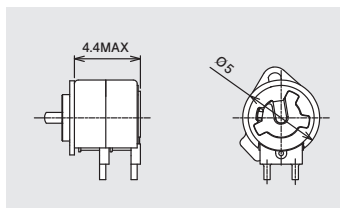
Ø3.4 MSDU series



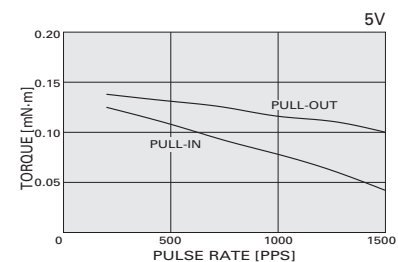
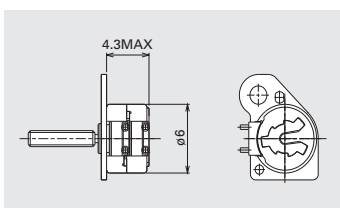
Ø4 MSBU series



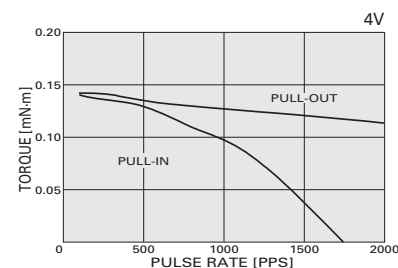
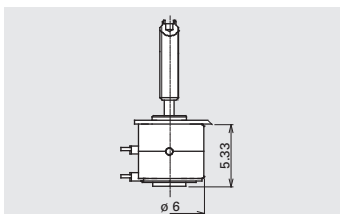
Ø5 MSEU series



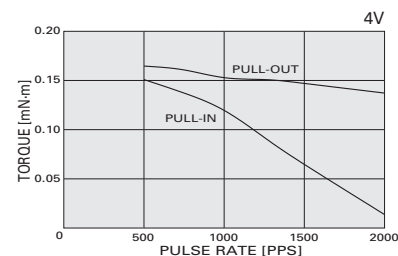
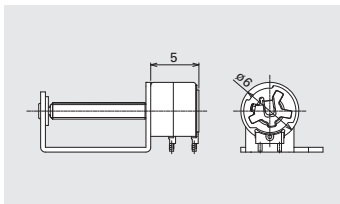
Ø6 MSLT series



MSKR series



MSMR series



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马达

马达驱动组件

读卡机

工业机器人

塑料成型用品

传感器

电气接点

八音盒

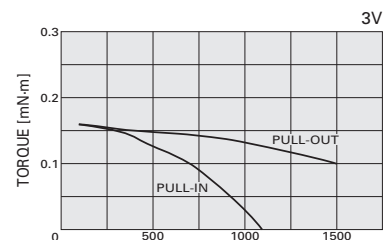
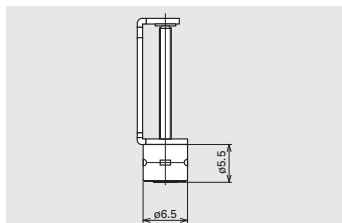
步进马达

STEPPING MOTORS

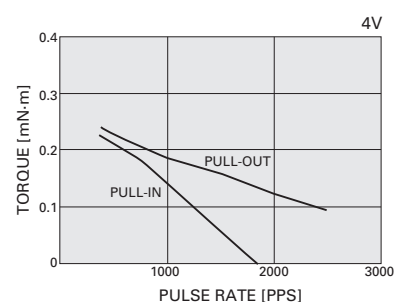
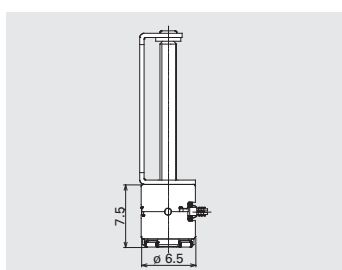
光学设备・信息设备用
FOR OPTICAL INSTRUMENT, COMPUTER PERIPHERALS

PM型 PM Type

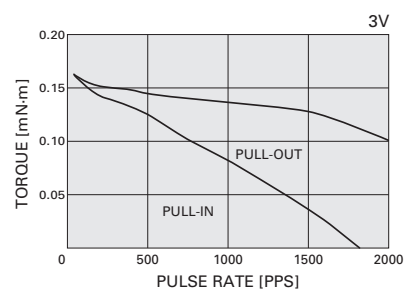
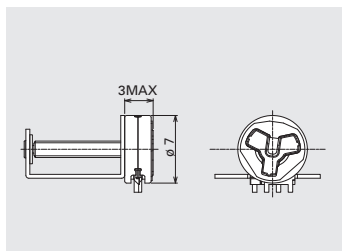
Ø 6.5 MSAT series



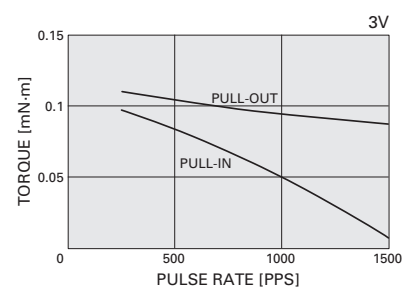
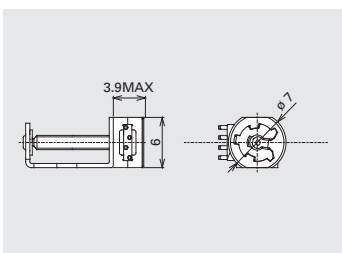
MSHR series



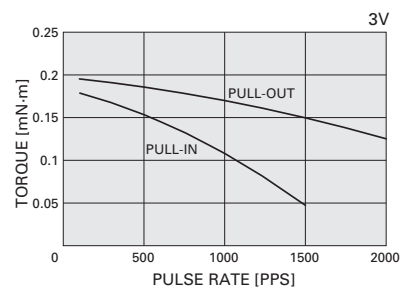
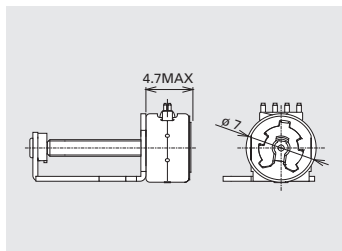
Ø 7.0 MSMW series



MSKW series



MSLR series



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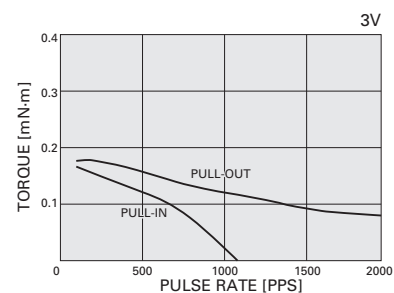
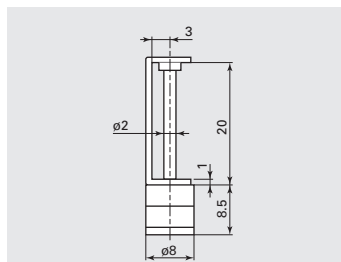
步进马达 STEPPING MOTORS

光学设备・信息设备用
FOR OPTICAL INSTRUMENT, COMPUTER PERIPHERALS

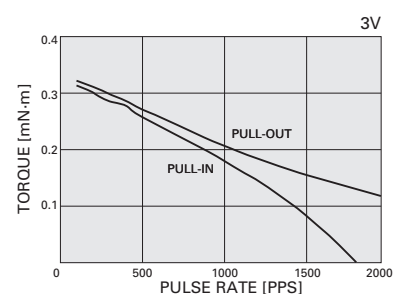
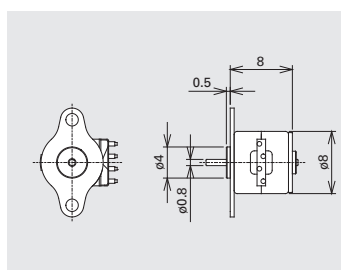
PM型 PM Type

Ø 8

MSEV series

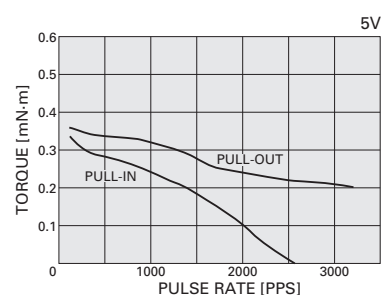
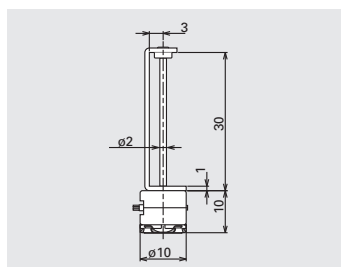


MSBV series



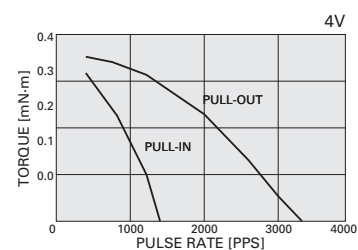
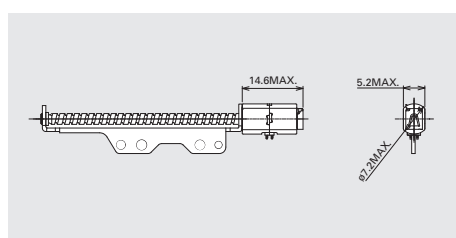
Ø 10

MSCV series

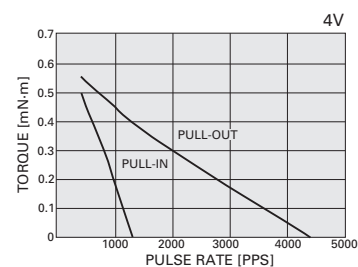
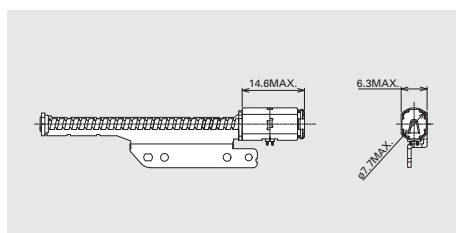


小判

MSCT MSCTS series



MSAW MSAWS series



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马达

马达驱动组件

读卡机

工业机器人

塑料成型品

传感器

电气接点

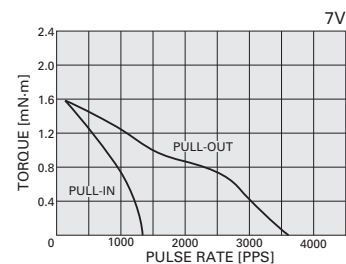
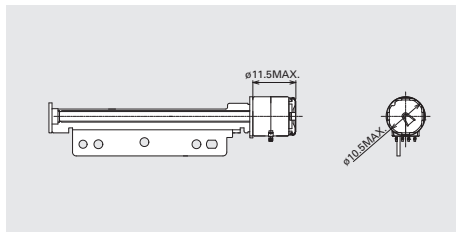
八音盒

步进马达 STEPPING MOTORS

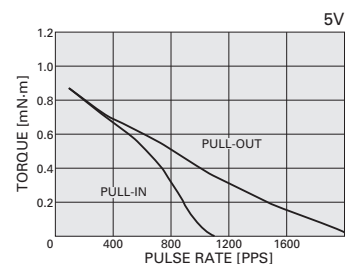
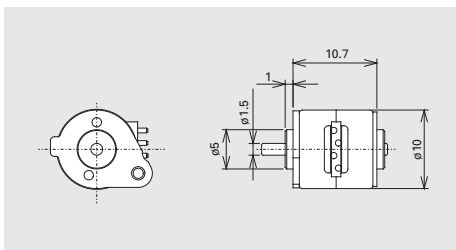
光学设备・信息设备用
FOR OPTICAL INSTRUMENT, COMPUTER PERIPHERALS

PM型 PM Type

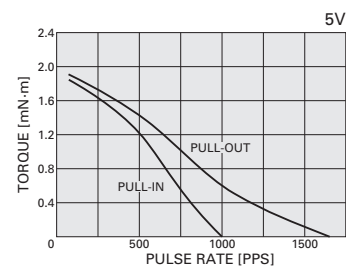
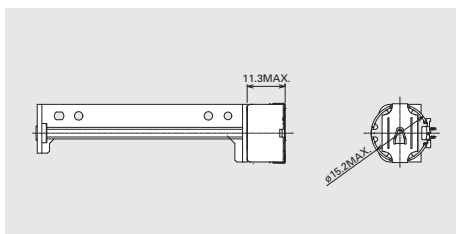
Ø 10 MSGN series



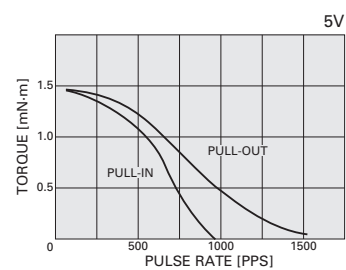
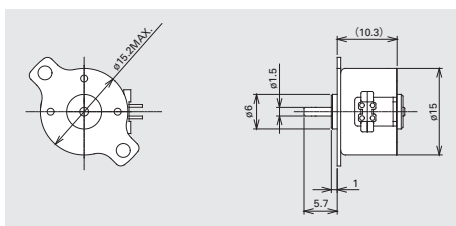
MSDN series



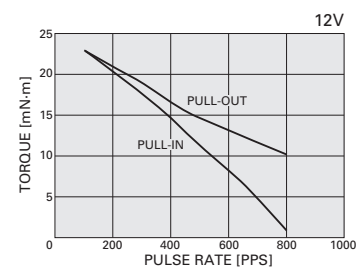
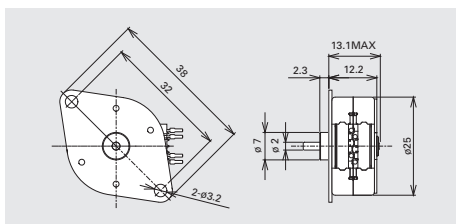
Ø 15 MSDP series



MSCA series



Ø 25 MSGB series



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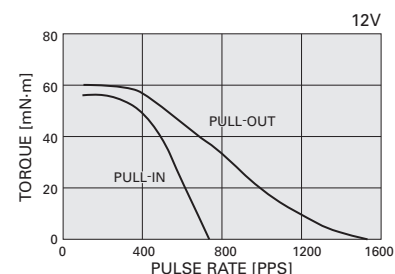
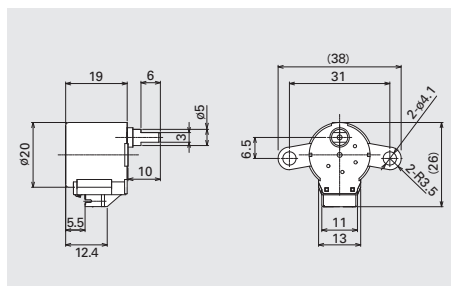
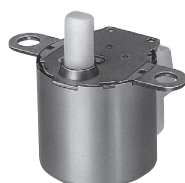
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步进马达 STEPPING MOTORS

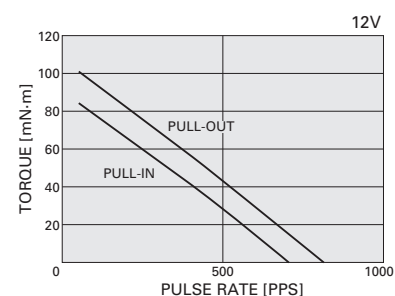
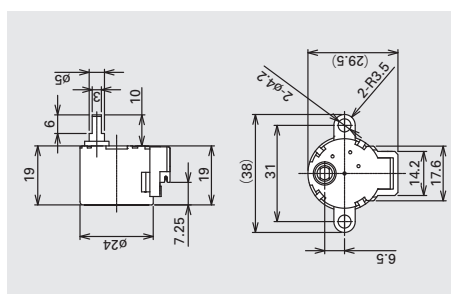
家电・住宅用
FOR HOME APPLIANCES

PM齿轮型 PM with Gear Box Type

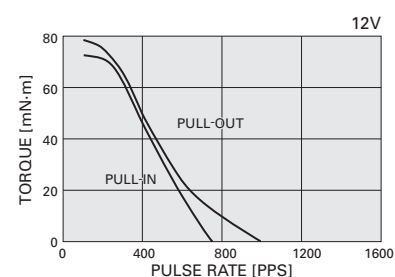
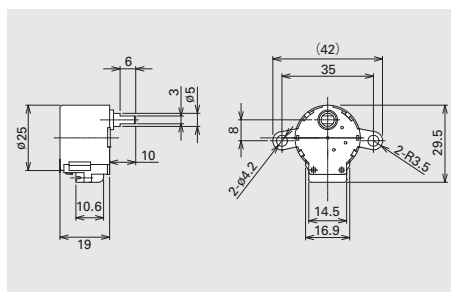
MSBPC series



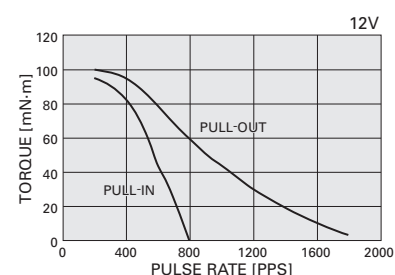
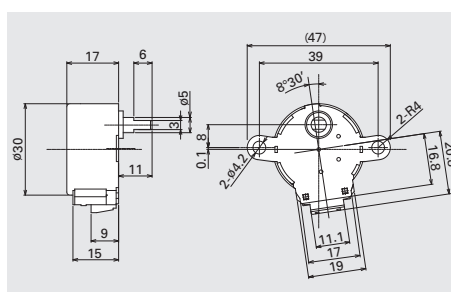
MSKPC series



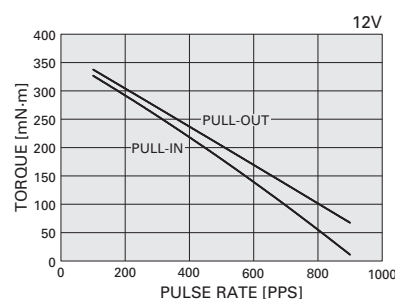
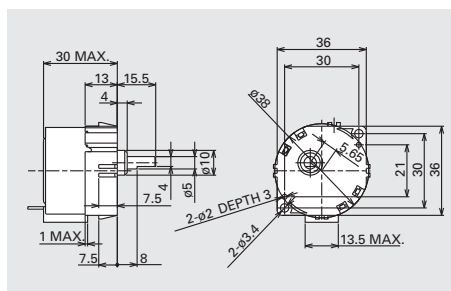
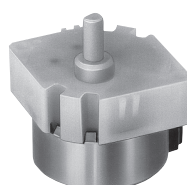
MSFJC series



MSFBC series



MSCRB series



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马达

马达驱动组件

读卡机

工业机器人

塑料成型机

传感器

电气接点

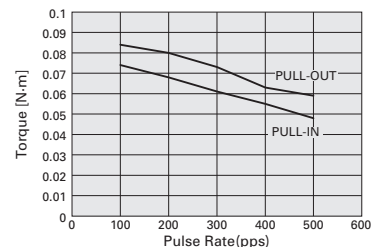
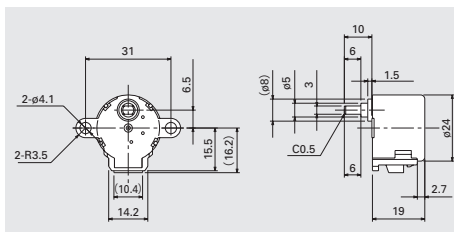
八音盒

步进马达 STEPPING MOTORS

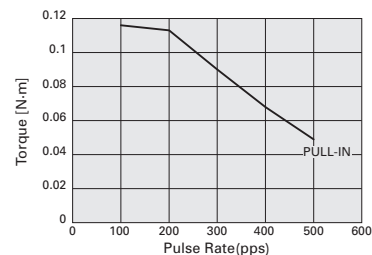
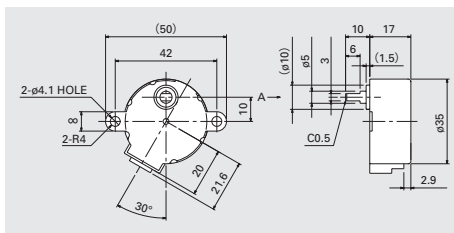
家电・住宅用/车载用
FOR HOMEAPPLIANCE/FOR AUTOMOTIVE

PM齿轮型 PM with Gear Box Type

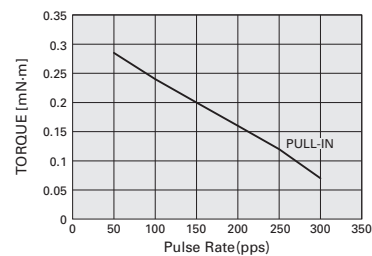
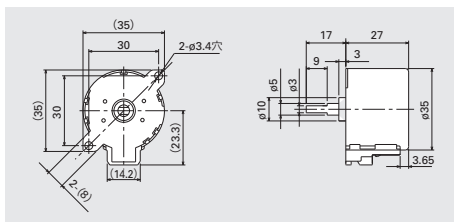
MSRPC (旧机种名※：MP24)



MSJS (旧机种名※：MP35EA)

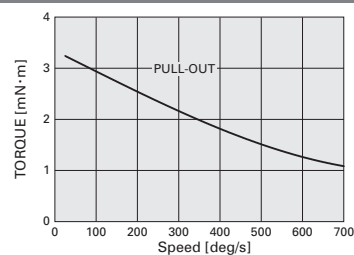
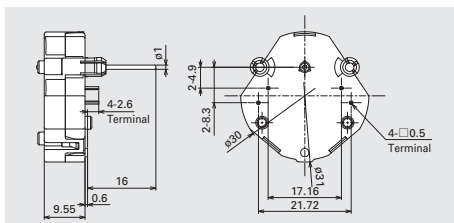


MSKS (旧机种名※：MP35HCA)

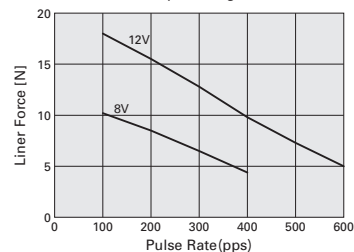
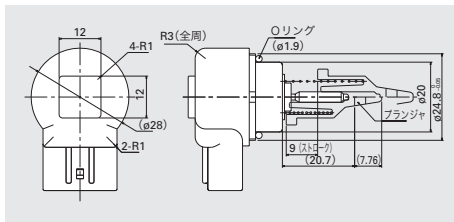


车载马达 On-Vehicle Motor

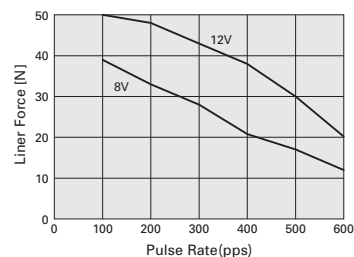
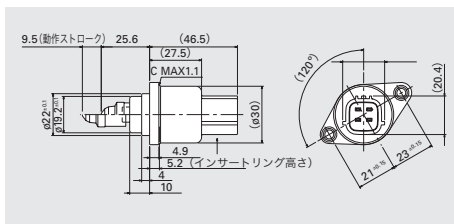
MSXB



MSSP (旧机种名※：EM20)



MSMS (旧机种名※：EM28)

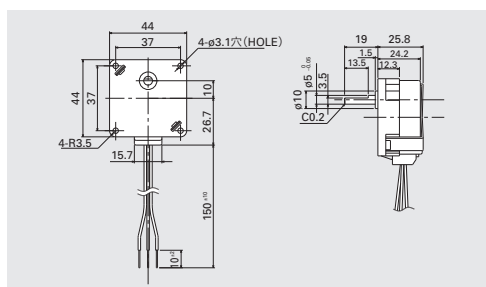
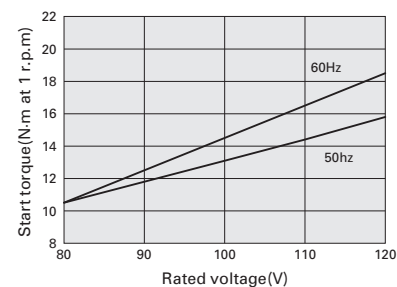
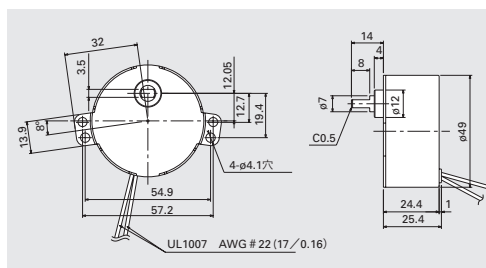
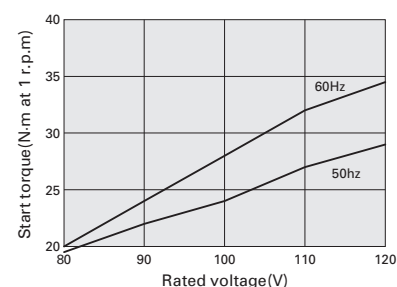
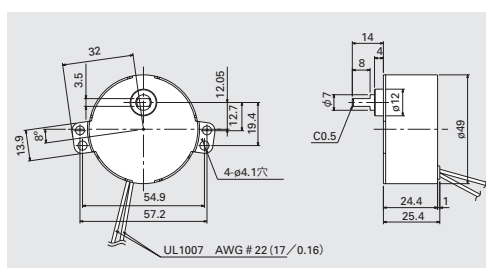
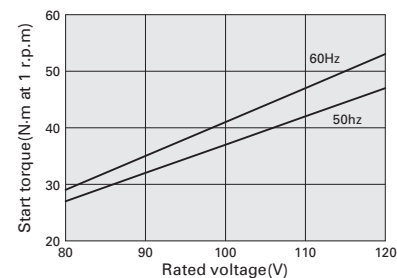
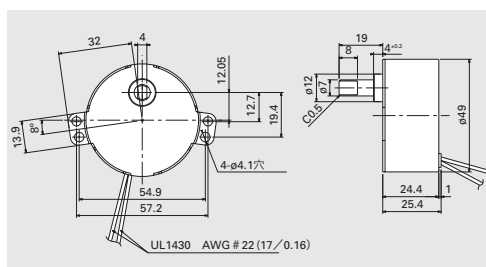


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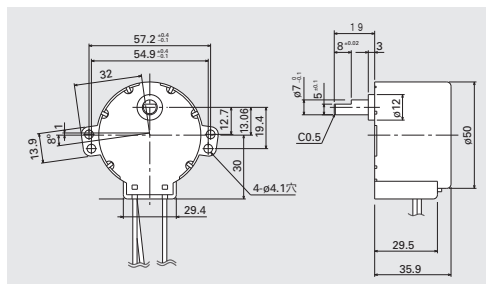
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家电·住宅用
FOR HOME APPLIANCES



电压 V	100	输出轴旋转次数 (min-1) 50/60Hz
频率 Hz	50/60	
消费电力 W	4.5	
无负载电流 mA	45 以下	
电容量 μF	0.47	
启动电压 V	85 以下	
启动扭矩 (每 1min ⁻¹ (r.p.m.)) N·m(kgf·cm)	2.5 (25)	
制动扭矩 (每 1min ⁻¹ (r.p.m.)) N·m(kgf·cm)	2.9 (30)	
使用周围温度℃	-10~60	
耐性	AC1,500V1 分钟	



电压 V	100	200 ~ 240	输出轴旋转次数 (min-1) 50/60Hz
频率 Hz	50/60	50/60	
消费电力 W	3.5	4.0	
无负载电流 mA	35 以下	20 以下	
电容量 μ F	0.4 ~ 0.47	0.1 ~ 0.12	
启动电压 V	80 以下	160 以下	
启动扭矩(每 1min ⁻¹ (r.p.m)) N·m(kgf·cm)	5.9 (60)	5.9 (60)	
制动扭矩(每 1min ⁻¹ (r.p.m)) N·m(kgf·cm)	7.8 (80)	7.8 (80)	
使用周围温度 °C	-10~60	-10~60	
耐性	AC1,500V	AC1,500V	62.5/75
	1 分钟	1 分钟	83.3/100

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马达驱动组件

MOTOR DRIVE UNITS

冰箱用
FOR REFRIGERATORS

冷媒阀系列 Refrigerant Valve Series

NSCE
用途
Applications

- 冰箱用冷媒阀
- Refrigerant valve of refrigerator

特点
Features

- 微调、多通阀对应
- 通过步进驱动实现高功能性与低噪音对应
- Fine adjustment control and multi port
- Low noise & hi-function by stepping motor



NSCE

3通阀组件
Three ways Valve Unit



NSCE

4通阀组件
Four ways Valve Unit



		NSCE
马达驱动部 Motor driving parts	额定电压 Rated voltage	DC12V
	输入电流 Current input	700mA以下 700mA or less
	励磁方式 Excitation	1-2相励磁、单极方式 30pps±2 1-2 phase excitation, uni-polar 30pps±2
	步进角 Step angle	3.75°
阀门部件 Valve parts	通气阀数量 Port	多通阀对应 Multi port valve
	标准动作 Standard operation	2~9模式 2~9 mode
		3通: 开关、关关、关开、开开 / 3 ways valve: Open-close, Close-close, Close-open, Open-open 4通: 开关关、关开关、关关开 / 4 ways valve: Open-close-close, Close-open-close, Close-close-open
	最高压力差动作 Max. operation pressure difference	1.77MPa
	气密试验压力 Airtight test pressure	1.77MPa
	耐压试验压力 Strength test pressure	6.86MPa
使用流体 Operation fluid		R134a・R600+冷冻机油 R134a・R600 + Freezing machine oil
安装姿势 Basic placement		和通风管下侧呈垂直方向±15° ±15° at vertical direction which a pipe should be kept downward.
使用温度范围 Operating temperature		-10℃~70℃

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马达驱动组件

MOTOR DRIVE UNITS

冰箱用
FOR REFRIGERATORS

风门系列 Damper Control Series

NSCE
用途
Applications

- 冷气排气口的开关控制
- Chilled air control of refrigerator

特点
Features

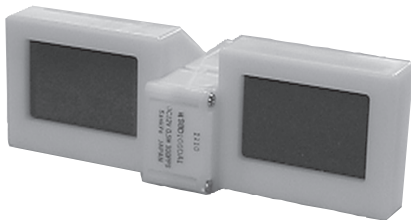
- 风道内安装对应
- 通过风门开闭, 控制冰箱内冷气
- 搭载步进马达、实现微调及节能效果
- in air duct type
- It controls cold air in the refrigerator by swinging the window part.
- By driving the stepping motor, it actualizes torefrigerator. control cold air in the It contributes to the energy saving of the refrigerator.



NSBC



NSBD



NSBK/NSBL



		NSBC	NSBD	NSBK/NSBL
马达驱动部 Motor driving parts	额定电压 Rated voltage	DC12V 300 pps		
	输入电流 Current input	60mA以下 60mA or less		
	励磁方式 Excitation	2相励磁、双极驱动 2 phase excitation, bi-polar		
	步进角 Step angle	7.5°/step		
导流板部 Valve parts	导流板 Baffle	单门型 Single type	双门型 Twin type	单门型 Single type
	步进角 Step angle	输出轴: 大约0.05 Output shaft about 0.05°		
	动作 Operation	关→开→关 Close → Open → Close	关关→开关→开开→关关→关关 Close-close → Open-close → Open-open → Close-open → Close-close	关→开→关 Close → Open → Close
	动作时间 (单方向) Operating time (one way)	约6.2秒 About 6.2s	约21.1秒 About 21.1s	约6.2秒
	轴部输出扭矩 Output shaft torque	0.08N·m以上 0.08N·m or more		
其他 Other	发热装置 Heater			额定: 1W Rating: 1W
使用温度范围 Operating temperature		-30°C~35°C		

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马达

马达驱动组件

读卡机

工业机器人

塑料成型机

传感器

电气接点

八音盒

马达驱动组件
MOTOR DRIVE UNITS

冰箱用
FOR REFRIGERATORS

制冰机系列 Ice Maker Series

- NTGZ
用途
Applications

- 制冰机驱动组件
 - Automatic ice cube maker for refrigerator
- 特点
Features

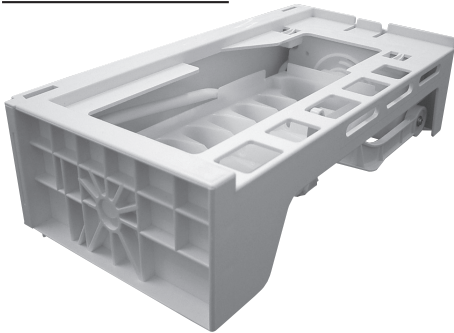
- 在贮冰箱中存储一定量的冰、离冰功能及冰量检测功能
 - 内置冰块解除功能（检冰轴）
 - Control the amount of ice cube by check-lever
 - Freeze breaking function is built in (check-lever)
- NTGM
用途
Applications

- 冰箱、全自动洗衣机、洗澡水供水
 - Ice trays for refrigerator, full automatic washing machines
- 特点
Features

- 由于齿轮泵式样有自吸功能、无需引水
 - Self absorption system by gear pump



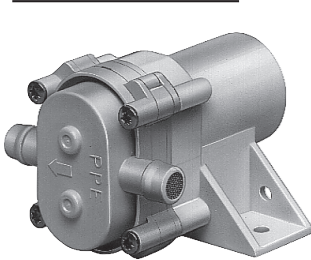
NTPV



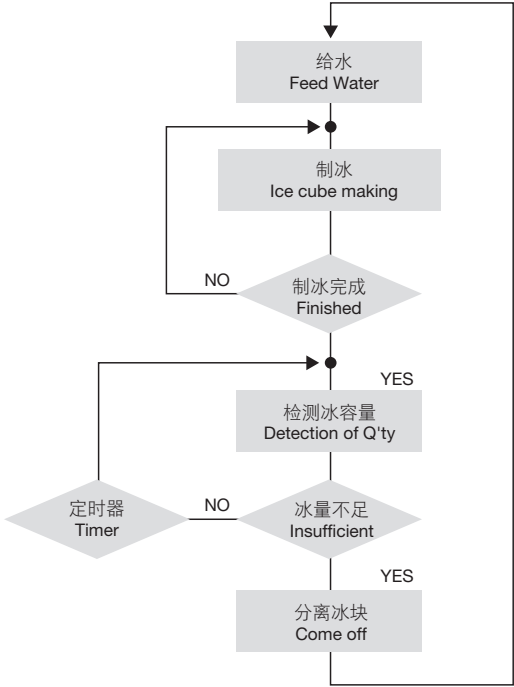
NTGZ



NTGM



自动制冰系统的概要
AUTOMATIC ICE CUBE MAKING SYSTEM



			NTPV	NTGZ	NTGM
马达驱动部 Motor driving parts	使用电压 Voltage for use	马达 Motor	DC10~13V	DC10~13V	DC12V
		微动开关 Tact switch	DC4.5~15V	DC4.5~15V	—
	输入电流 Current input	无负荷 No load	100mA 以下 100mA or less	100mA 以下 100mA or less	250mA 以下 250mA or less
		额定负荷 Rated load	300mA 以下 300mA or less	300mA 以下 300mA or less	—
输出轴扭矩 Output shaft torque		0~120° 120~160°	0N・m 4N・m	0N・m 4N・m	—
自吸高度 Sucking height		软管内径=Φ8 Inside diameter of the house=Φ8	—	—	150mm以上 150mm or more
动作时间 Operating time			大约30秒 About 30s	大约30秒 About 30s	—
使用温度范围 Operating temperature			-30℃~0℃	-30℃~0℃	0℃~20℃
制冰量/1次 Quantity of ice/1 time			大约100g About 100g	—	—

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马达驱动组件
MOTOR DRIVE UNITS

冰箱用
FOR REFRIGERATORS

化霜定时器系列 Defrost Time Switch Series

- 用途
Applications
- 冰箱、冷冻柜、陈列柜等的化霜定时器
● Defrost timer for refrigerator, freezer, show-case and others
- 特长
Features
- 确保通过AC同步马达驱动确保高可靠性

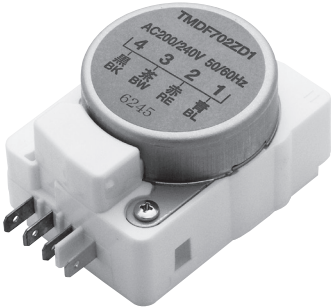
● 可以选择周期及除霜时间

● Hi-reliability at AC inductor motor

● Possible to choose the cycle and defrost time



TMDF



TMDJ



		TMDF			TMDJ	
					Condenser type	
马达驱动部 Motor driving parts	额定电压 Rated Voltage	AC 100V	AC 110/127V(50/60Hz)	AC 200/240V(50/60Hz)	AC 120V(50/60Hz)	AC 230V(50/60Hz)
	输入电流 Current input	15mA以下 15mA or less	17mA以下 17mA or less	8mA以下 8mA or less	10mA以下 10mA or less	15mA以下 15mA or less
	启动电压 Starting voltage	70V以下 70V or less	75V以下 75V or less	120V以下 120V or less	100V以下 100V or less	190V以下 190V or less
	消耗功率 Power consumption	1.3W以下 1.3W or less	1.7W以下 1.7W or less	1.6W以下 1.6W or less	0.4W以下 0.4W or less	0.6W以下 0.6W or less
开关额定功率 Switch rating	压缩机侧 Compressor side	AC 125V 6A COSφ=0.5~1 AC 250V 5A COSφ=0.5~1			AC 125V 1／3HP AC 250V 1／3HP	
	除霜侧 Defrost side	AC 125V 6A COSφ=1 AC 250V 5A COSφ=1			AC 125V 10A COSφ=1 AC 250V 5A COSφ=1	
使用温度范围 Operating temperature		-20℃~60℃			-20℃~70℃	

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马达

马达驱动组件

读卡机

工业机器人

塑料成型品

传感器

电气接点

八音盒

马达驱动组件

MOTOR DRIVE UNITS

洗衣机用
FOR WASHING MACHINES

排水阀驱动系列 Drain Valve Control Series

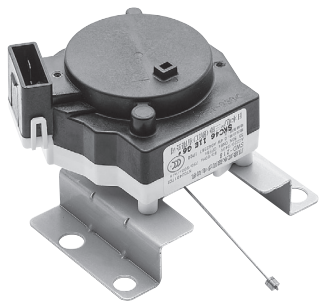
用途 Applications ●全自动洗衣机的排水电机
●Drain valve operation for full automatic washing machines

特点 Features ●AC电源驱动(AC100~240V、50/60Hz)
●通过感应离合器实现位置保持功能/NTCU
●通过单向离合器实现单方向旋转功能/NTCT
●AC driving supply (AC100~240V、50/60Hz)
●Hold the position by inductor clutch/NTCU
●One direct rotation by one way clutch/NTCT



(NTCU, NTCT)

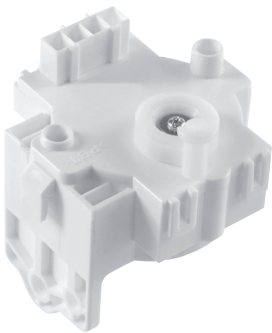
NTCU With Bracket



NTCU



NTCT



機種名		NTCU	NTCT
马达部	额定电压	AC100V(50/60Hz) AC220-240V(50/60Hz)	AC100V(50/60Hz) AC220-240V(50/60Hz)
	使用电压范围	AC85~115V(AC100V类型) AC187~276V(AC220-240V类型)	AC85~115V(AC100V类型) AC187~276V(AC220-240V类型 50Hz) AC204~246V(AC220-240V类型 60Hz)
	输入电流	40±5mA(AC100V/50Hz) 30±5mA(AC100V/60Hz) 17±5mA(AC220V/50Hz) 12±5mA(AC220V/60Hz) 20±5mA(AC240V/50Hz) 15±5mA(AC240V/60Hz)	44±5mA(AC100V/50Hz) 41±5mA(AC100V/60Hz) 19±5mA(AC220V) 22±5mA(AC240V)
输出部	驱动方式	拉线方式	回转头柄方式
	拉力	63.7N	25N
	动作时间	9.5s以下	5.3~7.0s(50Hz) 4.5~6.0s(60Hz)
	动作行程	27.2mm 23mm(BRACKET)	27.2~29.5mm
使用温度范围		-10°C~50°C	-5°C~40°C

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马达驱动组件

MOTOR DRIVE UNITS

洗衣机用
FOR WASHING MACHINES

洗衣机离合器切换驱动系统

用途 Applications ●将洗衣机马达旋转力适当传达给洗衣槽和蒸汽缸、并通过控制洗衣槽和蒸汽缸提高各工序的洗净效率。
●It adequately transmits the refrigerator motor torque the washing machine tub and the pulsator.
By controlling them it improve the efficiency of washinbg in each stage.

特点 Features ●商用电源驱动
●附带输出角度检测开关
●附带简易齿轮的马达驱动组件
●It is driven by a commercial power supply.
●The detection switch for the output angle is equipped.
●The driving motor unit with simple gear.

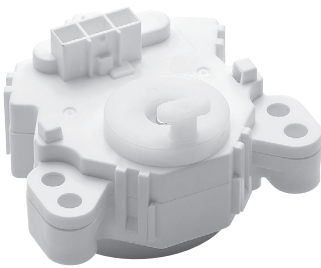


(NTVB, NTCV)

NTVB



NTCV



机种名		NTVB	NTCV
马达驱动部	额定电压	AC127V (60Hz) AC220-240V (50/60Hz)	AC100V (50/60Hz) AC220-240V (50/60Hz)
	使用电压范围	AC95～133V (AC127V类型) AC198～264V (AC220-240V类型)	AC90～110V (AC100V类型) AC198～264V (AC220-240V类型)
	输入电流	30.0±8mA (AC127V/60Hz) 15.5±5mA (AC220V/50Hz) 14.0±5mA (AC220V/60Hz) 17.5±5mA (AC240V/50Hz) 16.0±5mA (AC240V/60Hz)	39.0±8mA (AC100V/50Hz) 36.0±8mA (AC100V/60Hz) 20.5±5mA (AC220V/50Hz) 22.5±5mA (AC240V/50Hz)
输出部	驱动方式	摇动手柄方式 (动作角度：±24°)	回转手柄方式
	输出转速	5.0 r/min. (50Hz) 6.0 r/min. (60Hz)	3.3 r/min. (50Hz) 4.0 r/min. (60Hz)
	使用温度范围	0～50℃	0～50℃

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马达

马达驱动组件

读卡机

工业机器人

塑料成型机

传感器

电气接点

八音盒

马达驱动组件

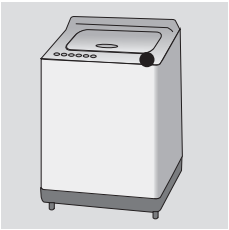
MOTOR DRIVE UNITS

洗衣机用
FOR WASHING MACHINES

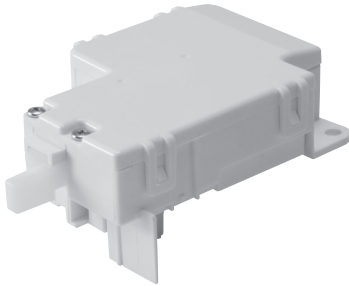
洗衣机盖板锁定系列 Lid Lock Series

用途 Applications
●全自动洗衣机的盖板锁定组件
●Lid lock unit for full automatic washing machines

特点 Features
●AC感应马达的使用
●通过滑块进行盖板锁定
●Drive by AC synchronous motor
●The lid is locked by the slider



NTCW



NTCY



		NTCW	NTCY
马达驱动部 Motor driving parts	额定电压 Rated voltage	AC100V(50/60Hz) AC110V(60Hz)	AC100V(50/60Hz) AC220V(50Hz)
	使用电压范围 Voltage range	AC85~115V(50Hz) AC85~121V(60Hz)	AC85~115V(50/60Hz) AC187~253V(50/60Hz)
	输入电流 Current input	24±2mA(AC100V/50Hz) 18±2mA(AC100V/60Hz) 22±2mA(AC110V/60Hz)	8.0±2mA(AC100V/50Hz) 6.8±2mA(AC100V/60Hz) 4.8±1mA(AC220V/50Hz)
输出部 Output parts	锁定方式 Lock type	滑动方式 Slider type	
	动作行程 Operating stroke	15mm	
	动作时间 Operating time	1s	
使用温度范围 Operating temperature		-10℃~60℃	-5℃~60℃

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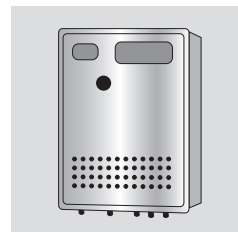
马达驱动组件

MOTOR DRIVE UNITS

热水器
FOR HOT WATER SUPPLIES

阀驱动系列 Valve Control Series

- 用途
Applications
- 切换热水器・太阳能等的双向阀・三通阀
●流量阀驱动、各种开关、位置控制机构
●2-way, 3way valves for hot water supply and solar heating
●Flow valve controls, position control and open/close
- 特点
Features
- 通过使用可移转差动齿轮实现小型化／NTGD
●通过脉冲控制实现高位置精度
●Compact body by used planet gear/NTGD
●Accurate positioning by pulse control



NTGD



NSAE



NSAM (旧机种名：MP35GU)



		NTGD	NSAE	NSAM (旧机种名：MP35GU)
马达驱动部 Motor driving parts	额定电压 Rated voltage	DC12V	DC12V	
	输入电流 Current input	150mA以下 150mA or less	350mA以下 350mA or less	
	励磁方式 Excitation	DC马达 DC motor	2相励磁 单极方式 2 phase excitation, uni-polar	
	步进角 Step angle	—	7.5°	
输出部 Output parts	输出轴扭矩 Output shaft torque	0.8N·m	0.64N·m	
	输出轴扭矩 Step angle	—	0.1166°	0.1177°
使用温度范围 Operating temperature		-20℃～60℃		

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马达

马达驱动组件

读卡机

工业机器人

塑料成型品

传感器

电气接点

八音盒

马达驱动组件

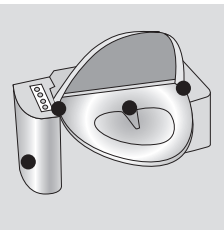
MOTOR DRIVE UNITS

卫浴
FOR SANITARY PRODUCTS

座便器开闭/阻尼器系列 Toilet Seat Control Series

- 用途
Applications
- 坐便器便座和盖板等的自动开闭装置及阻尼器
 - 卫生洁具用自动水洗阀驱动
 - 温水座便器清洁喷嘴驱动等
 - Automatic open & close for toilet ring and cover with oil damper
 - Valve drive units of automatic flush toilets for sanitary earthenware
 - Spary nozzle drive for warm-water flushing

- 特点
Features
- 对应小型・高扭矩的塑胶阻尼器
 - 通过单向阀实现单向慢落功能
 - 无噪音/NTMTGA
 - 步进马达方式
 - High torque for resin oil damper in compact body
 - Oneway damper structure by check valve
 - Less noise
 - Stepping motor drives



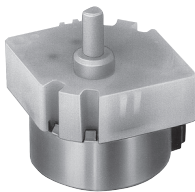
NTMT/NTMJ



NTTF



MSCRB



		NTMT/NTMJ (Toilet seat oil damper)	NTTF	MSCRB
马达驱动部 Motor driving parts	额定电压 Rated voltage	—	DC12V	DC12V
	输入电流 Current input	—	1.5A以下 1.5A or less	400mA以下(400pps) 400mA or less(400pps)
	励磁方式 Excitation	—	DC马达 DC motor	2相励磁、单极驱动 2 phase excitation, uni-polar drive
	步进角 Step angle	—	—	7.5°
输出部 In / Out put parts	输出轴扭矩 Output shaft torque	—	3.5N・m以上 3.5N・m or more	110mN・m以上
	输入轴扭矩 Input shaft torque	1.0~4.0N・m	—	—
	动作角度范围 Step angle	110°	120°	—
	动作时间 Operating time	5~20s	全开时间/Opening time: 2.5±1s 全关时间/Closing time: 2.5±1.5s	—
	步进角 Step angle	—	—	0.46°
使用温度范围 Operating temperature		0℃~40℃	0℃~40℃	-10℃~40℃

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马达驱动组件

MOTOR DRIVE UNITS

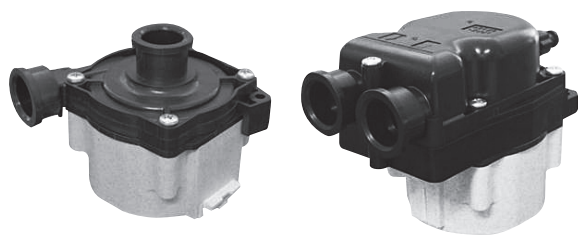
供水泵

FOR WATER SUPPLIES

供水泵系列 Water Supply Series

- 用途
Applications
- 热水器、全自动洗衣机、洗澡水、冰箱供水
●Tankless water heaters, full automatic washing machines, baths, refrigerators
- 特点
Features
- 通过DC无刷马达驱动实现低噪音、长寿命／NTHE
●Drive by DC brushless motor with long life and low noise, NTHE

NTWF/NTWG



NTHE



NTHD



		NTWF/NTWG		NTHE	NTHD
马达驱动部 Motor driving parts	额定电压 Rated voltage	DC282V		DC24V	DC282V
	输入电流 Current input	NTWF 0.105A以下 Less than 0.105A	NTWG 0.280A以下 Less than 0.280A	1.4±0.3A 通水状态下通过回路后的电流值 1.4±0.3A at water load including the circuit	0.70±0.18A 通水状态下通过回路后的电流值 0.70±0.18A at water load including the circuit
泵部 Pump parts	方式 Type	离心泵 Centrifugal pump			
	移送液体 Transfer liquid	水(相当于自来水) Water (Pipe water)			
	自吸性能 Self absorption	NTWF 无 No	NTWG 有 Yes	有 Yes	无 No
	流量性能 Flow performance	4L／分以上 PWM效率70% More than 4L/min at PWM duty 70%	6L／分以上 P W M效率90% More than 6L/min at PWM duty 90%	10L／分以上 扬程1.2m、使用4m水管时 More than 10L/min at hose length 4m, head 1.2m	28.5L／分以上 吐出扬程0.5m、使用1.8m水管时 More than 28.5L/min at hose length 1.8m, head 0.5m
	扬程性能 Head performance	扬程5.5m PWM效率70% Head 5.5m at PWM duty 70%	扬程8m PWM效率90% Head 8m at PWM duty 90%	—	—
	自吸性能 Self absorption	—	3m以上 More than 3m	1.9m以上 More than 1.9m	—
使用温度范围 Operating temperature		0℃～80℃	0℃～60℃	0℃～45℃	0℃～45℃

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马 达

马 达 驱 动 组 件

读 卡 机

工 业 机 器 人

塑 料 成 型 品

传 感 器

电 气 接 点

八 音 盒

马达驱动组件

MOTOR DRIVE UNITS

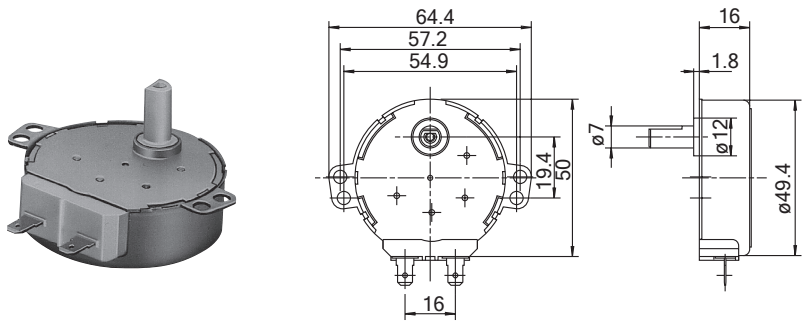
其他
For other

同步马达 AC Induct Motor

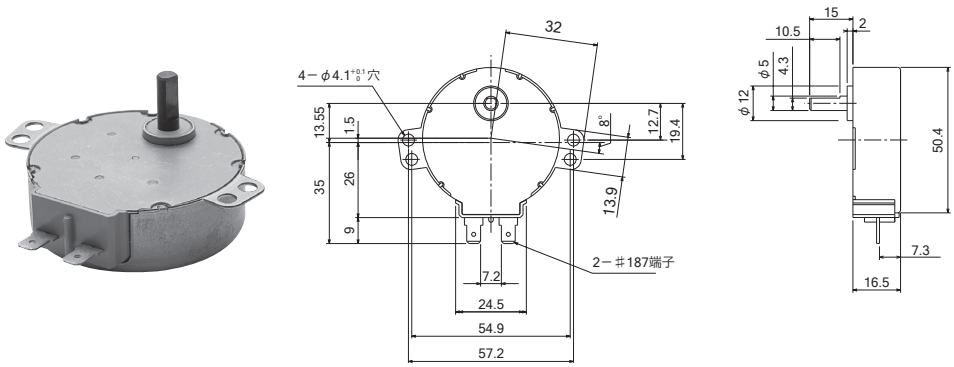
- 用途
Applications
- 微波炉转盘驱动
Turn table drive for microwave-oven range
 - 空调挡风板驱动
Rover drive for air conditioner
 - 电风扇摇头驱动
Swing dirve for oscillating fan

- 特点
Features
- 可以变更减速比
●Rate speed can be changed

M2



MOAG (旧机种名：MT8)



	M2系列	MOAG (旧机种名：MT8)
尺寸 Size	φ50×t16mm	φ49×16.5mm
功耗 (100V,50Hz) Power Consumption	3W以下	3.5W
额定速度 (min-1 {rpm})50/60Hz Rated Speed	2.5/3 4.3/5.1 5/6	3.3/4 4.2/5 5/6 30/36
输出扭矩 Torque	2.45 {25} N·m·min {kgf·cm·rpm}	5.194 {53} N·m·min {kgf·cm·rpm}

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读卡机

CARD READERS

卡发行机 Card Dispensers

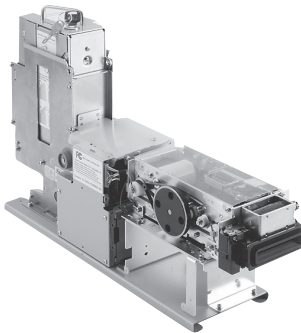
用途 Applications

- 适用各类卡的发行机
- 无人柜员机
- 有价商品卡发行机
- Card dispensing machines (Card encorder with hopper)
- Automatic loan-application machine
- Gift card dispensing

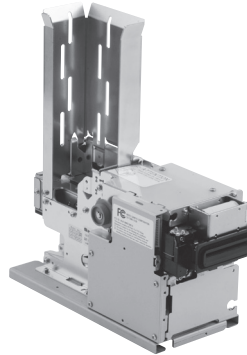
特点 Features

- 高可靠性和高耐久性
- 可发售凸凹字压印卡
- 卡读写机和卡储存箱共用RS232C界面接口, 程控一体化
- 盒式储卡箱加锁、提高其安全性
- 支持各种非接触卡(任选)
- 取得PBOC(中国人民银行)和EMV认证
- High reliability and durability
- Pre-embossed cards can be issued
- Single I/F to host
- Keep high security with a hopper cassette with lock
- For contactless IC Card
- PBOC2.0&EMV™ certified

SCT3Q8-3AM



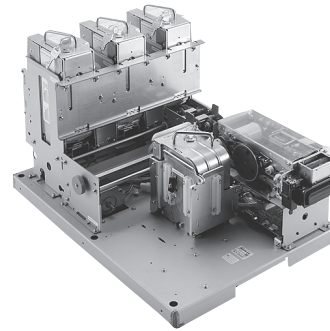
SCT0M0



SHT610



MST3Q8-3A



Category	Card type	Model number	Magnetic stripe				IC card		Interface	Power supply	Dimensions (mm)			Remarks
			ISO/IEC 7811 JIS X6301/6302				ISO/IEC 7816 JIS X6320	IC Contact less			W	D	H	
			Tr.1	Tr.2	Tr.3	JISII								
卡发行机 Card dispenser	兼容磁卡和IC卡 Mag. & IC	SCT3Q8-3A7340	R/W	R/W	R/W	-	R/W	-	RS232C (USB option)	+24V DC	115	364	275	120 cards in secure cassette detachable
		SCT3Q8-3AM341	R/W	R/W	R/W	-	R/W	type A, B, Mifare	RS232C	+24V DC	121	444	275	120 cards in secure cassette detachable
		SCT0MO-0130	-	-	-	-	-	type A, B, Mifare	RS232C	+24V DC	115	287	150~531	45~500 cards depend on cabinet size
		MST3Q8-3A 3530	R/W	R/W	R/W	-	R/W	-	RS232C	+24V DC	330	489	292	3 Hoppers 150 cards in secure cassette etachable
		MST3Q8-3A 3551	R/W	R/W	R/W	-	R/W	type A, B, Mifare	RS232C	+24V DC	330	489	292	3 Hoppers 150 cards in secure cassette etachable
		SHT610-0730	-	-	-	-	-	-	USB	+24V DC	102	156	292	Dispense only. ISO size card Clamp, perial and falldown.
		SHT300-0130	-	-	-	-	-	-	RS232C	+24V DC	96	145	297	Dispense only. ISOsize ca falldown only.
		SHT310-0341	-	-	-	-	-	-	RS232C	+24V DC	106	195	280	Dispense only. ISOsize card Clamp only.

R: Read only F/W: Read & Write

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读卡机

CARD READERS

马达驱动方式卡读写机系列 Motorized Card Reader-Writers Series

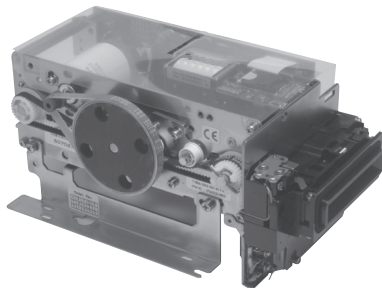
用途 Applications

- ATM柜员机/现金取款机
- 售货亭(KIOSK)用电子终端机
- 物流和零售(POS)用电子终端机
- 出入管理用终端机
- 各种ID卡用终端机
- ATMs/CDs
- Kiosk terminals
- POS terminals
- Security terminals
- Other ID terminals

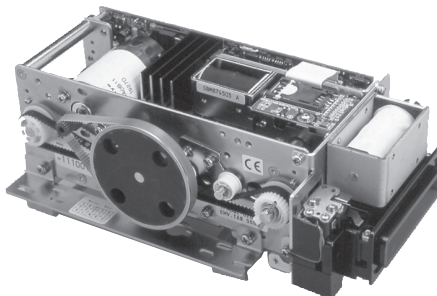
特点 Features

- 采用金融行业使用的高可靠性和高耐久性技术
- 适用国际标准IC卡的通信规格
- 取得PBOC(中国人民银行)和EMV认证
- 技术上采用独特的设计方案支持变形卡
- 可支持非EMV标准卡(任选)
- ICT3Q8系列备有功能扩展(任选)
- 内置强制退卡机构(ICT4G5)
- High reliability and durability
- ISO standard compliant for IC card protocol handling
- PBOC2.0&EMV™ certified
- Mechanism for warped card handling
- Non EMV™ cards can be supported (option)
- Scalable function (optional) (for ICT3Q8 series only)
- Power card ejection unit(ICT4G5)

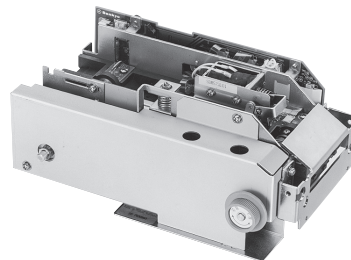
ICT3Q8-3A0180



ICT3Q8-3A0280



ICT4G5-4A0490



Category	Card type	Model number	Magnetic stripe				IC card	Shutter	Interface	Power supply	Dimensions (mm)			Remarks
			ISO/IEC 7811 JIS X 6301/6302				ISO/IEC 7816				W	D	H	
			Tr.1	Tr.2	Tr.3	JISII	JIS X6320							
马达驱动方式 Motorized	兼容磁卡和IC卡 Mag. & IC	ICT3Q8-3A2294	R/W	R/W	R/W	-	R/W	Full	USB	+24V DC	112	212	68	Hi-Co card Low hight
		ICT3Q8-3A2194	R/W	R/W	R/W	-	R/W	Full	USB	+24V DC	107	212	98	Hi-Co card
		ICT3Q8-3A2281	R/W	R/W	R/W	-	R/W	Full	RS232C	+24V DC	112	212	68	Hi-Co card Low hight
		ICT3Q8-3A2180	R/W	R/W	R/W	-	R/W	Full	RS232C	+24V DC	107	212	98	Hi-Co card
		ICT3Q8-3A0280	R/W	R/W	R/W	-	R/W	Full	RS232C	+24V DC	112	212	68	Low hight
		ICT3Q8-3A0180	R/W	R/W	R/W	-	R/W	Full	RS232C	+24V DC	107	212	98	
		ICT4G5-4A0490	R/W	R/W	R/W	R/W	R/W	Double	RS233C	+24V DC	125	222	90	Full feature for Japanese application

对应各种无接触式IC卡(任选)/For contactless smart card (optional)
R: Read only R/W: Read & Write

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读卡机

CARD READERS

马达驱动方式 读卡机(小型) Compact Motorized Card Readers

用途 Applications

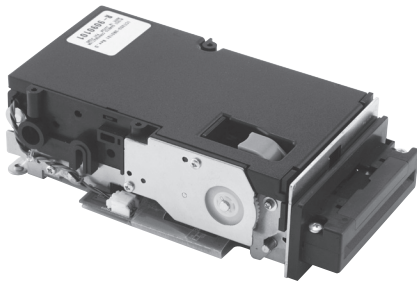
- 售货亭 (KIOSK) 用电子终端机
- 物流和零售 (POS) 用电子终端机
- 出入管理用终端机
- 各种ID卡用终端机

- Kiosk terminals
- POS terminals
- Security terminals
- Other ID terminals

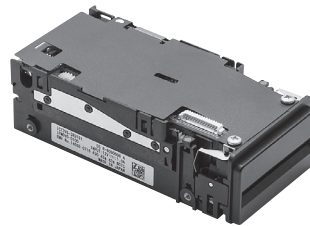
特点 Features

- 采用金融行业使用的高可靠性和高耐久性技术
- 适用国际标准IC卡的通信规格
- 取得PBOC2.0 (中国人民银行) 和EMV认证
- 技术上采用独特的设计方案支持变形卡
- 支持各种非接触卡 (任选)
- High reliability and durability
- ISO standard compliant for IC card protocol handling
- PBOC 2.0 & EMV™ certified
- Mechanism for warped card handling
- For contactless IC Card (optional)

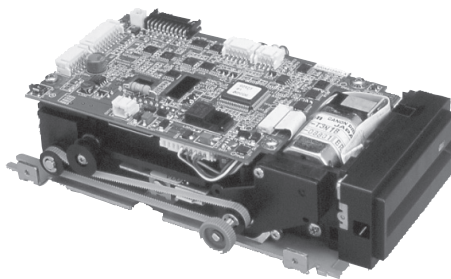
ICT3S3-3R



ICT3V5-3R



ICT3K6-3R



Category	Card type	Model number	Magnetic stripe				IC card		Shutter	Interface	Power supply	Dimensions (mm)			Remarks
			ISO/IEC 7811 JIS X 6301/6302				ISO/IEC 7816 JIS X 6320	IC				W	D	H	
			Tr.1	Tr.2	Tr.3	JISII		Contactless							
马达驱动方式 Motorized	兼容磁卡和IC卡 Mag. & IC	ICT3K9-3R6940	R	R	R	-	R/W	-	Full	RS232C	+12V DC	97	166.5	43.5	
		ICT3K9-3R4245	R	R	R	-	R/W	Type A, B, Mifare	Full	RS232C	+12V DC	97	166.5	43.5	
		ICT3K7-3R6990	R	R	R	-	R/W	Type-B	Full	USB	+12V DC	97	166.5	47.1	
		ICT3K7-3R4295	R	R	R	-	R/W	Type A, B, Mifare	Full	USB	+12V DC	97	166.5	46.7	Mini-B
		ICT3K6-3R6940	R	R	-	R	R/W	-	Full	RS232C	+12V DC	97	166.5	43.5	
		ICT3S3-3R0130	R	R	-	R	R/W	-	Full	USB/RS232C dual	+24V DC	75	145	42	Mechanical shutter
		ICT3V5シリーズ	R	R	R	-	R/W	Type A, B, Mifare	Full	USB/RS232C dual	+12V DC	62	125	38	Mechanical shutter SAM (option)

R: Read only R/W: Read & Write

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马达

马达驱动组件

读卡机

工业机器人

塑料成型品

传感器

电气接点

八音盒

读卡机

CARD READERS

手动式读卡机 Manual Card Readers

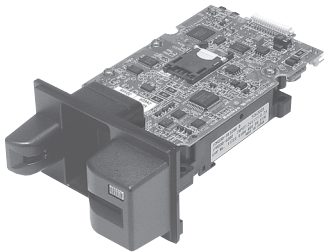
用途 Applications

- ATM柜员机／现金取款机
- 售货亭 (KIOSK) 用电子终端机
- 物流和零售 (POS) 用电子终端机
- 出入管理用终端机
- 各种ID卡用终端机
- ATMs／CDs
- Kiosk terminals
- POS terminals
- Security terminals
- Other ID terminals

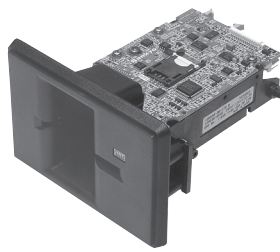
特点 Features

- 专用CMOS LSI (互补型大规模集成电路) 扩大了插卡速度的公差范围
- 技术上采用独特的设计方案支持变形卡
- 已取得 EMV证书
- Custom CMOS LSI designed to support wider range of card speed
- Specially designed head mounting for warped cards
- EMV™ certified

ICM330-3R



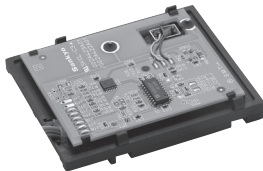
ICM350-3R



ICM0A0



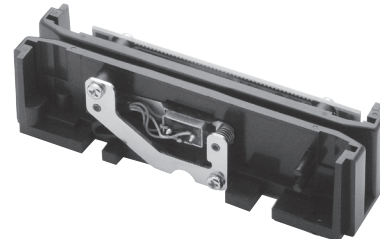
MCM158-1R



ICM330-3R



MCM20-2R



Category	Card type	Model number	Magnetic stripe				IC card	Shutter	Interface	Power supply	Dimensions (mm)			Remarks
			ISO/IEC 7811 JIS X6302				ISO/IEC 7816				W	D	H	
			Tr.1	Tr.2	Tr.3	JISII	JIS X 6320							
手动插入式 Manual dip	兼容磁卡和IC卡 Mag. & IC	ICM300-3R0775	R	R	R	-	R/W	PIN	RS232C	+12V DC	71	133.6	33.2	Without Bezel
		ICM300-3R1372	R	R	R	-	R/W	PIN	RS232C	+12V DC	80	138.1	50	
		ICM370-3R1896	R	R	R	-	R/W	PIN	USB	Bus power	80	126.8	50	Mini-B
		ICM333-3R1170	R	R	-	R	R/W	PIN	RS232C	+12V DC	80	135.3	50	
		ICM330-3R1270	R	R	R	-	R/W	FULL	RS232C	+12V DC	80	135.3	50	
		ICM330-3R1395	R	R	R	-	R/W	FULL	USB	+12V DC	80	138.5	50	
		ICM330-3R9176	R	R	R	-	R/W	FULL	RS232C	+12V DC	103.5	140	70	PCI PED
		ICM350-3R1270	R	R	R	-	R/W	FULL	RS232C	+12V DC	107.7	133	75.7	Flat Bezel
	芯片专用 Chip only	ICM0A0-0131	-	-	-	-	R/W	FULL	RS232C	+5V DC	60	114.5	16	
	磁条专用 Mag. stripe only	MCM260-2R0381	R	R	-	-	-	-	RS232C	+5V DC	80	112	50	Full insertion
		MCM330-3R1595	R	R	R	-	-	FULL	USB	+12V DC	80	139.2	50	Full insertion
		MCM158-1R0241	-	-	-	R	-	-	TTL	+5V DC	61	77	14.8	Half insertion
		MCM252-2R1191	R	R	-	-	-	-	USB	Bus power	98.5	98.5	28	GSA Certified
手动刷卡式 Manual Swipe	磁条专用 Mag. stripe only	MCM12-1R5030	-	-	-	R	-	-	TTL	+5V DC	24	90	24	
		MCM20-2R5030	-	R	-	R	-	-	TTL	+5V DC	24	90	24	
		MCM30-3R5030	R	R	R	-	-	-	TTL	+5V DC	24	90	24	

※R: Read only R/W: Read & Write
※电源: +5~+12V

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读卡机

CARD READERS

独立型读卡机 Standalone Type Card Readers

用途 Applications

- 物流和零售(POS)用电子终端机
- 各种ID卡用终端机
- POS terminals
- Other ID terminals

特点 Features

- 小型轻量设计
- 可适用于变形卡
- Compact & light
- Designed for warped card handling

MCI373



ICI3K3

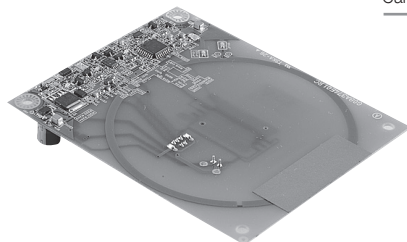


Category	Card type	Model number	Magnetic stripe				IC card		Interface	Power supply	Dimensions (mm)			Remarks
			ISO/IEC 7811 JIS X 6301/6302				ISO/IEC 7816 JIS X 6303	Protocol handling			W	D	H	
			Tr.1	Tr.2	Tr.3	JISII								
手动式 Manual	磁卡专用 Mag. stripe only	MCI373-0390	R	R	-	R	-	-	Key board	+5V DC	45	110	38	Bus Power
		MCI373-0391	R	R	-	R	-	-	USB	+5V DC	45	110	38	
马达式 Motorized	兼容磁卡和IC卡 Mag. & IC	ICI3K3 Series	R	R	-	R	R/W	-	USB	+100V AC	104	214	96	

R: Read only R/W: Read & write

非接触式读卡机 Contactless Card Readers

ICM0M0



Category	Card type	Model number	Contactless IC card	Interface	Power supply	Dimensions (mm)			Remarks
			ISO/IEC14443 series			W	D	H	
非接触式读卡机 Contactless Card Readers	非接触IC卡 Contactless IC card	ICM0M0 series	Type A,B and MIFARE	USB	+12V DC	80	12.7	100	PCB assy for terminal embedding

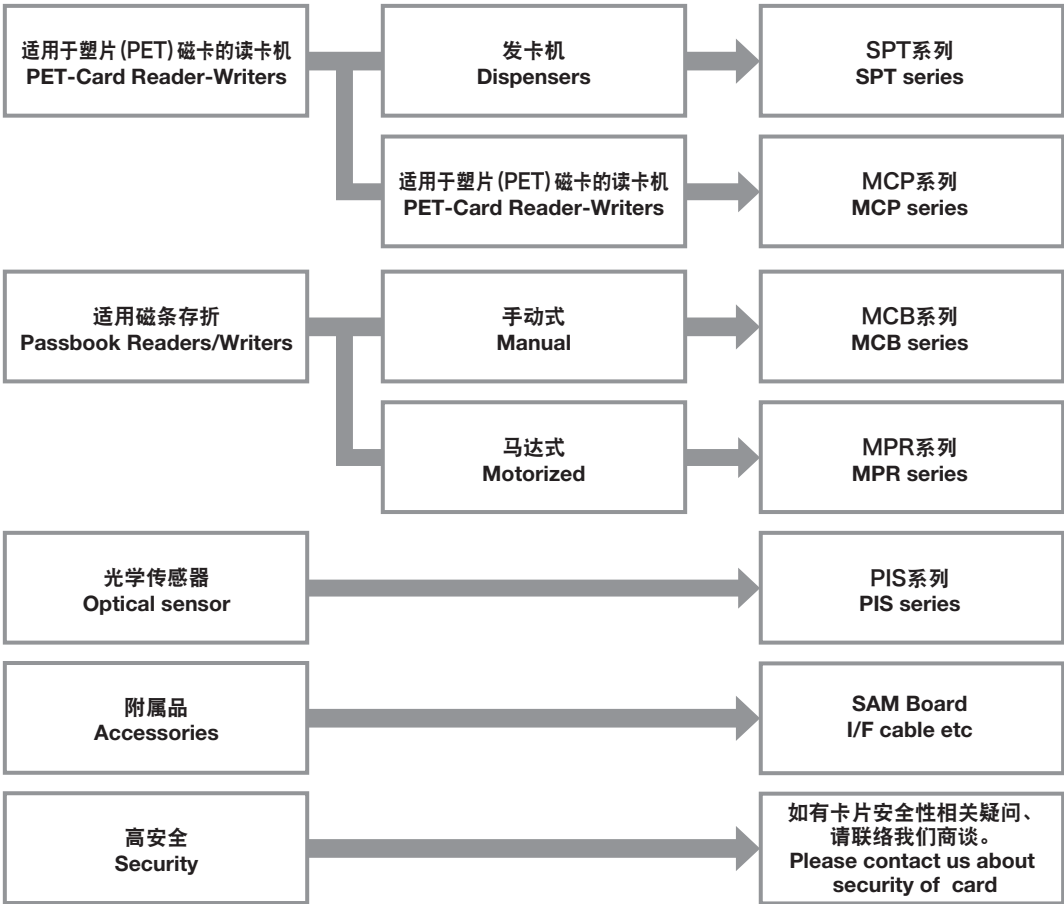
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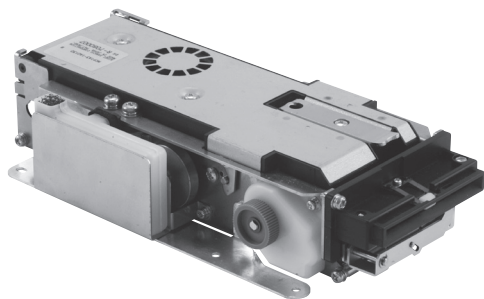
读卡机
CARD READERS

读卡机相关产品 Other Card Reader Products

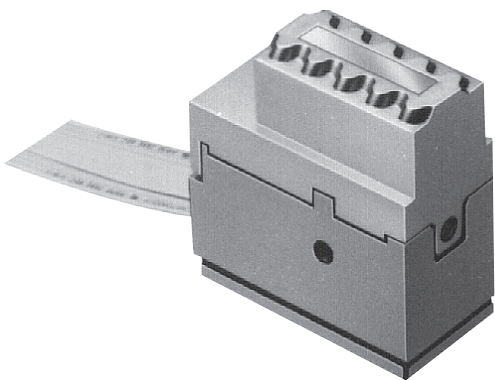
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MCP series



PIS series



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画像扫描装置

IMAGE SCANNER UNITS

用途
Applications

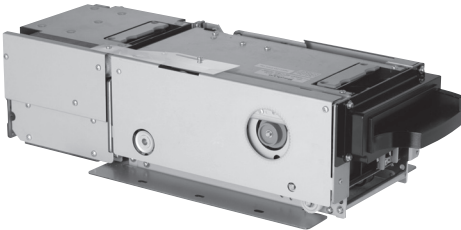
- 支票
- 手写文字
- 印字
- 条码
- Checks
- Hand-written letters
- Printed letters
- Bar-codes

特点
Features

- 线形CCD传感器高速扫描
- 微型中央处理器图像照度补正
- 小型化、大焦深
- High speed scanning
- Compensating image shading by microprocessor
- Compact size & deep field focusing

IST306

支票用
for checks



ISI111

条码/光学式识字扫描器用
for barcode/OCR



ISI221

ID卡用
for ID cards



Model number	接受传感器 Scanning sensor	扫描范围 Scanning area	分解能 Resolution	光源 Light source	连接 Interface	Remark
IST306	Contact Type	105mm	200dpi	RGB color/Photopic vision gray scale	USB 2.0 High speed	Both sides scanned at the same time.

Model number	接受传感器 Scanning sensor	扫描范围 Scanning area	分解能 Resolution	色调 Graduation	物距 Field depth	扫描间隔 Scan interval	光源 Light source	连接 Interface	Remark
ISI111	Contact Type	24mm	600dpi	256 Gray scales	0~1.0mm typ.	0.14ms	LED λ=940nm (660nm optional)	USB 2.0 High speed	One sides scanned.

Model number	接受传感器 Scanning sensor	扫描范围 Scanning area	分解能 Resolution	色调 Graduation	扫描速度 Scan speed	光源 Light source	连接 Interface	Remark
ISI221	Contact Type	54mm	600dpi	8/256 Gray scales	54mm/s	R, G, B and IR	USB 2.0 High speed	Both sides scanned at the same time.

*Bar-code/ICAO Passport MRZ部OCR文字認識DLL提供可能。Bar-code/ICAO Passport MRZ read DLL(Optional)

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马达

马达驱动组件

读卡机

工业机器人

塑料成型品

传感器

电气接点

八音盒

液晶面板搬运机器人

LCD PANEL HANDLING ROBOTS

液晶面板搬运机器人（第5代以下）圆筒型 LCD Panel Handling Robots(The 5th generation and smaller) telescopic type

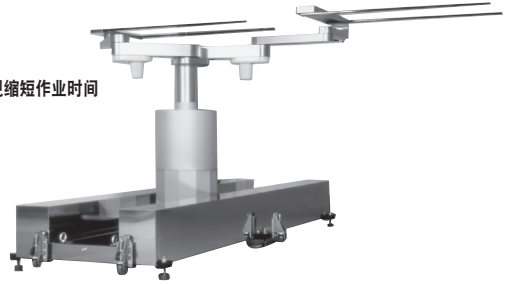
SR914X/SR915X

液晶 LCD

OLED

特点
Features

- 可实现稳定而高速度的动作。提高每个轴的速度与新开发的软件（复合动作与削减延误时间）以实现缩短作业时间
- 彻底压缩消费电力的省电设计
- 丰富对应各种面板尺寸
- 重视高刚性、可靠性的设计思想
- 使用安全性能高、高速/高性能的SC5000控制器
- Smooth & quick motion. High throughput achieved by improved axes speed and newly developed software.
- Low power consumption with rationalized mechanism.
- Applicable to wide range of glasses.
- Design concept considering high reliability.
- The enhanced safety-high speed/performance commonly used SC5000 robot controller



双手臂 Double Arms	SR9142	-	SR9143	-
单手臂 Single Arms	-	SR9152	-	SR9153
动作范围 Working Range				
RR/RL轴(mm) RR/RL AXIS	-1190~ +1190		-815~ +930	
Z轴(mm) Z AXIS	570/810/910/1000		570/810/910/1000	
θ轴(deg) Theta AXIS	-140~ +185		-140~ +185	
走行轴(mm) Track AXIS	0 & 300~11100 (300 pitch)		0 & 300~11100 (300 pitch)	
最大速度 Maximum Speed				
RR/RL轴(rad/s) RR/RL AXIS	2.7		2.7	
Z轴(mm/s) Z AXIS	800		800	
θ轴(rad/s) Theta AXIS	2.75		2.75	
走行轴(mm/s) Track AXIS	2300		2300	
重复精度(mm) Repeatability	±0.2		±0.2	
本体重量(kg) Manipulator weight	240	195	250	200
基板尺寸 (mm) Glass size	~W1100×L1300		~W730×L920	

液晶面板搬运机器人（第5代以下）支柱型 LCD Panel Handling Robots(The 5th generation and smaller) slider type

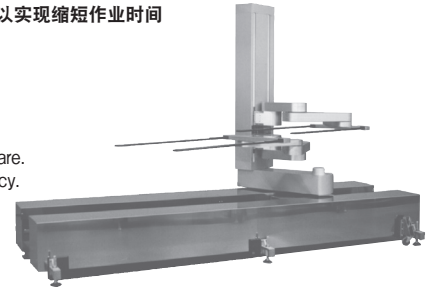
SR91 series

液晶 LCD

OLED

特点
Features

- 可实现稳定而高速度的动作。提高每个轴的速度与新开发的软件（复合动作与削减延误时间）以实现缩短作业时间
- 实绩丰富的手臂结构可实践高洁净度与稳定的直线动作
- 采用划时代的机构、以确保冲程长度与低Pass Line
- 彻底压缩消费电力的省电设计
- 走行轴的Pitch为300mm
- 使用安全性能高、高速/高性能的SC5000控制器
- Smooth & quick motion.High throughput achieved by improved axes speed and newly developed software.
- Well-experienced reliable arm mechanism achieves high level cleanliness and fine straightness accuracy.
- Unique arm support mechanism providing long stroke with keeping pass line low.
- Low power consumption with rationalized mechanism.
- Available in wide range of track lengths with flexible layout step by 300mm units.
- The enhanced safety-high speed/performance commonly used SC5000 robot controller



双手臂 Double Arms	SR9181H		-		SR9182H		-		SR9183H		-		SR9182E		-	
单手臂 Single Arms	-		SR9171H/SR9191H		-		SR9172H/SR9192H		-		SR9173H/SR9193H		-		SR9172E/SR9192E	
动作范围 Working Range																
RR/RL轴(mm) RR/RL AXIS	-1190~ +1190				-1190~ +1190				-1190~ +1190				-1190~ +1190			
Z轴(mm) Z AXIS	1300/1600/1900/2200/2400															
θ轴(deg) Theta AXIS	-140~ +185				-140~ +185				-140~ +185				-140~ +185			
走行轴(mm) Track AXIS	0 & 300~10200 (300 pitch)				0 & 300~10200 (300 pitch)				0 & 300~10200 (300 pitch)				0 & 300~10200 (300 pitch)			
最大速度 Maximum Speed																
RR/RL轴(rad/s) RR/RL AXIS	3.32				3.32				3.32				3.32			
Z轴(mm/s) Z AXIS	900				900				900				900			
θ轴(rad/s) Theta AXIS	2.4				2.4				2.4				2.4			
走行轴(mm/s) Track AXIS	3000				3000				3000				3000			
重复精度(mm) Repeatability	±0.2				±0.2				±0.2				±0.2			
本体重量(kg) Manipulator weight	300		250		300		250		300		250		300		250	
基板尺寸 (mm) Glass size	~W1100×L1300				~W1200×L1300				~W730×L920				~W1200×L1300			

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液晶面板搬运运用机器人

LCD PANEL HANDLING ROBOTS

液晶面板搬运运用机器人（第6世代以下）支柱型 LCD Panel Handling Robots (The 6th generation) slider type

SR99L series

液晶 LCD

OLED

特点

Features

- 采用了新型高强度的减速器、实现了高速化
- 不用切分Z轴和丝杆、缩短了装机时间
- 使用了高安全性、高速、高机能的SC5000控制器
- 使用了稳定的密封带和近距离的排气扇以确保高洁净度
- Realized high speed by adopting new high-rigidity reduction gear.
- No need to split 1300mm Z-axis. Shortened field recovery time by not requiring 1700mm Z-axis ball screw split.
- Using SC5000 controller with further improved safety, higher speed, and advanced function.
- Keeping high cleanliness by stabilizing the seal and its shortened distance from the fan.

双手臂 Double Arms	SR99L		
Upper Single Arm Upper Single Arm		SR99K	
Lower Single Arm Lower Single Arm			SR99M
手臂长度 ArmLength	877.5		
动作范围 Working Range			
RR/RL 轴 (mm) RR/RL AXIS	-1700~ +1680		
Z 轴 (mm) Z AXIS	1300・1700・2600・3000・4300・4700		
θ 轴 (°) Theta AXIS	-185~ +185		
走行轴 (mm) Track AXIS	0・700~15700(1000 pitch)		
最大速度 Maximum Speed			
RR/RL 轴 (rad/s) RR/RL AXIS	2.18		
Z 轴 (mm/s) Z AXIS 由冲程来决定 Depends on stroke	462.5~1500		
θ 轴 (rad/s) Theta AXIS Z 轴由冲程来决定 Depends on stroke	1.26~1.75		
走行轴 (mm/s) Track AXIS	2000		
重复精度 (mm) Repeatability	±0.2		
最大可搬重量 (mm) Maximum payload	50/ARM		
FORK 的承重量 (Nm) Max.moment at the end effector mounting	400		
本体重量 (Kg) Manipulaor weight	1670(Z=2600,NotTrack)		
基板尺寸 (mm) Glass size	~1500×1850		



液晶面板搬运运用机器人（第8.5世代以下）支柱型 LCD Panel Handling Robots (The 8.5th generation) slider type

SR99H/SR99S series

液晶 LCD

OLED

特点

Features

- 采用了大型化的减速器和马达、使手臂实现了高速化 (SR99H/SR99S)
- 增加了S轴、实现了全方位的矫正 (SR99H)
- 使用了高安全性、高速、高机能的SC5000控制器
- Realized higher speed of arm by enlarging reduction gear and motor.(SR99H/SR99S)
- Possible to align in all directions by adding the S-axis.(SR99H)
- Using SC5000 controller with further improved safety, higher speed, and advanced function.

双手臂 Double Arms	SR99H(S)xx		
Upper Single Arm Upper Single Arm		SR99G(R)xx	
Lower Single Arm Lower Single Arm			SR99J(T)xx
手臂长度 ArmLength	1200mm		
动作范围 Working Range			
RR/RL 轴 (mm) RR/RL AXIS	-2300~ +2300		
Z 轴 (mm) Z AXIS	1300・1700・2600・3000・3800・4700		
θ 轴 (°) Theta AXIS	-140~ +185		
走行轴 (mm) Track AXIS	0・700~15700(1000 pitch)		
最大速度 Maximum Speed			
RR/RL 轴 (rad/s) RR/RL AXIS	1.92~2.18		
Z 轴 (mm/s) Z AXIS 由冲程来决定 Depends on stroke	750~1250		
θ 轴 (rad/s) Theta AXIS Z 轴由冲程来决定 Depends on stroke	1.05~1.57		
走行轴 (mm/s) Track AXIS	1500/2000		
重复精度 (mm) Repeatability	±0.25		
最大可搬重量 (kg) Maximum payload	65		
FORK 的承重量 (Nm) Max.moment at the end effector mounting	550		
本体重量 (kg) Manipulaor weight	2670(Z=1300,NoTrack)		
基板尺寸 (mm) Glass size	~W2250xL2600		



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工业机器人

塑料成型品

传感器

电气接点

八音盒

液晶面板搬运机器人

LCD PANEL HANDLING ROBOTS

液晶面板搬运机器人（第10.5世代）支柱型

LCD Panel Handling Robots (The 10.5th generation) slider type

SR95 series

液晶 LCD

OLED

特点 Features

- 采用了大型化的减速器和马达、以及增强了本体的强度、实现了ROBOT的高速高精度化
- Z轴的可动范围达4600mm、考虑了运输安全、使总高度控制在2650mm以下
- 使用了高安全性、高速、高机能的SC5000控制器
- 行走轴由3000mm和5000mm的框架单元的自由组合、以应对各种需求
- Realized high speed and high performance by adopting new big reduction gear and large capacity motor, and by improving manipulator rigidity.
- Considered shipment size for Z-axis 4600mm robot, and the total height is suppressed to 2650mm.
- Using SC5000 controller with further improved safety, higher speed, and advanced function.
- Traverse-axis corresponds to various variations depending on combination of 3000mm and 5000mm Frame Unit.



双手臂 Double Arms	SR958		
Upper 单手臂 Upper Single Arm		SR957	
Lower 单手臂 Lower Single Arm			SR959
手臂长度 ArmLength	1485		
动作范围 Working Range			
RR/RL 轴(mm) RR/RL AXIS	-2925~ +2575		
Z 轴(mm) Z AXIS	2150・2500・3650・4000・4600・5500・6200		
θ 轴(°) Theta AXIS	-140~ +185		
走行轴(mm) Track AXIS	0・1200・3300・6300・8400・9300・11400・13500・14400・16500		
最大速度 Maximum Speed			
RRR/RL 轴(rad/s) RRR/RL AXIS	1.86		
Z 轴(mm/s) Z AXIS 由冲程来决定 Depends on stroke	950・1050・1150・1300		
θ 轴(rad/s) Theta AXIS Z 轴由冲程来决定 Depends on stroke	1.52(1.05 Z:5500~)		
走行轴(mm/s) Track AXIS	2300(3000 Tr:9300~)		
重复精度(mm) Repeatability	±0.25		
最大可搬重量(kg) Maximum payload	150/ARM		
FORK 的承重量(Nm) Max.moment at the end effector mounting	1500		
本体重量(kg) Manipulaor weight	5100(Z=6200,NotTrack)		
基板尺寸(mm) Glass size	~W2940×L3370		

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液晶面板搬运用机器人

LCD PANEL HANDLING ROBOTS

真空用
FOR VACUUM ENVIRONMENT

真空用液晶面板搬运用机器人 Vacuum Environment LCD Panel Handling Robots

SR8665 series

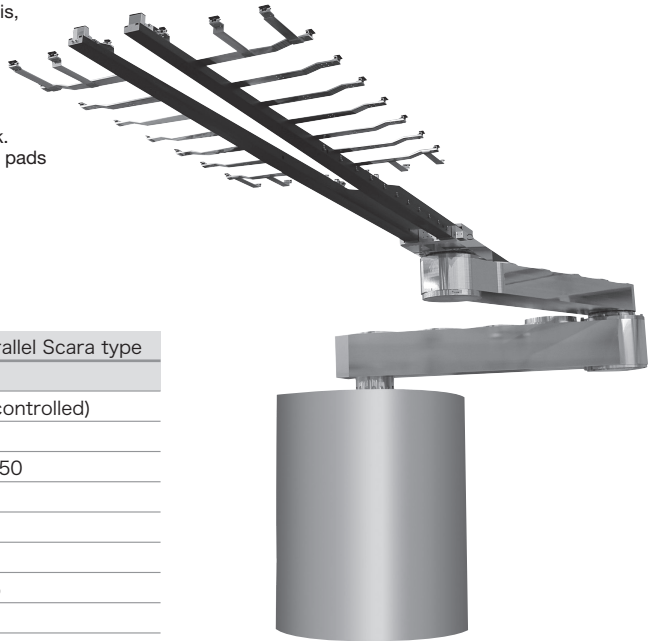
OLED

太阳能 SOLAR CELL

特点 Features

- S轴、TH轴、Z轴的独立控制运行、使各轴可同时动作
- 可适用于任何腔体、具有高自由度的设计
- 第一ARM为止都保持在大气范围的设计、有利于驱动部的热量处理
- 除了玻璃基板以外、重量级的MASK也可搬运
- 吸附位置可根据基板外周定位、进行FaceDown搬运
- 减少了手臂关节的轴承数以降低润滑油的排气量
- 可安装真空用载荷传感器
- Possible to do parallel access motion, by moving S-axis, TH1-axis, and Z-axis independently from each other.
- Possible to accommodate any chamber layout, and contributing to high design flexibility.
- Easy heat countermeasure to the drive unit due to atmospheric environment up to 1stArm.
- Not only glass substrate, but also possible to handle heavy mask.
- Possible to support Facedown glass handling by laying out hand pads on the substrate circumference.
- Reduced grease outgassing by reducing arm joint bearing.
- Possible to add substrate presence sensor for vacuum environment use, as option.

		双取双放
		平行取片的SCARA方式 Parallel Scara type
真空度 (Pa) Vacocum-resistance level		1.3×10 ⁻⁵
自由度 Degree of Freedom		4-AXIS(all AC-servo controlled)
动作范围 Working Range		
S 轴 (deg) S AXIS/Thete2 轴 θ AXIS		+/-290/ +/-150
Z 轴 (mm) Z AXIS		250 ~820
θ 1 轴 (deg) Thete1 AXIS		+/-290
最大速度 Maximum Speed		
S 轴 (deg./s) S AXIS/Thete2 轴 θ AXIS		100 / 115
Z 轴 (mm/s) Z AXIS		160~350
θ 1 轴 (deg./s) Thete1 AXIS		100
重复精度 (mm) Repeatability		+/- 0.5
噪音 (dB) Noise generation		80 or less
本体重量 (kg) Manipulator weight		100
基板尺寸 (mm) Glass size MASK 的尺寸		~1500×925 t=0.4~0.7 1700×1100



SR8670 series

G10.5対応

液晶 LCD

太阳能 SOLAR CELL

特点 Features

- 减小了旋转半径、使全体的占有面积减小
- 减少了关节数提高了热传导性
- 真空和大气间的连接部的最小化和R轴的驱动部模块化使维护更容易
- Possible to minimize total occupied area by reducing turning radius.
- Better thermal conductivity due to less number of joints.
- Improved maintainability by minimizing vacuum/atmospheric blockage and by making R-axis drive section a common unit.

		大型飞镖 Large Boo merang type
真空度 (Pa) Vacocum-resistance level		5.0x10 ⁻³
自由度 Degree of Freedom		4-AXIS(all AC-servo controlled)
动作范围 Working Range		
RR/RL 轴 (mm) RR/RL AXIS		-2400~ +2530
Z 轴 (mm) Z AXIS		670
θ 轴 (deg) Thete AXIS		67~ -185
最大速度 Maximum Speed		
RR/RL 轴 (deg./S) RR/RL AXIS		45
Z 轴 (mm/s) Z AXIS		400
θ 轴 (deg./s) Thete AXIS		72
重复精度 (mm) Repeatability		+/- 0.5
噪音 (dB) Noise generation		80 or less
基板尺寸 (mm) Glass size		~3000×3400 t=0.4~0.7



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液晶面板搬运机器人

LCD PANEL HANDLING ROBOTS

真空用
FOR VACUUM ENVIRONMENT

真空用液晶面板搬运机器人 Vacuum Environment LCD Panel Handling Robots

液晶 LCD

OLED

太阳能 SOLAR CELL

特点
Features

- 可以应对从常温到高温的各种需求
- 驱动部模块化、易于维护
- 多达3段的Z轴使高度可动范围加大
- 控制器小型轻量
- 独有的降温系统、使其能应对高温环境
- R部和本体的分割设计、使其易于保养也易于进入腔体
- 使用了陶瓷手臂来应对高温环境
- ARM驱动部使用了高精度部件和电能回馈机构
- R轴采用了磁浮驱动以保证高直进性 (SR8653系列)

- Different types of end effectors to meet different temperature requirements.
- Module structure drive units for easy maintenance.
- Ability to access up to three-layer Load Lock with long Z-stroke .
- Small and lightweight controllers with common structure for easy maintenance.
- Sankyo's original cooling system to meet high temperature requirement.
- Easy to separate R-axis unit from Manipulator for simple maintenance and installation.
- Seramic hands available to meet high moment.
- High-precision parts and hybrid belts used for arm drive units.
- Linear drive R-axis to achieve high straight line accuracy. (SR8653 series)

SR8651/SR8652

		SCARA形式 Scara type	
		SR8651	SR8652
真空度(Pa) Vacuuum-resistance level		1.33×10 ⁻²	1.33×10 ⁻²
自由度 Degree of Freedom		5-AXIS(all AC-servo controlled)	5-AXIS(all AC-servo controlled)
动作范围 Working Range			
RR/RL 轴(mm) RR/RL AXIS		2400	2720
Z 轴(mm) Z AXIS		250/450	465(Solar)/670(LCD)
θ 轴(deg) Thete AXIS		+140~ -185	+140~ -185
最大速度 Maximum Speed			
RR/RL 轴(mm/sec) RR/RL AXIS		3370	2474
Z 轴(mm/s) Z AXIS		300	400
θ 轴(rads/s) Thete AXIS		2.09	2.09
重复精度(mm) Repeatability		+/- 0.2	+/- 0.2
噪音(dB) Noise generation		80 or less	80 or less
基板尺寸(mm) Glass size		~1100×1300 t=3.1~5.2 ~1300×1500 t=0.5~1.1 ~1500×925 t=0.5~1.1	1100×1300 t=4~5(Solar) ~1500×1850 t=0.5~1.1(LCD)



SR8653

		磁浮导轨方式 Linear Guide type
真空度(Pa) Vaccum-resistance level		1.33×10 ⁻²
自由度 Degree of Freedom		5-AXIS(all AC-servo controlled)
动作范围 Working Range		
RR/RL 轴(mm) RR/RL AXIS		3620
Z 轴(mm) Z AXIS		820
θ 轴(deg) Thete AXIS		+140~ -185
最大速度 Maximum Speed		
RR/RL 轴(deg./sec) RR/RL AXIS		2700
Z 轴(mm/sec) Z AXIS		500
θ 轴(rads/sec) Thete AXIS		2.09
重复精度(mm) Repeatability		+/- 0.25
噪音(dB) Noise generation		85 or less
基板尺寸(mm) Glass size		~2200×2500 t=0.5~0.7



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半导体晶片搬运机器人

WAFER HANDLING ROBOTS

大气用半导体晶片搬运机器人

Atmospheric Environment Wafer Handling Robots

SR8220

特点
Features

- 采用2ARM构造增大了搬运范围
- 实现了晶圆的高速传输和双片同取放
- 确保了超高的直线精度
- ARM和Z轴的各种组合以满足应对各种装置的需求
- 可同时适用于2~8英寸包括12英寸的晶圆的搬送

- Dual arm version insure max.throughput
- High-speed replacement of a wafer and a double pick are possible.
- Excellent straight line accuracy
- It can combine a variation of a Z axis height with an arms which suitable for a various equipments.
- Compatible to handle 2 to 8 inch wafers, also capable to use 12 inch

		SR8220		
ArmType		Short	Standard	Long
自由度 Degree of Freedom		4-AXIS		
可动范围 Working Range				
R1/R2 轴(mm) R1/R2 AXIS		-265 ~ +245	-212~+321	-319 ~ +447
Z 轴(mm) Z AXIS		300/400/450/600		
θ 轴(deg) Thete AXIS		340		
最大速度 Maximum Speed				
R1/R2 轴(rad/sec) R1/R2 AXIS		5.76		
Z 轴(mm/sec) Z AXIS		450		
θ 轴(rad/sec) Thete AXIS		6.97		
最大可搬重量(kg) Maximum Payload		2		
重复精度(mm) Repeatability		+/- 0.1		
本体重量(kg) Manipulator weight		60/70/85		
控制器 Controller		SC5000		



SR8240

特点
Features

- 300mm 应对2~3端口
- 紧凑的构造、很小的占有面积
- 具有多功能和可回旋的手臂
- 独立的双驱动系统实现2片同时取放
- 和晶圆合同片间距的2片同取放

- Adaptable to 300mm 2~3 ports
- Compact size(Space-saving)
- Flip-axis and universal hand available
- Independent dual end effectors to pick 2 wafers simultaneously
- The pitch can be synchronized to FOUP movement to place 2 wafers simultaneously

自由度 Degree of Freedom		5-AXIS
可动范围 Working Range		
翻转轴(deg) Roll 1/2 AXIS		-270 ~ +450
X 轴(mm) X AXIS		-432 ~ +432
Z 轴(mm) Z AXIS		300
θ 轴(deg) Thete AXIS		±180
最大速度 Maximum Speed		
翻转轴(rad/sec) Roll 1/2 AXIS		9.42
X 轴(mm/s) X AXIS		1680
Z 轴(mm/s) Z AXIS		500
θ 轴(rad/s) Thete AXIS		8.72
重复精度(mm) Repeatability		+/- 0.1
本体重量(kg) Manipulator weight		60
控制器 Controller		SC5000



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马达

马达驱动组件

读卡机

工业机器人

塑料成型品

传感器

电气接点

八音盒

半导体晶片搬运机器人

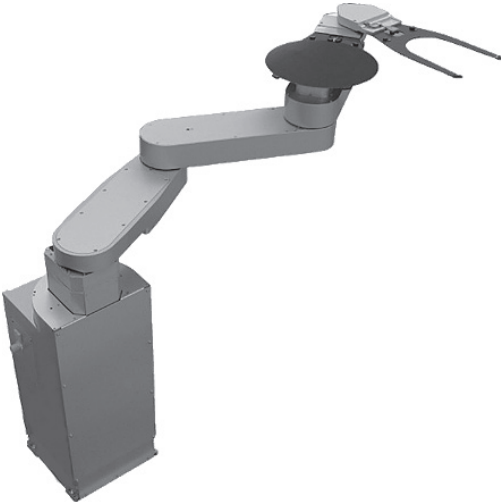
WAFER HANDLING ROBOTS

SR8241

特点 Features

- 大搬送范围的设计
- 独立的双驱动系统实现2片同时取放
- 紧凑的构造、很小的占有面积
- 应对10mm的片间距
- 和晶圆合同片间距的2片同取放
- 低取片高度
- 具有多功能和可回旋的手臂
- 3段链接ARM无行走轨道的设计、应对最大5台晶圆台平行排列
- High-Throughput Model
- Dual End Effectors/Double Pick
- Compact Size (Space-Saving)
- End Effector's Pitch 10mm
- Same Pitch as FOUP' Pitch to operate simultaneous 2wafer
- Lower Path Line
- Flip-axis and Universal Hand available
- FOUP access at most 5 FOUPs arrangement is capable without track axis by 3 link arms

	SR8241
自由度 Degree of Freedom	5-AXIS
可动范围 Working Range	
翻转轴 (deg) Roll 1/2 AXIS	+/-275
X 轴 (mm) X AXIS	-750~+750
Z 轴 (mm) Z AXIS	470
θ 轴 (deg) Thete AXIS	+/-170
最大速度 Maximum Speed	
翻转轴 (rag/sec) Roll 1/2 AXIS	9.42
X 轴 (rag/sec) X AXIS	2.44 (1952mm/sec)
Z 轴 (mm/sec) Z AXIS	720
θ 轴 (rag/sec) Thete AXIS	6.54
最大可搬重量 (kg) Maximum Payload	2
重复精度 (mm) Repeatability	+/- 0.05
本体重量 (kg) Manipulator Weight	70
控制器 Controller	SC5000



真空用半导体晶片搬运机器人

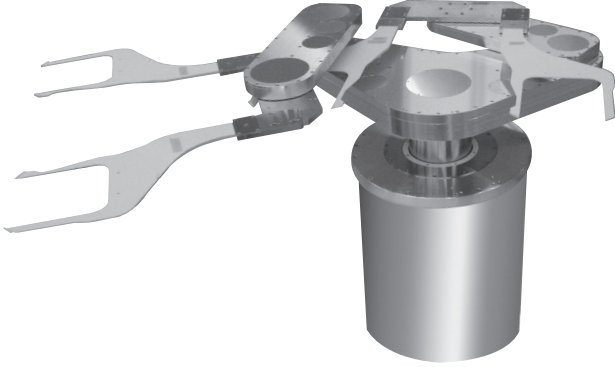
Vacuum Environment Wafer Handling Robots

SR8608

特点 Features

- 可实现高速取放的2手臂×2个最大直径 (SR8608系列)
- 飞镖型手臂可实现最小旋转半径 (实现较小的占地面积)
- 用很长的可动距离来确保大的预存量
- Dual arm version and double plate End-Effector insure max.throughput.
- Smaller radius of gyration with Boomerang arm application
- Long Z-stroke make up the big buffer production.

真空度 (Pa) Vaccum-resistance level	3x10 ⁻⁶
自由度 Degree of Freedom	4-AXIS
動作範圍 Working Range	
RR/RL 轴 (mm) RR/RL AXIS	-340 ~ +360
θ 轴 (deg) Thete AXIS	-95 ~ +185
Z 轴 (mm) Z AXIS	150
最大速度 Maximum Speed	
RR/RL 轴 (deg) RR/RL AXIS	225 (2670mm/sec)
θ 轴 (deg/s) Thete AXIS	225
Z 轴 (mm/s) Z AXIS	100
重复精度 (mm) Repeatability	+/-0.1
噪音 (dB) Noise generation	70 or less
本体重量 (Kg) Manipular Weight	180 (include hand)
漏率 Leak Rate	1x10 ⁻⁶ Pa・m3/sec
主体外护套 Outer Sheath	SUS cover, Aluminum cover
运行条件 Operation Conditions	0 ~ 40°C, 30 ~ 90%
储存条件 Storage Conditions	-30 ~ 70°C, 10 ~ 95%



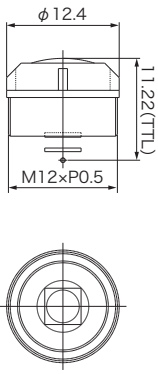
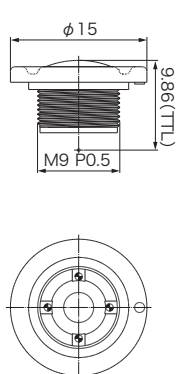
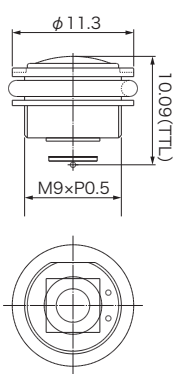
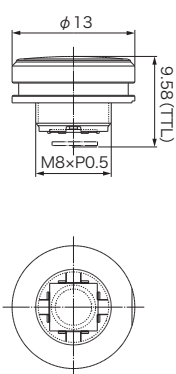
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塑料成型品

PLASTIC MOLDED PARTS

广角镜头（汽车・监视用）标准批品 Wide-Angle Lens Series for Automotive / Security

Item		Specification			
机型 Model Name		4N256 90deg	4N278 135deg	4N291 135deg, 防水 Waterproof	4N313 135deg, 3P 廉价 3P Low Cost
					
外形尺寸 Physical Dimensions					
目标图像传感器尺寸 Target Image Sensor Size		1/4 (H=3.6mm×V=2.7mm)	1/4 (H=3.6mm×V=2.7mm)	1/4 (H=3.6mm×V=2.7mm)	1/3.7 (H=3.84mm×V=2.88mm)
视角 View Angle	水平 Horizontal	88 deg (y=1.80mm)	132 deg (y=1.80mm)	132 deg (y=1.80mm)	136 deg (y=1.92mm)
	垂直 Vertical	69 deg (y=1.35mm)	99 deg (y=1.35mm)	99 deg (y=1.35mm)	110 deg (y=1.44mm)
	对角 Diagonal	103 deg (y=2.25mm)	174deg (y=2.25mm)	172 deg (y=2.25mm)	166 deg (y=2.4mm)
F No.		2.3	2.8	2.8	2.2
解像力 Resolution	中心 Center	300视线以上 More than 300 TVLine	500视线以上 More than 500 TVLine	500视线以上 More than 500 TVLine	400视线以上 More Than 400TVLine
	周围 Ambient	150视线以上 More than 150 TVLine (y=1.58mm)	250视线以上 More than 250 TVLine (y=1.58mm)	300视线以上 More than 300 TVLine (y=1.58mm)	150视线以上 More than 150TVLine (y=1.58mm)
周围光量比 Relative Illumination		48%以上 More than 48 % (y=1.8mm)	41%以上 More than 41 % (y=2.25mm)	40%以上 More than 40 % (y=2.25mm)	34%以上 More Than 34% (y=2.4mm)
镜头一规范 Lens 1 specification		塑料 Plastic	塑料 Plastic	玻璃（标准） Glass	塑料 （塑料硬涂层） Plastic on hardcoat
防水 Waterproof		—	—	IP67	IP67

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马达

马达驱动组件

读卡机

工业机器人

塑料成型品

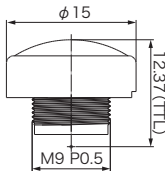
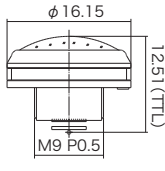
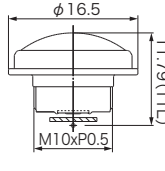
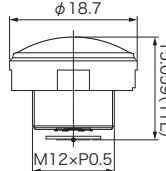
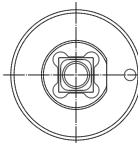
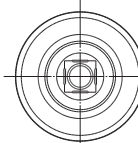
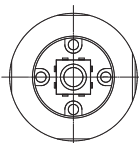
传感器

电气接点

八音盒

塑料成型品
PLASTIC MOLDED PARTS

鱼眼镜头（汽车・监视用）标准批品 Fisheye Lens Series for Automotive / Security

Item		Specification			
机型 Model Name		4N279 立体投射 Stereographic projecton	4N292 立体投射 Stereographic projection 防水 Waterproof	4N288 f θ:等距投射 f θ:Equidistance projection	4N307 高解像鱼眼 High Spec type 立体投射 Stereographic projecton
					
外形尺寸 Physical Dimensions					
					
目标图像传感器尺寸 Target Image Sensor Size		1/4 (H=3.6mm×V=2.7mm)	1/4 (H=3.6mm×V=2.7mm)	1/4 (H=3.6mm×V=2.7mm)	1/4 (H=3.6mm×V=2.7mm)
视角 View Angle	水平 Horizontal	195 deg (y=1.80mm)	195 deg (y=1.80mm)	196 deg (y=1.80mm)	190 deg (y=1.80mm)
	垂直 Vertical	158 deg (y=1.35mm)	158 deg (y=1.35mm)	144 deg (y=1.35mm)	154 deg (y=1.35mm)
	对角 Diagonal	最大像圆 Max. image circle 199 deg (y=1.85mm)	最大像圆 Max. image circle 199 deg (y=1.85mm)	最大像圆 Max. image circle 212 deg (y=1.95mm)	最大像圆 Max. image circle 203 deg (y=1.95mm)
F No.		2.6	2.6	2.8	2.4
解像力 Resolution	中心 Center	500视线以上 More than 500 TVLine	500视线以上 More than 500 TVLine	800视线以上 More than 800 TVLine	850视线以上 More than 850 TVLine
	周围 Ambient	350视线以上 More than 350 TVLine (y=1.58mm)	350视线以上 More than 350 TVLine (y=1.58mm)	400视线以上 More than 400 TVLine (y=1.69mm)	550视线以上 More than 550 TVLine (y=1.69mm)
周围光量比 Rellative Illumination		28%以上 More than 28 % (y=1.8mm)	30%以上 More than 30 % (y=1.8mm)	44%以上 More than 44 % (y=1.8mm)	37%以上 More than 37 % (y=1.8mm)
镜头一规范 Lens 1 specification		塑料 Plastic	塑料 Plastic	塑料 Plastic	塑料 Plastic
防水 Waterproof		—	IP67	—	—

* y : 图像高 Image Height

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塑料成型品 PLASTIC MOLDED PARTS

鱼眼镜头・各种光学产品 Fish-Eye Lenses & Optical Products

精通光学の匠心巧技 Craftsmanship that Manipulates Light

鱼眼镜头 Fish-Eye Lenses

- 由本公司独特专利技术打造的超广角镜头、实现了小型化和高解像度。
世界首次可以从各个角度的立体影像来观测车辆环境。
- Our patented super- wide-angle lenses are compact and achieve a high level of resolution.
Equipped on-board, they provide, for the first time in the world, 3-D images surrounding the vehicle from various angles.



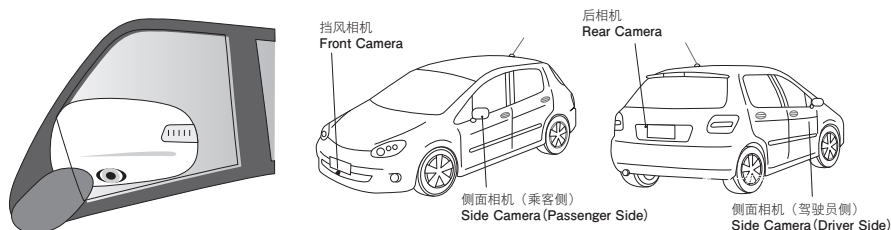
90度 90deg.

135度 135deg.

190度 190deg.

「周围监视摄像机用透镜组件」 "Watch lenses units "

主要汽车生产厂家都采用本公司生产的镜头 For its "multi-angle vision," our lens has been adopted by leading automakers.



LED照明 LED Illumination

正在世界普及的环保照明：以其本公司的模拟技术提供支持。
LED illumination is spreading worldwide. We support this accelerating trend with our simulation technology.



筒灯 Downlight

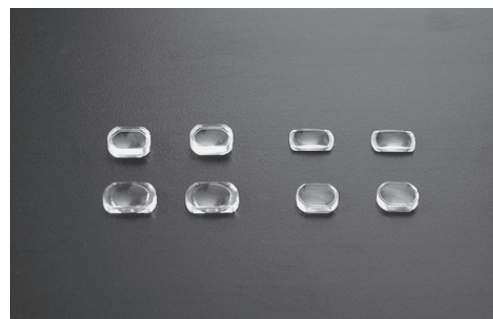
头灯 Head lamp

双色成型 散光+菲涅耳透镜
Duble-moldeing Diffusion + Fresnel lens

蓝光光盘用透镜 Blu-ray Disc Lenses

高清晰影像⇒蓝光时代 扩大提供高精度透镜
用于PC、AV机器 DVD:BD=5:1 激光收取头透镜

High-definition TV ⇒ Blu-ray era Expanded supply of hifh-precision lenses.
Used in PCs and audiovisual equipment DVD:BD = 5:1 Pickup lenses.



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马达

马达驱动组件

读卡机

工业机器人

塑料成型品

传感器

电气接点

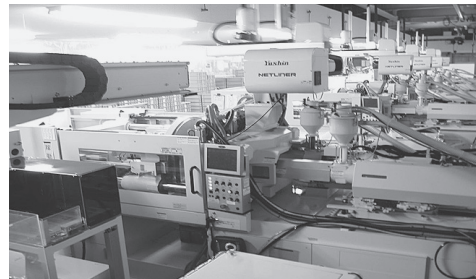
八音盒

塑料成型品

PLASTIC MOLDED PARTS

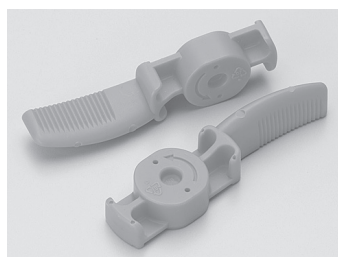
双色成型品 Double Molded Products

本公司即使针对特性不同的材料、也能使用一台成型机进行整体加工。
不仅具有很高的性价比（削减组装机时、缩短交期）、而且还能满足客
户对高品位外观、仿造对策以及环保措施等各种要求。
We supply long life and high add value products with the double molding
technology that is possible to mold two different types of materials into a
single combined unit using one molding machine.

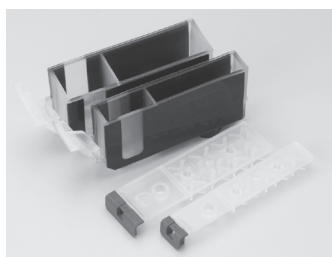


大型双色成型机持有台数 世界最大规模
We own the world's largest number of
large-size double molding machines.

办公设备用部件、汽车用部件 Parts for OA equipment & automobile



打印机用部件 (合成橡胶+PP)
Printer parts(elastomer +PP)



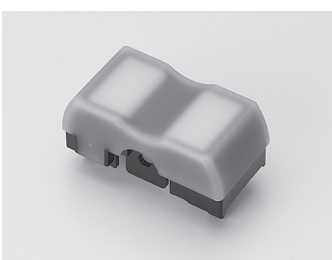
打印机用部件 (PP+PP)
Printer parts(PP + PP)



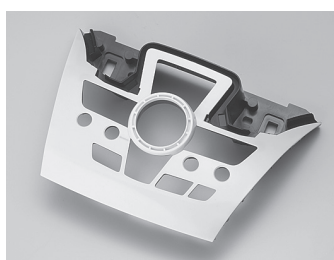
游戏机部件 (合成橡胶+ABS)
Game machine parts(elastomer + ABS)



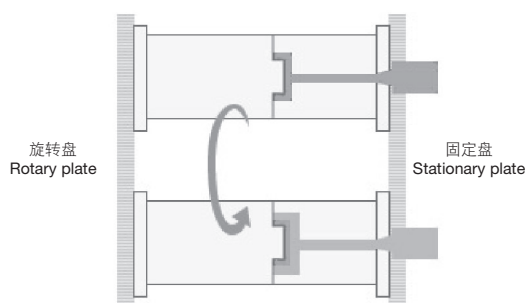
汽车用门镜部件
(红外线穿透PMMA+ABS)
Automobile door mirror part
(infrared-transmitting PMMA + ABS)



开关用部件 Switch part



车载音响用面板 Onboard audio panel



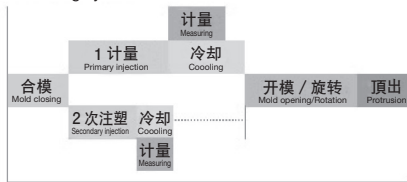
成形流程 Molding process



1 次成型
Primary molding

2 次成型
Secondary molding

成型周期 Molding cycle



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塑料成型品

PLASTIC MOLDED PARTS

精密部件 Precision Parts

为客户提供能满足微米级精度要求的部件。

We supply high-precision parts required of dimensional accuracy within microns.

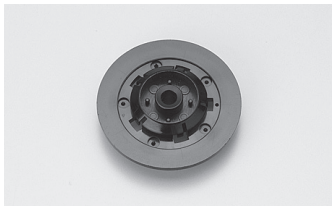
IT用部件、相机用部件 IT products & camera parts



镜头框（车载摄像头）
Lens ring frame (for onboard cameras)



DVD/BD用拾音器框
Pickup frame for DVD/BD



DVD/BD用转盘
DVD/BD turntable

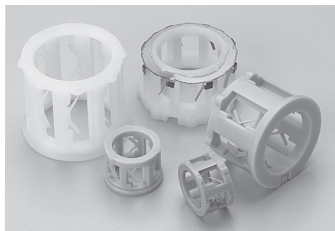
薄型成型品、精密连接器 Thin-wall molded products & precision connectors

追求耐热性、耐久性的高刚性齿轮

通过高精度齿轮、为保证汽车的安全性和机能做贡献。

Our high-precision gears for onboard equipment that requires heat resistance and durability.

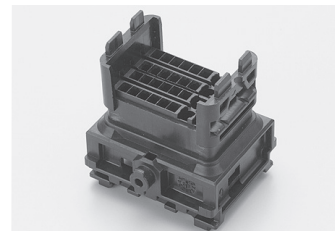
The high-precision of our gears guarantees safety and functionality of automobiles.



保持器
打印机用单向离合器
Keeper
One-way clutches for printer



间隔辊
打印机用薄型成型品
Spacer roller
Thin-wall-molded products for printer



连接器
车载连接器
Connector
Connectors for onboard use

复合成型品 Composite Molded Products

通过手动、自动嵌入成型为客户提供金属和树脂部件。

We offer metal-and plastics-combined products via either manual or automated insert molding.

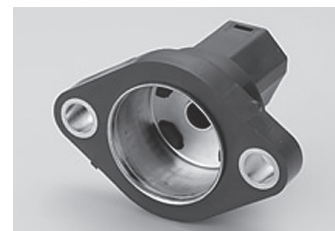
车用部件 On board equipment parts



直接点火用嵌入部件
Insert-molded part for direct ignition



直接点火用嵌入部件
Insert-molded part for direct ignition



汽车用嵌入部件
Insert-molded part for automobiles

开发设备 Equipment development

冲压部件的嵌入成型・・・立式成型方面的冲压、嵌入成型乃至终端加工（弯曲、切割）自动化。

Insert molding of press-worked parts...the processes of press ~ insert molding~ terminal processing (bending and cutting) are automate by vertical moldings.



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塑料成型品

传感器

电气接点

八音盒

塑料成型品

PLASTIC MOLDED PARTS

高精度齿轮 High-Precision Gears

提供更安静、更高效、更好地传动的高精度塑胶齿轮。

We supply high-precision plastics gears capable of conveying power more quietly and efficiently.

办公设备用齿轮 Gears for office automation (OA) equipment

应JGMA/JIS的高精度齿轮(模数0.3~1.5)(正齿轮、斜齿轮、蜗杆)

高精度齿轮默默地为打印机等的优质打印提供着的有力支持。

JGMA/JIS-compatible high-precision gears (module 0.3~1.5) (super gear; helical gear; worm)

Our high-precision gears support the superior printing quality of printer behind the scene.



面向办公设备的高精度齿轮
High-precision gears for OA equipment



面向办公设备的高精度齿轮
High-precision gears for OA equipment



涡轮
Worm

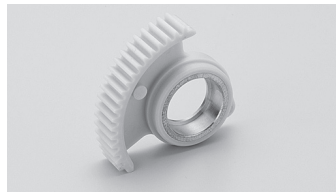
车用齿轮 Gears for on board equipment

追求耐热性、耐久性的高刚性齿轮

通过高精度齿轮、为保证汽车的安全性和机能做贡献。

Our high-precision gears for onboard equipment that requires heat resistance and durability.

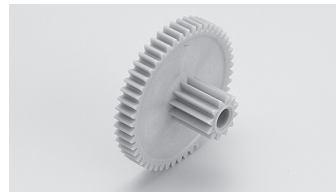
The high-precision of our gears guarantees safety and functionality of automobiles.



进气系统传动部件
Driving system parts for inlet pipes



电动座椅传动齿轮
Gears for power sheet drive



进气系统传动部件
Driving system parts for inlet pipes

耐热部件 Heat-Resistant Products

耐热部件提供从金属向树脂化转变的各种解决方案。

We offer solution for shifting from metals to plastics.

用于住宅热水设备的接头等由树脂制成。 We have plastic couplings for use with hot-water housing supply equipment.

作为防止水锤现象的措施、使用PPS树脂中含有合成橡胶的材料。

As water hummer countermeasure, we use PPS resin containing elastomer.



PPS (聚苯硫醚)制接头 PPS coupling



PPS (聚苯硫醚)制接头 PPS coupling



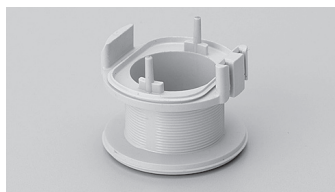
PPS (聚苯硫醚)制阀门 PPA valve

用于汽车部件由树脂制成。
具有耐热性和耐韧性

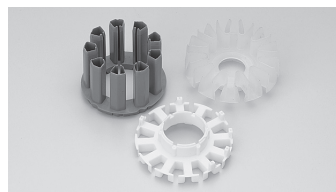
We have plastic parts for automobile.
Offers high heat-resistance and toughness.



汽油发动机用燃油配管
(加入PA6尼龙玻璃纤维)
Delivery pipe for gasoline eng
(blended with PA6 nylon glass fiber)



共轨式柴油发动机用减压阀绕线器
(PPS制:含有合成橡胶)
Press reducer bobbin for common-rail diesel
engines (Made of PPS containing elastomer)



马达用绝缘材料
Insulator for motors

●上述产品的一部分属于定制产品
Some products listed above are exclusive for specific customers

●咨询相关产品、请看封底的联系方式。
For additional information, please contact the offices listed on the back cover.

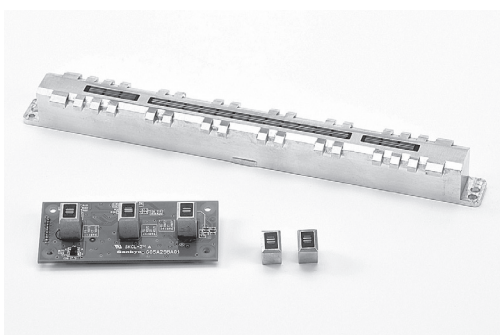
传感器 SENSORS

线性编码器 Linear Encoders



- 用途**
Applications
- 线性电机的位置、速度控制
 - Position and speed control of linear motors
- 特点**
Features
- 在油雾等多种恶劣环境下确保高度的可靠性
 - 采用独自の规模磁化技术实现了良好的内插精度
 - Maintains high reliability in difficult conditions such as oil mist
 - Superior interpolation precision has been achieved due to unique scale polarization technology

磁量传感器 Magnetic Quantity Sensors



- 用途**
Applications
- 磁性墨水的读取、真伪鉴别、识别
 - Readout of magnetic ink, authentication, identification
- 特点**
Features
- 可以检测出磁性墨水的浓淡
 - 通过无磁结构、实现稳定的输出
 - 通过采用陶瓷零件而实现的良好耐磨性
 - Able to detect contrasting densities of magnetic ink
 - Stabilized output due to magnet-less structure
 - Superior wear resistance due to the adoption of ceramic members

旋转编码器 Rotary Encoders

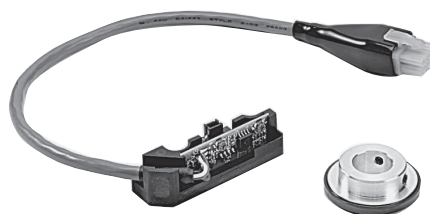
EA series

面对向检出 Facial type



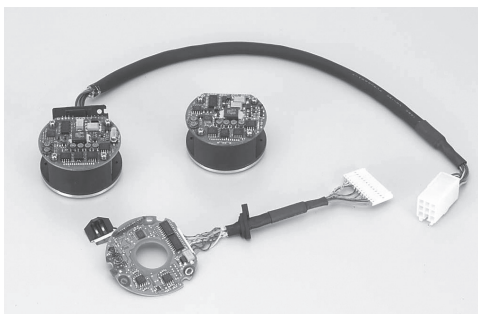
PSRD / PSET

周对象检出 Cylindrical type



PSRD

周对象检出 Cylindrical type



- 用途**
Applications
- 伺服马达、步进马达的位置控制、速度控制
 - Position and speed control of servo motors, stepping motors
- 特点**
Features
- 对磁性传感器的广泛的技术力量、针对顾客要求定制对应
 - 1 极对磁编码器 EA 系列
 - 绝对值编码器、小型化/薄型化机型、出色的耐环境性能、安装简单
 - 参数设定可更改（专利申请中）、准备了两种接口
 - A wide range of technological capabilities with magnetic sensors permits customization to suit customer requirements.
 - One pole pair magnetic type encoder / EA series
 - Absolute encoder, small/thin type model, strong bad environments, easy installation
 - Parameters allow for variable setting (Patent pending), two types of interfaces available

● 上述产品的一部分属于定制产品
Some products listed above are exclusive for specific customers

● 咨询相关产品、请看封底联系方式。
For additional information, please contact the offices listed on the back cover.

马达

马达驱动组件

读卡机

工业机器人

塑料成型品

传感器

电气接点

八音盒

精密滚珠丝杆

PRECISION BALL SCREWS

精密滚珠丝杆 Precision Ball Screws

用途
Applications

●产业器械

●Industrial Equipment

特点
Features

●高的机器效率
●长寿命
●精密的微小送可能
●高精度

●High transmission efficiency
●Long life and low wear
●Precision fine feed
●High precision



主要规格 Feature

丝杠直径 Screw O.D	Φ3 mm~Φ32 mm	
丝杠总长 Overall length screw shaft	最大1,200 mm	Max.1,200mm
导程 Lead	0.8 mm~32 mm	
轴向间隙 Axial Clearance	Z:0 T:0.005 mm以下 S:0.020 mm 以下 N:0.050 mm 以下	Z:0 T:0.005 mm or less S:0.020 mm or less N:0.050 mm or less
预压式 Preloading	单螺母：超大球预压 偏移导致预压 间隔双螺母预压：垫片预压 Single nut: Oversize ball preloading Offset lead preloading Double nut: Spacer preloading	

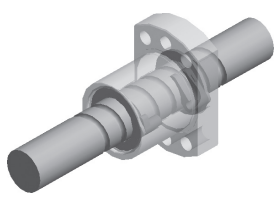
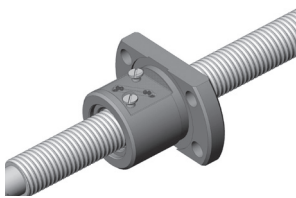
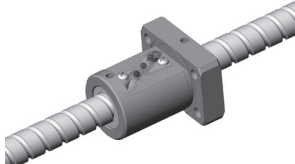
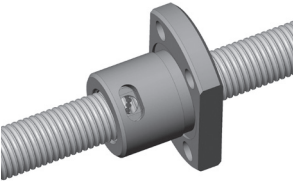
螺母的构造 Structure of Nut

■陀螺型 Deflector type
内循环型、小型
Internal side circuit type, compact

■插管式 Tube type
向一般 For general use

滚珠循环方式 Ball cycle type
■返回型导 Return guide
小直径、小导程 Short lead

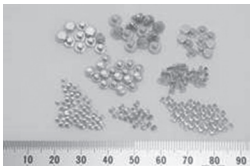
■端盖偏转器式
End deflector type
小型、中高导程
Compact, middle-high lead



电气接点 Electric Contact

车载及民生用电气接点 Electric contact for on-vehicle and home electric appliances

广泛应用于车载电装用继电器、开关上、并应用于混合动力车等高电压用途上。
This contact is mainly used for an on-vehicle electric relay or switch. In addition, this contact is used for high voltage applications, e.g., a hybrid car, etc

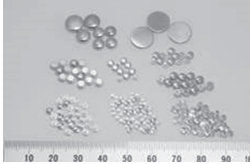


用途
Applications

●DC 负载用途 车载 (12V、24V、高压) 继电器、开关
●AC 负载用途 家电、工业机器相关、供电、控制器用继电器、开关
●For DC : Automotive relays, switches, system-main-relays
●For AC : Home electric appliances, industrial machineries and equipments power distribution breakers

特点
Features

●通过接点的微型化、复合化实现低成本、节省空间
●通过高耐着性、耐消耗性提高接点寿命
●通过低接触电阻抑制接点
●通过中国国内制造、销售网点、确保全球化供应体制
●Lower cost by down sizing and Ag-Cu combined structure
●High welding resistance and high consumption resistance improving electric contacts life
●Excellent performance, low contact resistance, welding resistance, wear resistance
●Establishment of global supply chain with 2 bases of manufacturing and sales : japan, china



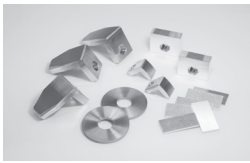
烧结电气接点(钨铜合金) Sintered Contacts (Elkonite)

用途
Applications

●真空断路器、PAS (电线杆空气开关)
●电缆连接器
●Vacuum circuit breaker, pole-mounted switch
●Cable connector

特点
Features

●Ag 系...耐电弧消耗性、耐着性、高导电性
●Ag-WC 系...氧化性、抑制接触电阻增加、耐电弧性
●Ag-WC-Co 系...耐电弧消耗性、接触稳定性
●For Ag : high arc consumption resistance and high welding resistance and high conductivity
●For Ag-WC : Oxidation resistance and low contact resistance and arc resistance
●For Ag-WC-Co : high arc consumption resistance and stability of contact



高比重合金(钨合金) High density alloy metals (Anviloy)

用途
Applications

●手机内置振动马达用振子、平衡器、衡器、扁平马达用振子、制振材料
●Vibrator for a vibration motor built in a cellular phone, Balancer, Weight, Vibrator for a flat motor, Damping material

特点
Features

●高比重、高强度、高耐腐蚀性
●High specific gravity, High strength, High corrosion resistance



八音盒 MUSIC BOX

ORPHEUS

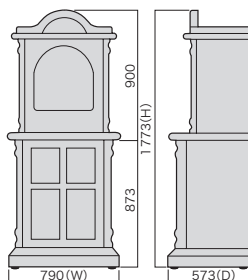
80音俄耳甫斯(ORPHEUS) ×2 80 Note ORPHEUS×2

可设置在玄关、大厅等位置、任何人都可享受到音乐的美妙。
Place a music box in the entrance or hallway for listening joy of everybody.



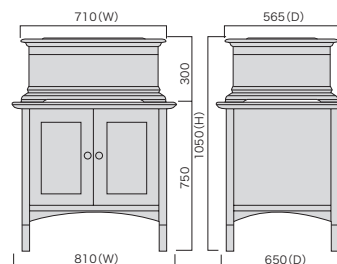
DS-802S
¥3,800,000 (不含税)

尺寸 Size:	790 x 573 x 1,773 mm (仅含本体)
重量 Weight:	95kg
驱动 Drive:	电动马达驱动 Electric motor drive
电源 Power source:	AC100V
碟片 Disc:	带10张碟 10 discs
消费电力 Electricity consumption:	40W
演奏时间 Play time:	一张碟片可放60-90秒 (可调式) 60-90 seconds per a disc(adjustable)



DS-804S (本体)
¥2,700,000 (不含税)
DS-803 (桌子)
¥300,000 (不含税)

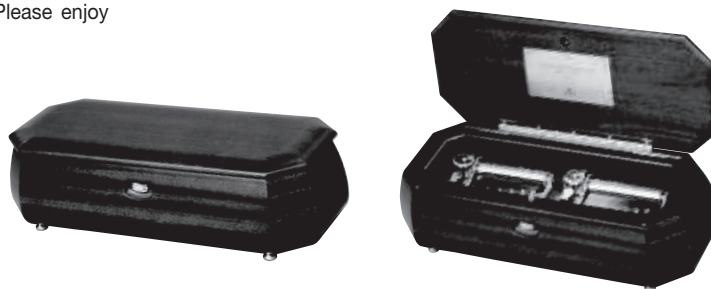
尺寸 Size:	W710 x D565 x H300 mm (仅含本体) (only the body)
重量 Weight:	24kg (仅含本体) 24kg (only the body)
驱动 Drive:	电动马达驱动 Electric motor drive
外箱材质 Material of music box:	MM材质 (乐器用压缩材料) MM material (Compressed material for musical instrument) 层板 (核桃木、樟木) Sliced veneer (Walnut, Camphor)
涂装 Coating:	消光聚氨酯 Urethane mat coating
碟片 Disc:	10片装 (可选择喜欢的曲子) 10 Discs



50音俄耳甫斯(ORPHEUS) ×2 Concerto 100 50 Note ORPHEUS ×2 Concerto100

世界首创 依靠单动力(发条)同时驱动2个50音八音盒的琴鼓、
可以再现大师演奏的经典名曲。
可以享受左右各50个振动板演奏的完美协奏曲。
Concerto 100 has the world's first structure to work twin 50 Note movements by single power source (Spring) and enables to realize classic masterpieces to be played by Piano player. Please enjoy wonderful concerto played by twin 50 Note Combs.

Concerto 100



EX-511U ¥357,000 (不含税)

- 咨询相关产品、请看封底的联系方式。
For additional information, please contact the offices listed on the back cover.
- "ORPHEUS" 及上它们的商标属于日本电产三协株式会社的注册商标。
"ORPHEUS" and their corresponding logos are registered trademarks of NIDEC SANKYO CORPORATION.

八音盒 MUSIC BOX

72/50/30音俄耳甫斯(ORPHEUS) 72/50/30 Note ORPHEUS

八音盒是日本电产三协公司的创业业务。
为满足现在市场上多种多样的需求、我们扩充了产品线提供多种多样的产品供客户选择。
八音盒是赠送给重要的人的最合适的礼物。
Musical movements are Nidec Sankyo's original business.
Today, we have a rich range of musical movement lineup to meet various needs.
A music box is the best gift to your loved ones.



72音俄耳甫斯 (ORPHEUS) 72 Note ORPHEUS



高档机种"ORPHEUS"中的上位机种。
72音的节板可演奏出丰富的音色。
A high end model of luxury music box "ORPHEUS".
72-Note vibrating plate plays a melody with a rich tone.



50音俄耳甫斯 (ORPHEUS) 50 Note ORPHEUS



高档机种俄耳甫斯 (ORPHEUS) 的主打机种。
内置广受各年龄段听众所喜欢的大量音乐。
A mid-range model of luxury model music box "ORPHEUS".
It comes in a large assortment of musical pieces from all periods.



30音俄耳甫斯 (ORPHEUS) 30 Note ORPHEUS



高档机种俄耳甫斯 (ORPHEUS) 中的基本机种。
A standard model of luxury model music box "ORPHEUS".



- 咨询相关产品、请看封底的联系方式。
For additional information, please contact the offices listed on the back cover.
- "ORPHEUS" 及产品上的商标属于日本电产三协株式会社的注册商标。
"ORPHEUS" and their corresponding logos are registered trademarks of NIDEC SANKYO CORPORATION.

八音盒 MUSIC BOX

订购八音盒 Custom-made Music Box

可从日电产三协公司包含10,000首以上的乐曲库中选择喜欢的音乐来进行八音盒的制作。

即使是曲库中没有的乐曲、也可按照您的要求进行编曲、制作出只属于您的原创八音盒。

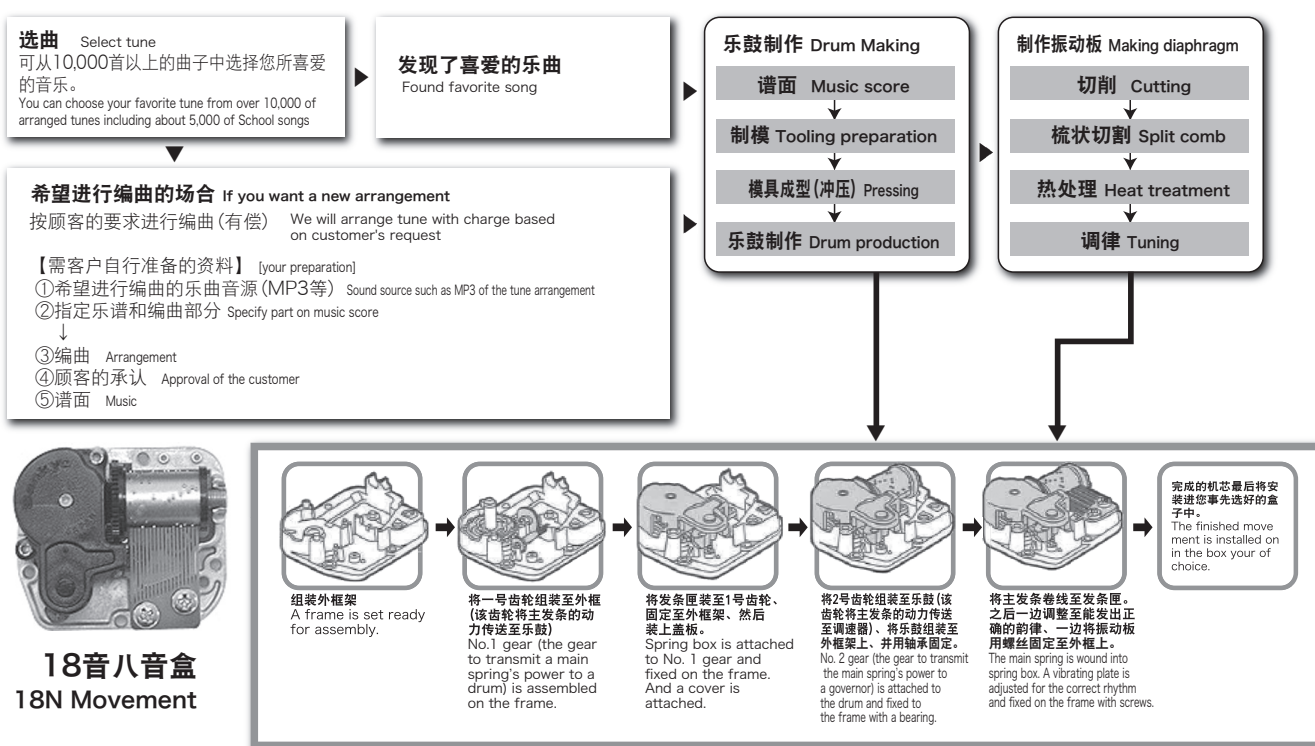
在纪念品及小赠品上、推荐您定制原创八音盒。

Nidec Sankyo produces original musical movements in the tunes you select from among over 10,000 musical pieces in our list.

At your request, we can arrange a piece not in the list and produce your original music box.

Original music boxes are best suited for various commemorative or novelty gifts.

原创八音盒的制作 Produce original Music Box



各种纪念品 Souvenir



【联络方式】 Contact us

八音盒担任 Sales & Marketing

电话号码: (81)3-6893-3111 (营业时间 日本时间9:00~17:30 定休日:周六周日以及其他法定假日)

Phone Number: (81)3-6893-3111 (Opening Hours 9:00~17:30 Closed on Saturday, Sunday, Public holiday)

产品情报是、URL <http://www.nidec-sankyo.co.jp/orgel/>



All for dreams

日本电产三协株式会社

总公司 长野县諏访郡下諏访町5329 邮编:393-8511
TEL: (81) 266-27-3111 FAX: (81) 266-28-5833
http://www.nidec-sankyo.co.jp/c/

NIDEC SANKYO CORPORATION

Head Office 5329, Shimosuwa-machi, Suwa-gun, Nagano 393-8511, Japan
TEL: (81) 266-27-3111 FAX: (81) 266-28-5833
http://www.nidec-sankyo.co.jp/english/index.html

国内 Domestic offices and facilities

●销售管理据点 Sales & Management Offices

日电产三协电子(深圳)有限公司
广东省深圳市福田区益田路4068号卓越时代广场1005-1008室
NIDEC SANKYO ELECTRONICS (SHENZHEN) CORPORATION
Room 1005-1008, Excellence Times Square Building, 4068 Yitian Road, Futian District, Shenzhen, Guangdong Province, P.R. China
TEL: (86) 755-8359-2335 FAX: (86) 755-8359-3532

日电产三协(香港)有限公司
香港新界葵芳兴芳路223号新都会广场第二座26楼2605-2606室
NIDEC SANKYO (H.K.) CO., LIMITED
Unit 2605-06, Level 26, Metroplaza Tower II, No.223 Hing Fong Road, Kwai Fong, N.T., Hong Kong
TEL: (852) 2369-6855 FAX: (852) 2724-2702

日电产三协电子(上海)有限公司
上海市漕溪北路18号美莱大厦28楼B.C.
NIDEC SANKYO ELECTRONICS (SHANGHAI) CORPORATION
28/F B C Shanghai Shi Ye Building, 18 Cao Xi Road North, Shanghai, P.R. China, 200030 P.R. China
TEL: (86) 21-6427-2460 FAX: (86) 21-6427-2458

●开发生产据点 Development/Production Locations

日电产三协电子(东莞)有限公司
广东省东莞市石龙镇上塘西路38号
NIDEC SANKYO ELECTRONICS (DONGGUAN) CORPORATION
No.38 Shangtang Road, Shilong, Dongguan, Guangdong Province 523325, P.R. China
TEL: (86) 769-8611-1234 FAX: (86) 769-8611-4531

日电产三协电子(韶关)有限公司
广东省韶关市乳源县广东乳源经济开发区
NIDEC SANKYO ELECTRONICS (SHAOGUAN) CO., LTD.
Guangdong Ruyuan National Development-Zone, Ruyuan, Shaoguan, Guangdong Province 512721, P.R. China
TEL: (86) 751-528-1147 FAX: (86) 751-528-1970

日电产三协(浙江)有限公司
浙江省平湖市经济开发区兴平二路888号
NIDEC SANKYO (ZHEJIANG) CORPORATION
No.888 Xing Ping 2nd Road, Pinghu Economic Development Zone, Pinghu City, Zhejiang Province 314200, P.R. China
TEL: (86) 573-8507-8861 FAX: (86) 573-8507-8866

日电产三协(东莞)工机有限公司
广东省东莞市长安镇乌沙管理区江贝开发区步步高大道
NIDEC SANKYO (DONGGUAN) CORPORATION
Bubugao, Road, Jiangbei Development Zone, Wusha, Changan, Dongguan-City, Guangdong-Province, China
TEL: (86)-769-85547460 FAX: (86)-769-85547461

日电产三协(大连)有限公司
辽宁省大连经济技术开发区工业团地33-31号
NIDEC SANKYO (DALIAN) CORPORATION
No.33-31 Industrial Park Economic & Technical Development Zone, Dalian, China
TEL: 86-411-87651771 FAX: 86-411-87651872

咨询处 Contact	TEL & FAX
日电产三协电子(深圳)有限公司 广东省深圳市福田区益田路4068号卓越时代广场1005-1008室	TEL : (86) 755-8359-2335 FAX : (86) 755-8359-3532
日电产三协电子(上海)有限公司 上海市漕溪北路18号美莱大厦28楼B.C.	TEL : (86) 21-6427-2460 FAX : (86) 21-6427-2458
日电产三协(香港)有限公司 香港新界葵芳兴芳路223号新都会广场第二座26楼2605-2606室	TEL : (852) 2369-6855 FAX : (852) 2724-2702

Overses Sales Offices	TEL & FAX
NIDEC SANKYO AMERICA CORPORATION 1 International Boulevard, Suite 400, Mahwah, NJ 07495, U.S.A.	TEL : (1) 201-512-8839 FAX : (1) 201-512-1499
NIDEC SANKYO EUROPE GmbH Mollsfeld 1, 40670 Meerbusch, F.R. Germany	TEL : (49) 2159-6958-0 FAX : (49) 2159-3903
NIDEC SANKYO SINGAPORE PTE. LTD. No.2 Toh Guan Road East#02-03(2M)Singapore 608837	TEL : (65) 62781926 FAX : (65) 62785591
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