

PH600 Series Servo Drive

Electro-hydraulic Servo System

PH600系列-高性能电液伺服系统选型手册



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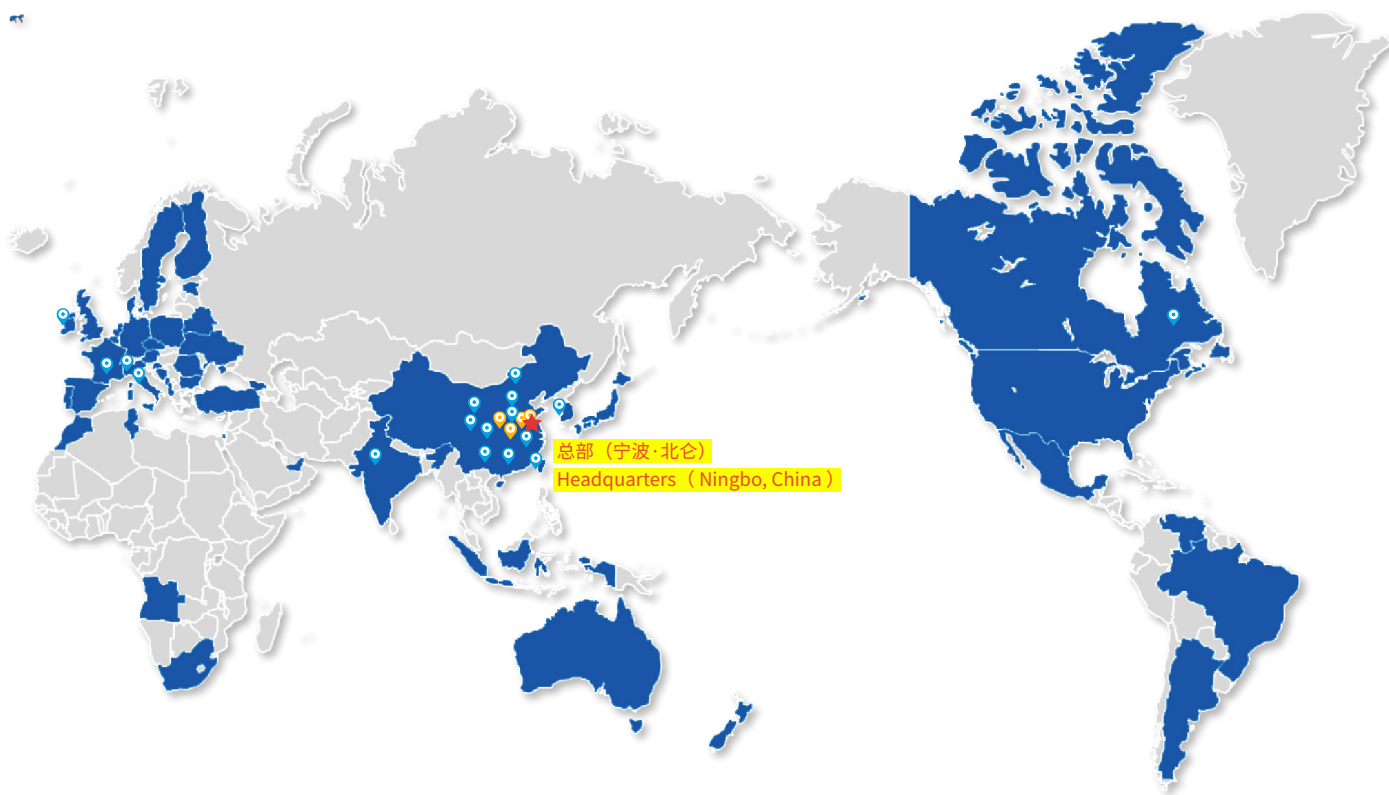
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Company Profile 企业简介

宁波菲仕技术股份有限公司（简称：菲仕技术）成立于 2001 年，由民营控股、先进制造产业投资基金和宁波通商集团等战略投资人参股，公司致力于以“高效节能、精准控制”电驱动技术为核心的创新及产业化，为运动控制和能量转换领域提供系统产品和综合解决方案，经过多年品牌沉淀，菲仕已成为一家集研发、生产、销售为一体，拥有国内外多家控股子公司的集团化创新型高科技企业。

Ningbo Physis Technology Co., Ltd. (hereinafter referred to as Physis) was founded in 2001. Physis always devotes to innovation and industrialization of electrical drive technology, provides servo products and solutions for the field of motion control & energy conversion. After years of brand development and accumulation, Physis becomes a collectivized & innovative high-tech enterprise, which collects together R&D, manufacturing and sales, and has a numbers of domestic and overseas subsidiaries.



★ 总部
Headquarters

📍 5 大生产基地
Manufacturing Plant

📍 3 大研发中心
R&D center

📍 17 个海内外分支机构
Sales of subsidiaries and agency services

■ 销售产品及服务国家
Countries in which products are sold and services are served

Global presence 全球布局

立足全国 放眼全球

总部“永动谷”落户中国宁波北仑，在国内产业链完善的宁波、株洲、天津、赣州建立大型生产基地。建立国内外分子公司 17 家，合作伙伴百余家，形成覆盖全国、面向全球市场的营销服务网络，逐步落地国际化战略。

Physis has established large-scale production bases in Ningbo, Zhuzhou, Tianjin, and Guangzhou, which have a complete domestic industrial chain.

It has established 17 domestic and foreign subsidiaries and more than 100 partners, formed a marketing service network covering the whole country and facing the global market, and gradually implemented the internationalization strategy.

Products 产品

PH600 系列高性能电液伺服驱动器

功率范围：7.5kW~110kW

支持闭环矢量控制，内置 PID 控制，简便的增益调整及增益切换功能

支持 4 种现场总线：标配 Modbus，选配 CANopen，EtherCAT，Profinet

高可靠性，内置 C3 滤波器，核心电路板标配加厚防护涂层

性能优越，环境适应性好，结构简单，体积小、功率密度大，便于安装

保护功能完备，具有输入缺相保护、过流、过压、过载、过热、制动过载保护等功能

用 LED 面板或外置 HMI 来修改参数，支持参数拷贝，操作方便

采用可插拔式端子，散热风扇可快速更换，更方便现场接线和维护

PH600 Series Servo Drive

Power range: 7.5kW~110kW

Close-loop vector control, built-in PID control

Multi type Communication, Modbus

RTU, CANopen, EtherCAT, Profinet

High Reliability, Built-in C3 filter, Thickened protective coating

Complete Protection functions, such as Phase-lacking, Overcurrent, Overvoltage, Overload, Overheat, Brake overload and so on

Easy operation, using LED and keypad or external HMI to modify parameters, supporting parameter quick copying function

Convenient wiring and maintenance, using pluggable terminals and cooling fan can be quickly replaced



Express 系列交流永磁同步伺服电机

菲仕研发的新一代高性能伺服电机，该系列电机拥有更高的功率密度，更好的伺服响应速度和过载输出特性，特别适合需要高速响应和短时过载要求高的应用场合，如高速节能注塑机、压铸机等。

额定功率范围：7.9kW~337.2kW

额定扭矩范围：150Nm~2200Nm

峰值扭矩范围：150Nm~3500Nm

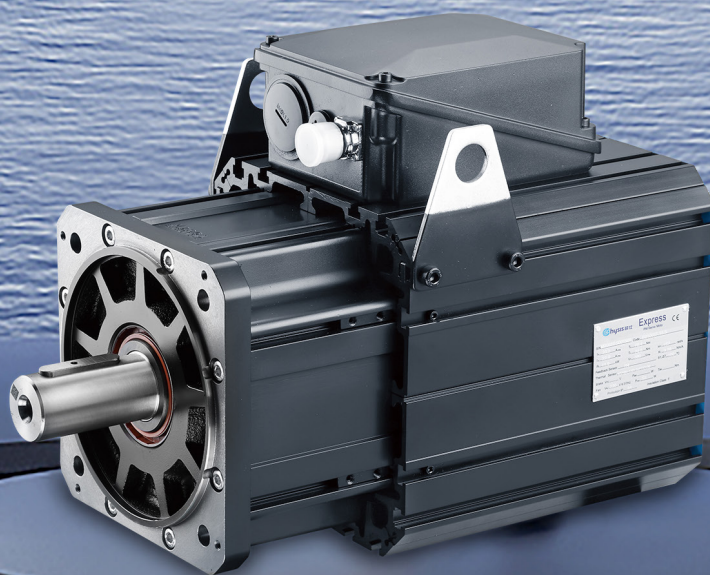
Express Series Servo Motor

Express series servo motor is a new generation of high performance servo motor that has higher power density, higher response speed and good overload output characteristic. Specially suitable for some applications which need high requirements of high speed response and short-time overload, such as high speed energy-saving injection molding machine, die-casting machine, etc.

Rated power range : 7.9kW~337.2kW

Rated torque range : 150Nm~2200Nm

Peak torque range : 150Nm~3500Nm



Servo System Solution

伺服系统解决方案

配置

控制系统、交流伺服驱动器、交流永磁伺服电机、油泵、速度反馈单元、压力反馈单元等

优势

PQ 控制

压力控制稳定；压力波动低于 0.5bar

性能稳定，可靠；重复定位精度高，噪音低

节能高效，节能率 30%~70%

快速响应，响应时间低于 30ms

Configurations

Control system, servo drive, PM servo motor, oil pump, speed feedback unit, pressure feedback unit, etc

Advantages

PQ control

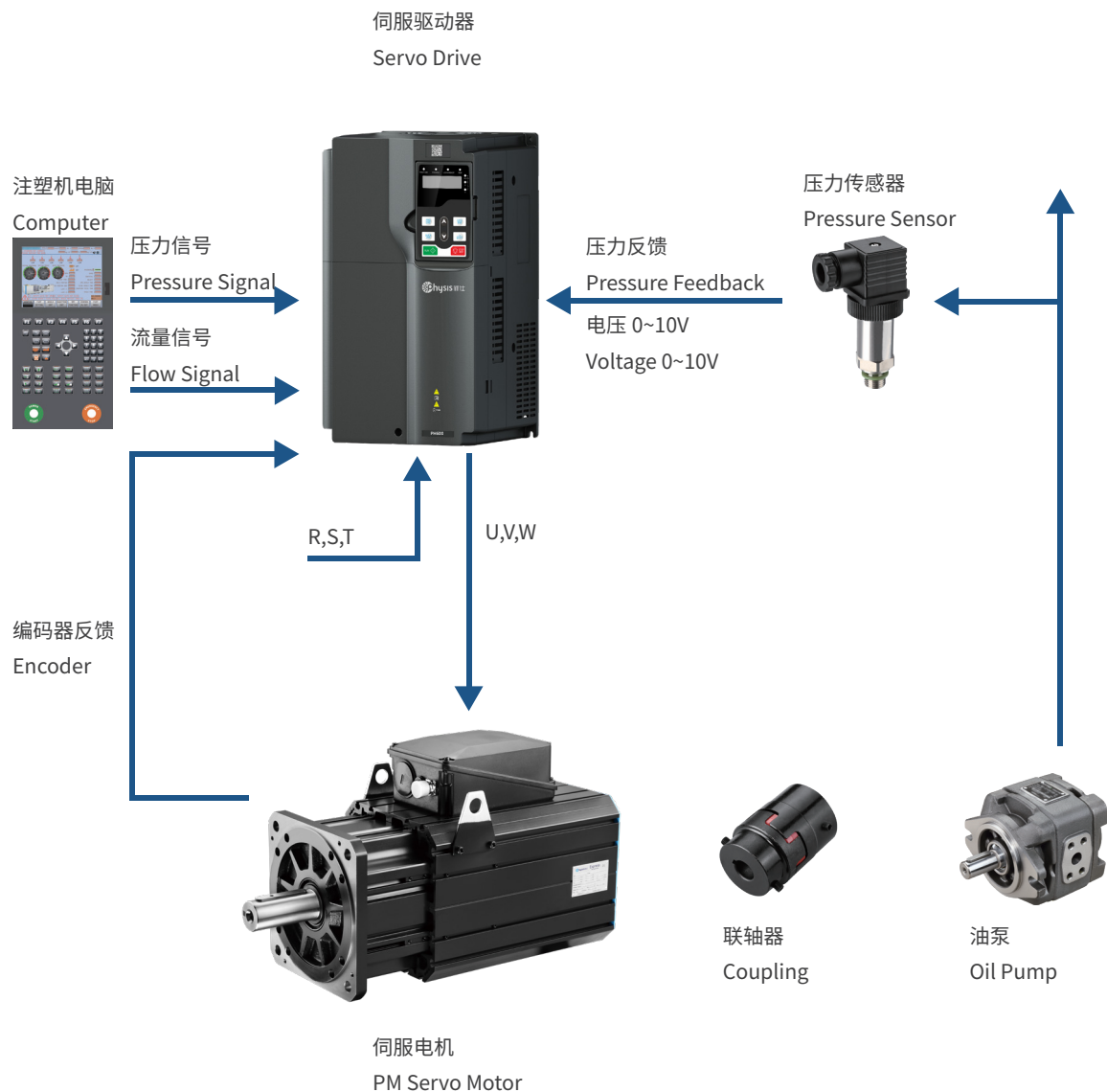
Pressure control stability, pressure fluctuations < 0.5Bar

Performance stability & reliability

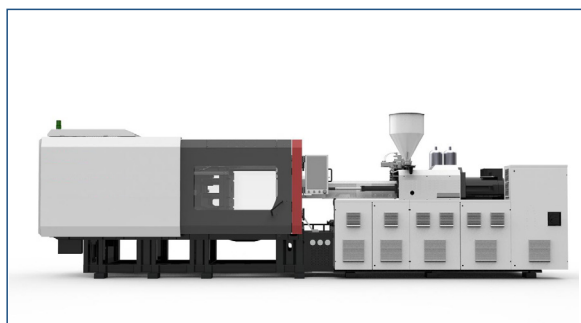
High position repeat accuracy, low noise

Energy efficiency 30%~70%

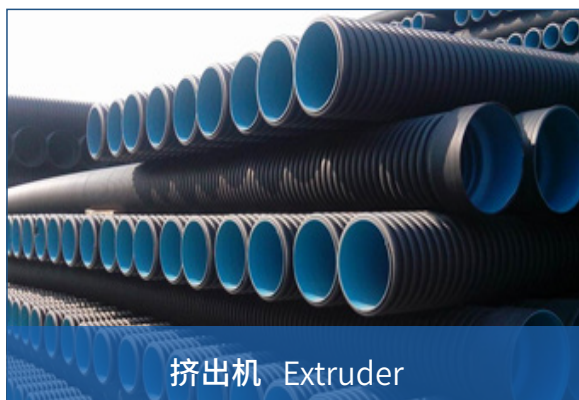
Quick response < 30ms



Application 应用领域



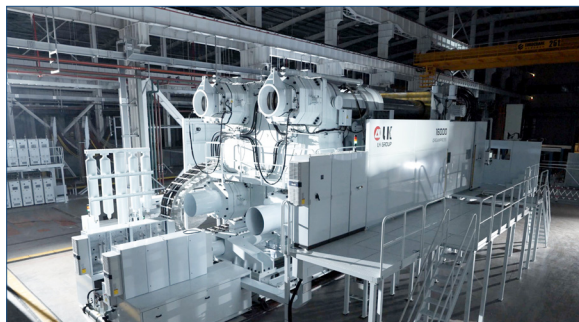
注塑机 Injection Molding Machine



挤出机 Extruder



钢铁冶金 Iron and steel



压铸机 Die Casting Machine



液压机 Hydraulic Press



折弯机 Bending Machine

Servo Drive Code

PH600 系列驱动器代码

PH600	.011	.43	A	R	S	F	—	XX
驱动器系列识别 Series Identify	驱动器功率识别 Power Identify	电压等级 Voltage Class	版本号 Hardware Version	PG 卡识别 PG Card	总线识别 Communication Bus	冷却方式识别 Cooling		备用识别码 Customized Drive Identification
						F= 强制风冷 Fan cooling Y= 强制液冷（即将上线） Liquid cooling		冷却方式
						S: 标配 Modbus 标准型 C: 选配 CAN 通信 E: 选配 EtherCAT 通信（即将上线） F: 选配 Profinet 通信（即将上线）		总线识别
					R= 旋转变压器 Resolver encoder Z=SVC/ 无编码（即将上线）			PG 卡识别
				A: 不内置直流电抗器 (7.5KW~55KW 选配) B: 内置直流电抗器 (75KW~110KW 标配)				硬件版本号
		43 = 380Vac 3 相						电压等级
	007 = 7.5kW 011 = 11kW 015 = 15kW 018 = 18.5kW 022 = 22kW 030 = 30kW 037 = 37kW 045 = 45kW 055 = 55kW 075 = 75kW 090 = 90kW 110 = 110kW							功率识别
驱动器系列识别码：600 系列变频器								

代码示例：

PH600.011.43ARMF

菲仕 PH600 系列伺服驱动器，功率 11kW，380V 输入三相电压，A 版硬件版本，旋转变压器，总线 Modbus，强制风冷

Code Example:

PH600.011.43ARMF

PH 600 servo series drive, 11kW, input voltage 380V, hardware version A, resolver encoder, modbus communication bus, fan cooling

Drive Technical Specifications

PH600 系列伺服驱动器技术规格

项目 Item		描述 Descripton
控制方式 Control Mode		三相全波整流, IGBT PWM 控制正弦波电流驱动方式 Three phase full wave rectification, IGBT PWM control sine wave current drive mode
最高输出频率 Max Output Frequency		400Hz
电机位置传感器 Motor Position Sensor		旋转变压器Resolver、分辨率4096pulse/rev
环境 Environment	工作温度 Operation Temperature	-10℃~+50℃ (不冻结, 40℃以上降额使用) -10℃~+50℃ (Not frozen, derated for use above 40℃)
	储存温度 Storage Temperature	-30℃~+60℃ (不冻结) -30℃~+60℃ (Not frozen)
	湿度 Humidity	工作/储存≤90%RH, 无凝露; Operation/Storage≤90%RH, no condensation
	空气 Air	室内(无日晒), 无腐蚀性气体, 无易燃性气体, 无油气, 无尘埃 Indoor, no corrosive gas, no flammable gas, no oil gas, no dust
	海拔 Altitude	3000m以下(1000m以上降额使用, 高度每升高100m, 降额) Below 3000m (Derating for use above 1000m, derating for every 100m increase in height)
防护等级 Protection Grade		IP20
冷却方式 Cooling Method		F: 风冷 Forced air cooling
数字信号 Digital Signal	输入 Input	6路DI, 内部阻抗: 5.1kΩ 6 Digital DI, internal impedance: 5.1kΩ
	输出 Output	3路DO, 开路集电极输出 3 Digital output
继电器 Relay	输出 Output	1路继电器输出: RA常开, RB常闭, RC公共端 触点容量: 3A/AC250V, 1A/DC30V 1 Relay output: RA:NO, RB:NC, RC:Common Contact rating: 3A/AC250V, 1A/DC30V
模拟信号 Analog Signal	输入 Input	2路(AI1、AI2) 12位A/D输入, 0~10V; 1路(AI3) 12位A/D输入, 0~10V/0~20mA 2 Analog inputs, 12-bit A/D, 0~10V; 1 Analog input, 12-bit A/D, 0~10V/0~20mA
	输出 Output	2路输出: 10位D/A, 0~10V/0~20mA 2 Analog outputs: 10-bit D/A, 0~10V/0~20mA
控制电源 Control Power	输出 Output	对外提供15V基准电源, 最大输出50mA 对外提供24V基准电源, 最大输出100mA Provide DC15V reference power supply with maximum output of 50mA Provide DC24V reference power supply with maximum output of 50mA
RS485 通信接口 RS485 Communication Interface	通讯 Communication	通信协议: Modbus RTU 波特率: 9600bps, 19200bps, 38400bps, 57600bps (Default: 19200bps)

项目 Item		描述 Descripton
电机温度 Motor Temperature	电机温度传感 Motor Temperature Sensor	KTY84, PT1000, PTC130
通讯功能 Communication		标配Modbus RTU, 选配CAN、EtherCAT、Profinet
LED 显示面板与键盘 LED Display Panel and Keyboard		5位LED显示, 8个功能键 5-digit LED display with 8 function keys
控制功能性能 Control Function Performance	速度控制 Speed Control	可设定为模拟输入AI、内部参数、通信控制等
	多泵并联控制 Multi Pump Control	可控制16个泵, 五种工作方式(多泵, 复合, 多模式, 通信两模式, 通信四模式) Capable of controlling 16 pumps and five working modes(Multi pump, composite, multi mode, communication two mode, communication four mode)
	压力控制精度 Pressure Control Accuracy	±1bar
	流量控制精度 Flow Control Accuracy	±0.5%FS
	速度控制精度 Speed Control Accuracy	±0.5%
	压力控制阶跃响应 Pressure Step Control Response	≤100ms
	速度阶跃相应 Speed Step Response	≤50ms
	流量校正功能 Flow Correction Function	根据各种泵特性对输出流量进行压力校正 Pressure correction of output flow rate based on various pump characteristics
	转矩响应时间 Torque Response Time	≤2ms
	报警信息 Alarm Infor	过电流、直流过压、直流欠压、制动电阻损坏、模块过温、压力传感器故障、正反向过速、制动过载等 Overcurrent, DC overvoltage, DC undervoltage, brake resistor damage, module over temperature, pressure sensor failure, overspeed, brake overload
保护功能 Protection Function	报警记录 Alarm Record	可存储5个报警记录 Can store 5 alarm records
其他 Other	EMC 滤波器 EMC Filter	C3: 内置C3滤波器 Built-in C3 Filter
	质保期 Warranty Period	18个月质保 18 month warranty
其他 Other	认证要求 Certification Requirements	满足CE认证 Meet CE certification

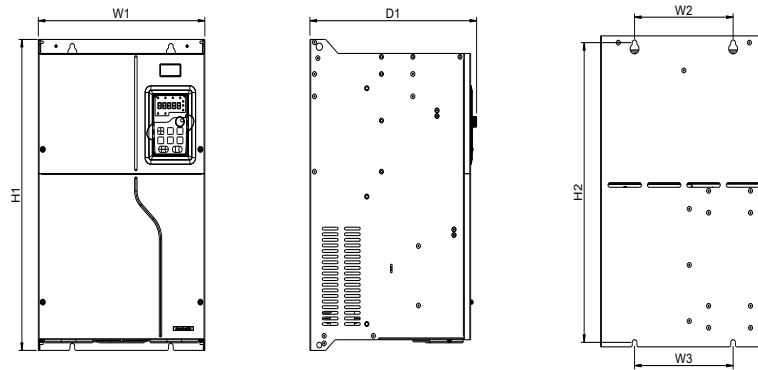
Drive Specifications

PH600 系列伺服驱动器规格参数

PH600__43ARSF	007	011	015	018	022	030	037	045	055	075	090	110
适用电机容量 (kW) Applicable motor capacity	7.5	11	15	18	22	30	37	45	55	75	90	110
额定输出电流 (A) Rated output current	18.5	25	32	38	45	60	75	92	115	150	180	215
过载 (Arms) 持续时间 5min Overload (Arms) lasts 5min	26	35	48	53	67	99	109	138	167	195	242	258
最大输出电流 (Arms) 持续 时间 30s Max. output current (Arms) lasts 30s	32.5	40.7	55.2	63.6	81.3	113	141	169.7	226	297	318	350
额定输入电流 (A) Rated input current(Arms)	25	32	40	47	56	70	80	94	128	160	190	225
输入电压 Input voltage	AC 380V~480V											
电压波动范围 Voltage fluctuation range	-15%~+10%, AC 323V~528V											
输入频率 Input frequency	50Hz/60Hz,47~63Hz											
重量 (kg) Weight	4.8	4.8	6.1	6.1	9.5	14.5	14.5	21	21	27	49	49
推荐外置制动电阻规格 Recommended external braking resistor specifications	40Ω 1000W				15Ω 1500W		10Ω 2000W			2 个 20Ω 2000w 电阻并联 resistors in parallel connection	2 个 10Ω 2000w 电阻并联 resistors in parallel connection	
最小制动电阻 (Ω) Min. braking resistance	31	31	23	23	15	11.7		6.4			4.4	4.4

Dimensions of Drive

PH600 系列伺服驱动器壁挂安装尺寸



PH600__43ARSF	外形尺寸 (mm) Outline Dimensions			安装孔位 (mm) Mounting Hole Distance			安装孔径 Hole Diameter	固定螺钉 Fixing Screw
	W1	H1	D1	H2	W2	W3		
007	145	280	203	268	130	/	Ø 6	M5
011								
015								
018	169	320	210	308	154	/	Ø 6	M5
022	200	341	208	328.6	185	/	Ø 6	M5
030	250	400	222	380	230	/	Ø 6	M5
037								
045	282	560	257	542	160	226	Ø 9	M8
055								
075								
090	338	554	330	534	200	/	Ø 9.5	M8
110								

E0 1007F 203 R4 0 Y0 Kb 1-T F

10

电机型号 Motor Code		E01004F			E01005F			E01007F			E01008F			E01010F			E01012F			E01013F		
额定转速 Rated Speed	wn [rpm]	1500	1700	2000	1500	1700	2000	1500	1700	2000	1500	1700	2000	1500	1700	2000	1500	1700	2000	1500	1700	2000
额定频率 Rated Freq	Fn [Hz]	100	113	133	100	113	133	100	113	133	100	113	133	100	113	133	100	113	133	100	113	133
极数 Number of poles	2p	8																				
最大速度 Max Speed	wmax [rpm]	3500																				
最大频率 Max Freq	Fmax [Hz]	233																				
堵转电流 Stall Current	Io [A]	15	18	20	24	28	31	31	35	42	42	45	52	48	57	62	56	62	77	61	68	77
额定电流 Rated Current	In [A]	15	17	19	23	26	29	29	32	38	39	41	47	45	52	56	52	57	69	57	62	69
堵转扭矩 Stall Torque	To [Nm]	53			78			106			132			158			183			208		
额定扭矩 Rated Torque	Tn [Nm]	50	50	50	75	74	73	100	99	97	124	123	121	148	146	143	171	168	165	193	190	187
额定功率 Rated Power	Pn [kW]	7.9	9.0	10	12	13	15	16	18	20	20	22	25	23	26	30	27	30	34	30	34	39
扭矩常数 Torque Constant	Kt [Nm/A]	3.43	2.91	2.57	3.38	2.86	2.60	3.46	3.12	2.60	3.25	3.03	2.60	3.38	2.86	2.60	3.33	3.03	2.42	3.46	3.12	2.77
反电动势 Back EMF	EMF [V/krpm]	208	176	156	204	173	157	210	189	157	197	183	157	204	173	157	202	183	147	210	189	168
绕组线电阻 Winding Resistance	Rw [ohm]	1.67	1.13	0.892	0.825	0.546	0.465	0.543	0.451	0.322	0.37	0.31	0.233	0.319	0.216	0.179	0.244	0.200	0.133	0.222	0.176	0.145
直轴线电感 Direct Inductance	Ld [mH]	18.2	13.1	10.2	11.5	8.2	6.8	9.1	7.4	5.1	6.4	5.6	4.1	5.8	4.1	3.4	4.8	4.0	2.5	4.5	3.7	2.9
交轴线电感 Quadrature Inductance	Lq [mH]	42.7	30.9	24.0	27.1	19.4	16.0	21.4	17.3	12.0	15.0	13.1	9.6	13.5	9.7	8.0	11.3	9.3	6.0	10.7	8.6	6.8
最大电流 Max Current	I _{max} [A]	50	59	66	80	91	100	100	112	135	135	144	170	155	182	200	183	200	250	200	222	250
最大扭矩 Max Torque	T _{max} [Nm]	145			222			297			371			445			520			594		
转动惯量 Rotor Inertia	Jm [kgcm ²]	56			80			103			126			150			173			196		
电机重量 Weight	M [kg]	40			47			54			61			68			75			82		

驱动器电压 Vdrive: 380Vac

直流母线电压 Vdcbus : 537Vdc

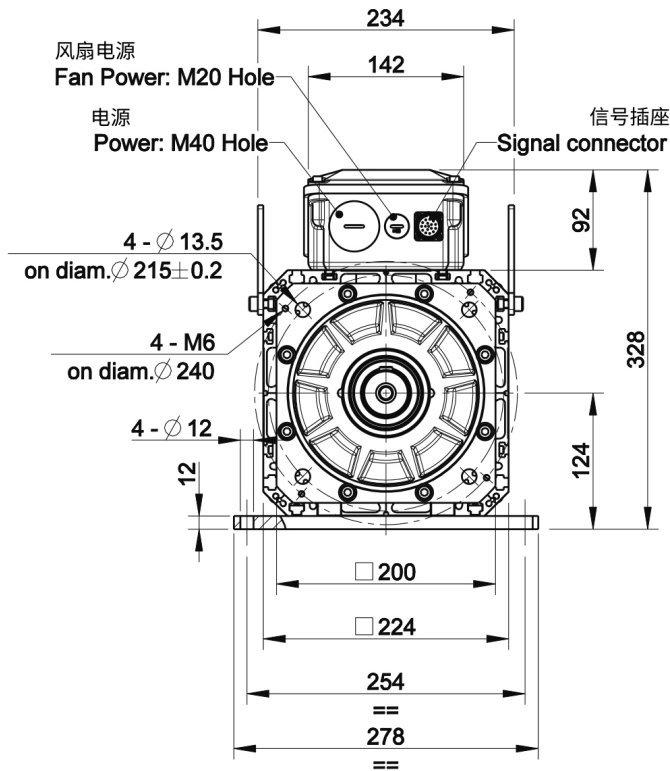
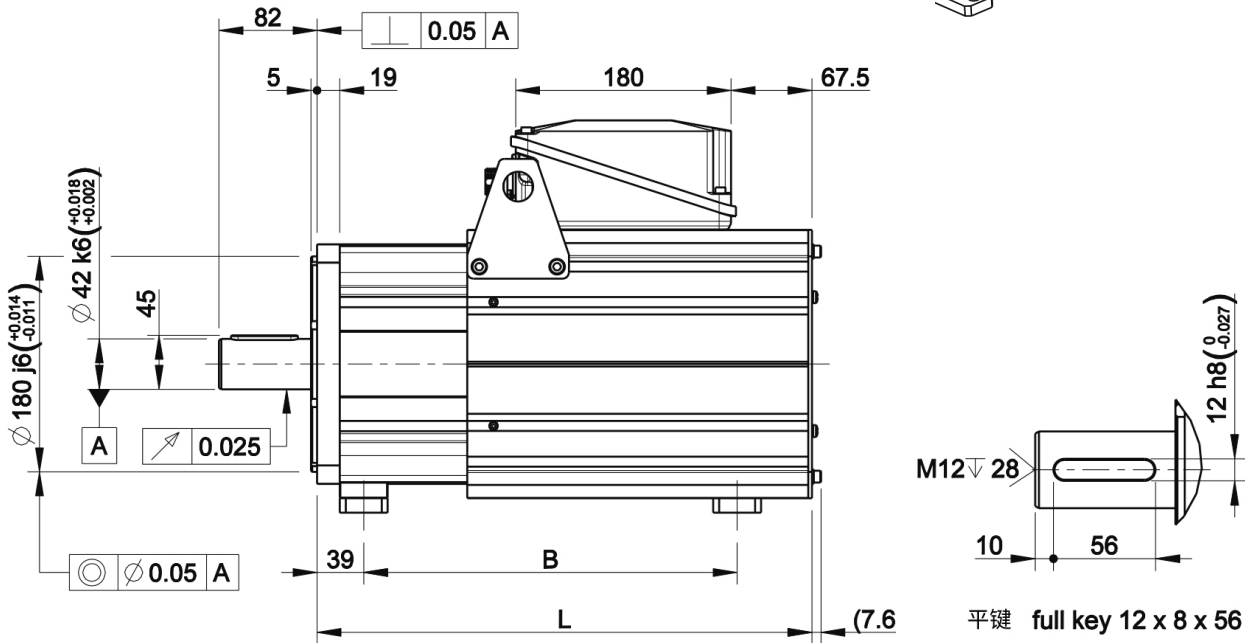
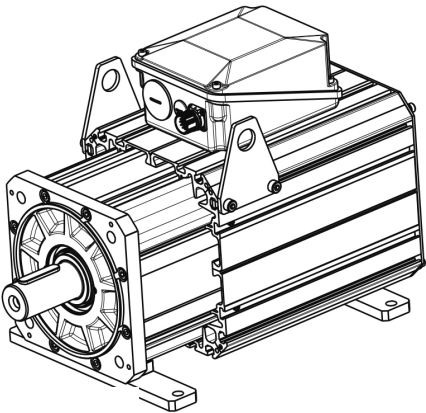
载波频率 PWM frequency: ≥ 4kHz

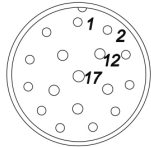
温升 DT : 100K

环境温度 Tamb : 30°C

制动器的机械参数 / Technical Data of the Holding Brake		
制动扭矩 Holding Torque	MBr [Nm]	140
额定电压 (± 10%) Rated Voltage (± 10%)	Ubr [Vdc]	24
额定电流 Rated Current	Ibr [A]	2.3
重量 Mass	MBr [Kg]	11
惯量 nertia	JBr [Kgcm ²]	56
电机增加的长度 Additional Motor Length	Length [mm]	65

	B	L
E01004F	267	342
E01005F	285	378
E01007F	312	414
E01008F	354	450
E01010F	396	486
E01012F	400	527
E01013F	471	558

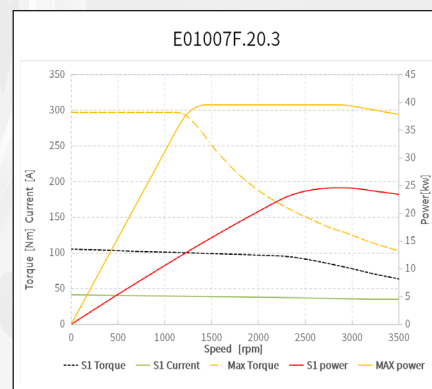
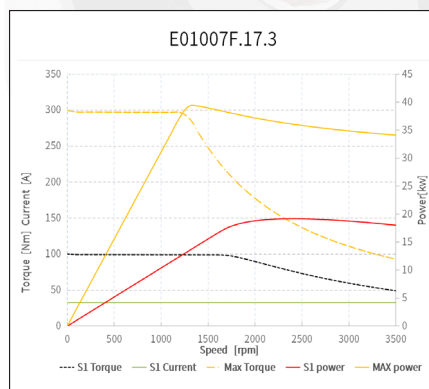
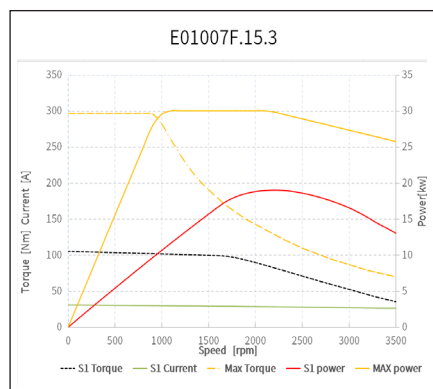
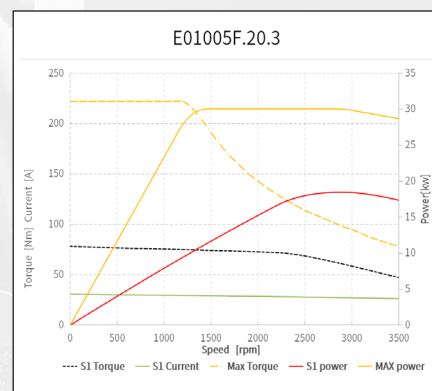
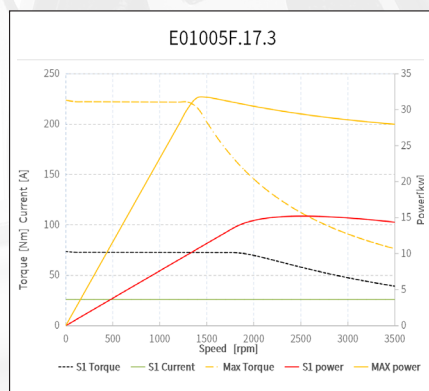
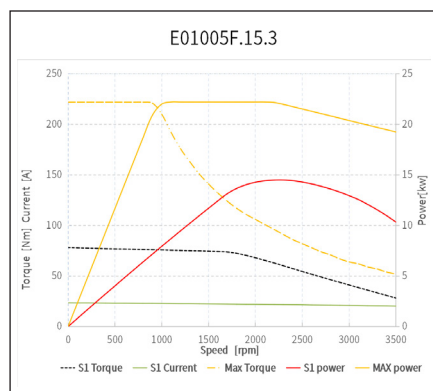
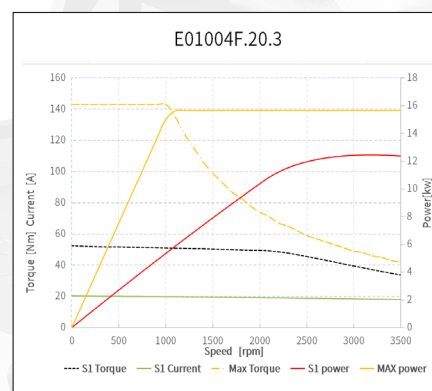
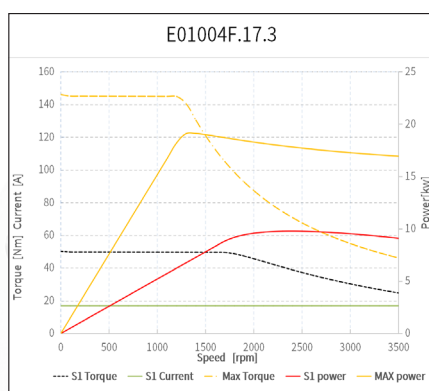
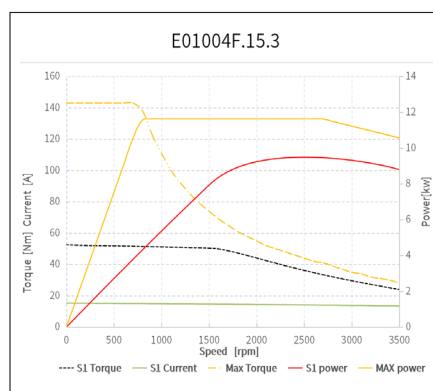
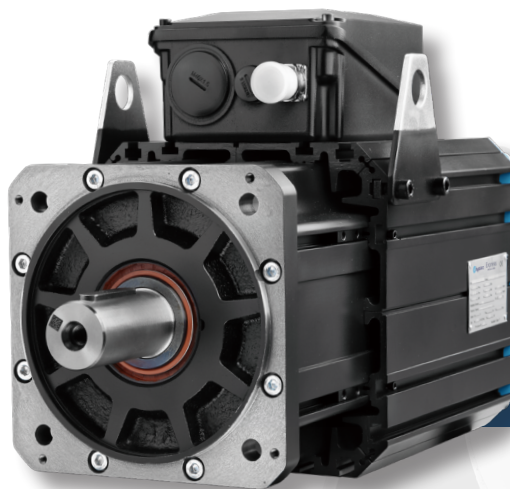


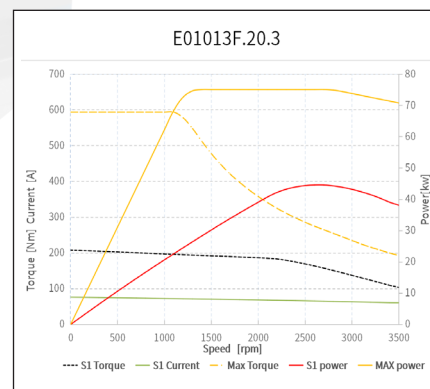
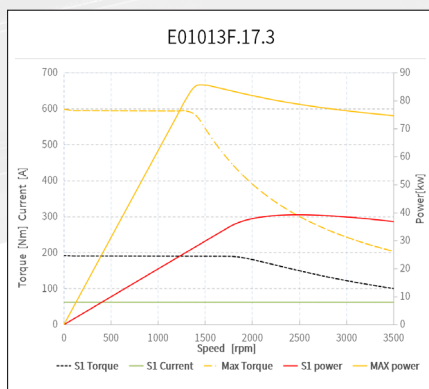
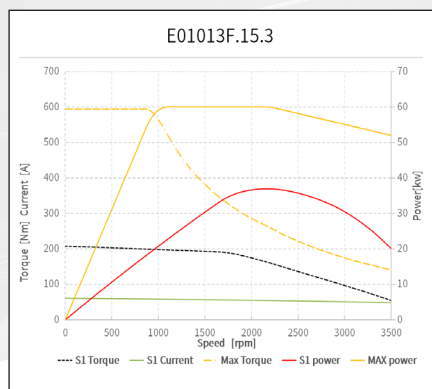
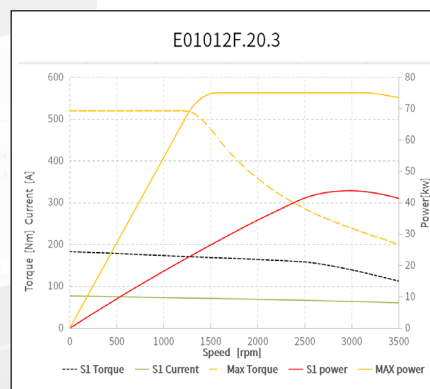
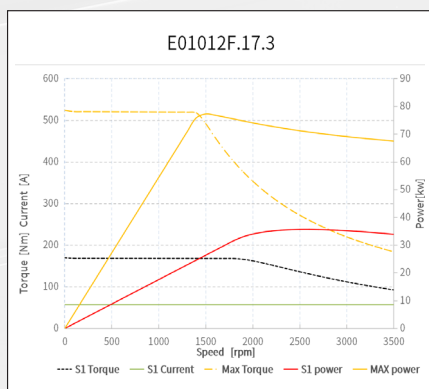
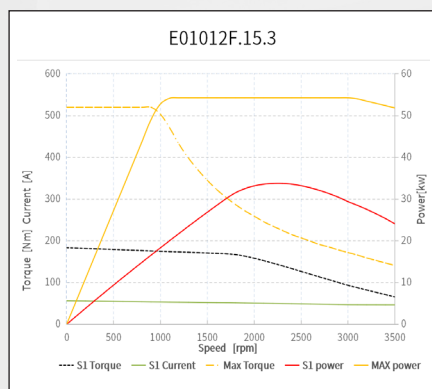
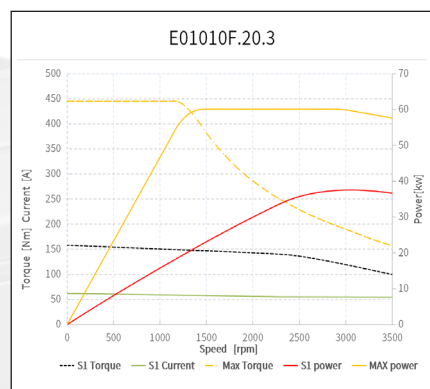
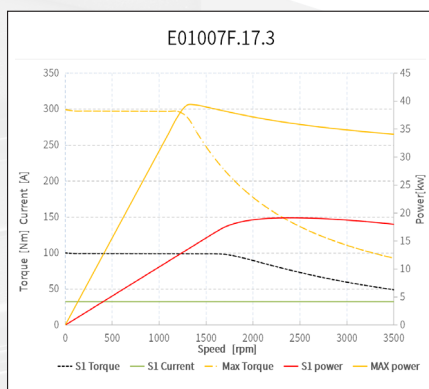
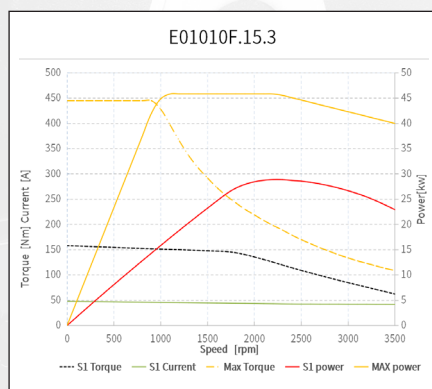
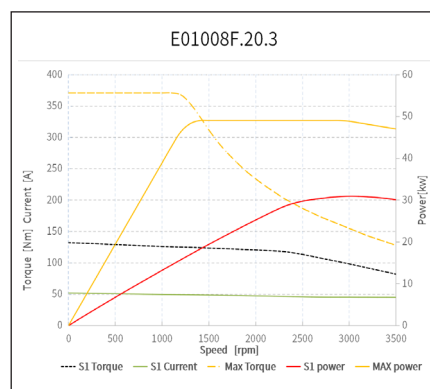
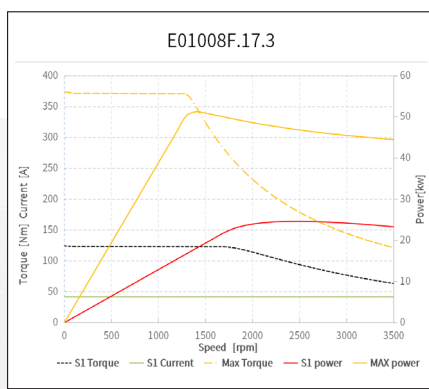
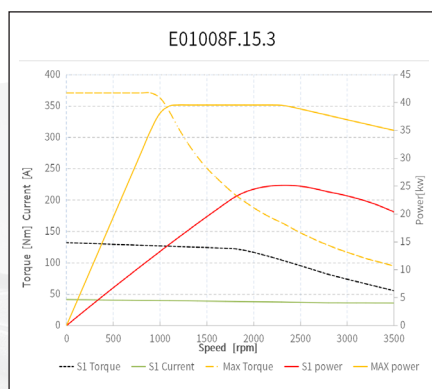
 信号插座 Signal Connector M23 Size 1-17 Pin		
针脚号 PIN	线色 WIRE COLOR	定义 FUNCTION
1	n.c.	n.c.
2	n.c.	n.c.
3	n.c.	n.c.
4	YELLOW 黄	SIN-
5	RED 红	COS+
6	BLACK 黑	COS-
7	RED / WHITE 红 / 白	RESX+
8	BROWN 棕	KTY+
9	WHITE 白	KTY-
10	YELLOW / WHITE 黄 / 白	RESX-
11	n.c.	n.c.
12	n.c.	n.c.
13	n.c.	n.c.
14	BLUE 蓝	SIN+
15	n.c.	n.c.
16	BLUE 蓝	PTC+
17	BLUE 蓝	PTC-
旋转变压器 Resolver : 1X-BRX		

Performance Curve

电机性能曲线 (E010__F)

驱动器电压 Vdrive : 380Vac
 直流母线电压 Vdcbus: 537Vdc
 载波频率 PWM frequency: $\geq 4\text{kHz}$
 温升 DT: 100K
 环境温度 Tamb: 30°C





电机型号 Motor Code		E01005C			E01007C			E01008C			E01010C			E01012C			E01013C		
额定转速 Rated Speed	wn [rpm]	1500	1700	2000	1500	1700	2000	1500	1700	2000	1500	1700	2000	1500	1700	2000	1500	1700	2000
额定频率 Rated Freq	Fn [Hz]	100	113.3	113.3	100	113.3	133	100	113.3	133	100	113.3	133	100	113.3	133	100	113.3	133
极数 Number of poles	2p	8																	
最大速度 Max Speed	wmax [rpm]	3500																	
最大频率 Max Freq	Fmax [Hz]	233																	
堵转电流 Stall Current	Io [A]	33.39	37.275	42.21	138.6	48.51	54.915	52.5	59.85	69.3	65.1	76.125	84	76.65	84	103.95	85.575	94.5	111.3
额定电流 Rated Current	In [A]	31.8	35.5	40.2	42	46.2	52.3	50	57	66	62	72.5	80	73	80	99	81.5	90	106
堵转扭矩 Stall Torque	To [Nm]	103.4	101.9	99.8	138.6	136.5	136.5	52.5	173.3	171.7	210	207.9	207.9	244.7	243.6	241.5	283.5	278.3	277.2
额定扭矩 Rated Torque	Tn [Nm]	98.5	97	95	132	130	130	165.5	165	163.5	200	198	198	233	232	230	270	265	264
额定功率 Rated Power	Pn [kW]	15.5	17.3	19.9	20.7	23.1	27.2	26	29.4	34.2	31.4	35.2	41.5	36.6	41.3	48.2	42.4	47.2	55.3
冷却水流量 Minimum Flow Rate	Flow [L/min]	10			12			15			17			20			25		
扭矩常数 Torque Constant	Kt [Nm/A]	3.18	2.79	2.41	3.22	2.88	2.54	3.39	2.96	2.54	3.3	2.79	2.54	3.26	2.96	2.37	3.4	3.05	2.55
反电动势 Back EMF	EMF [V/krpm]	192.5	169	146	195	174.5	154	205.4	179.5	154	200	169	154	197.7	179.5	143.5	205.4	184.5	154
绕组线电阻 Winding Resistance	Rw [ohm]	0.6958	0.5683	0.4	0.4748	0.3897	0.2982	0.3974	0.3	0.2185	0.2971	0.2133	0.1724	0.2388	0.1975	0.1243	0.2136	0.173	0.1202
直轴线电感 Direct Inductance	Ld [mH]	8.18	6.33	4.73	6.27	5.02	3.91	5.55	4.25	3.12	4.39	3.14	2.6	3.66	3.01	1.93	3.46	2.8	1.94
交轴线电感 Quadrature Inductance	Lq [mH]	16.82	13.03	9.73	12.91	10.34	8.05	11.45	8.76	6.44	9.05	6.47	5.36	7.58	6.23	4	7.18	5.79	4.02
最大电流 Max Current	Imax [A]	80	91	100	100	112	135	135	144	170	155	182	200	183	200	250	200	222	250
最大扭矩 Max Torque	Tmax [Nm]	222			297			371			445			520			594		
转动惯量 Rotor Inertia	Jm [kgcm ²]	80			103			126			150			173			196		
电机重量 Weight	M [kg]	48			56			63			70			79			86		

驱动器电压 Vdrive: 380Vac

直流母线电压 Vdcbus : 537Vdc

载波频率 PWM frequency: ≥ 4kHz

温升 DT : 100K

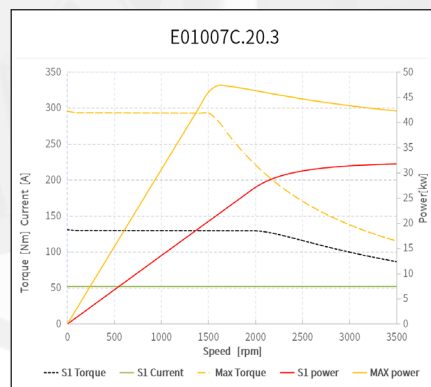
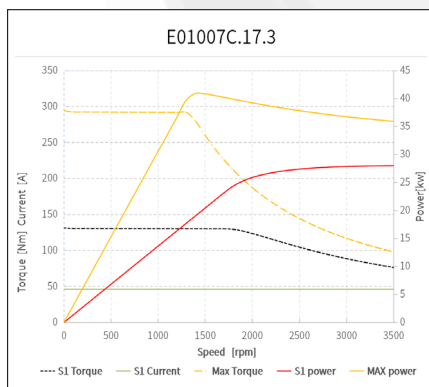
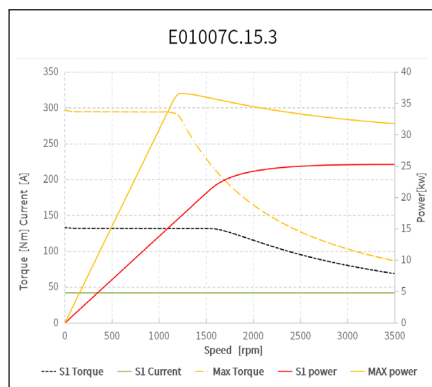
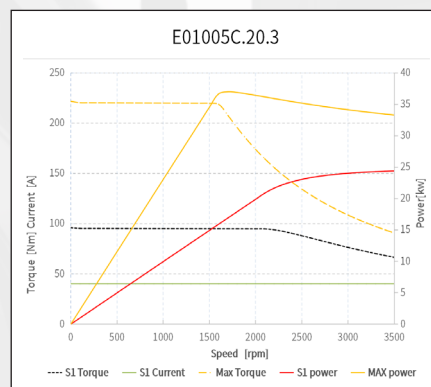
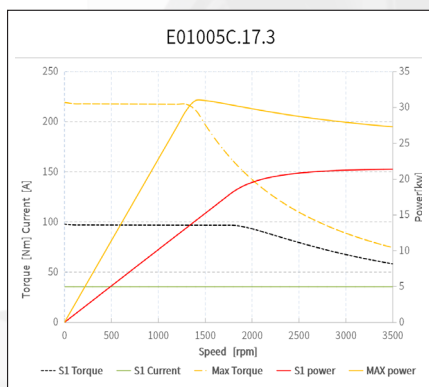
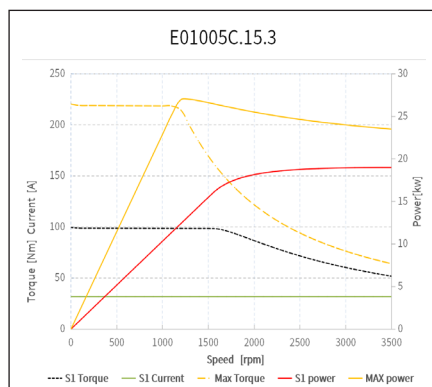
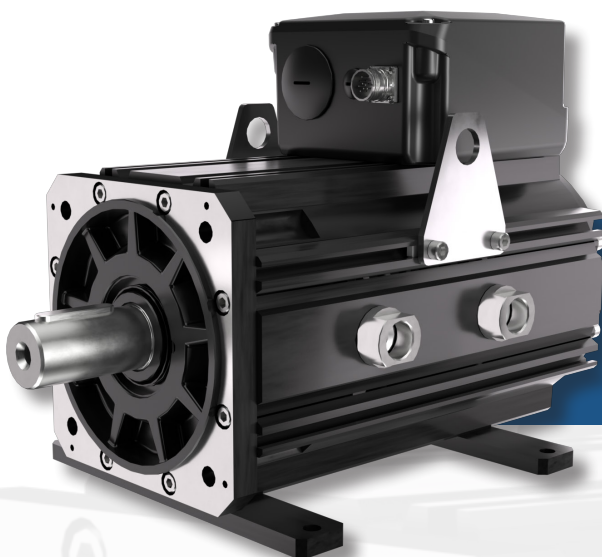
环境温度 Tamb : 30°C

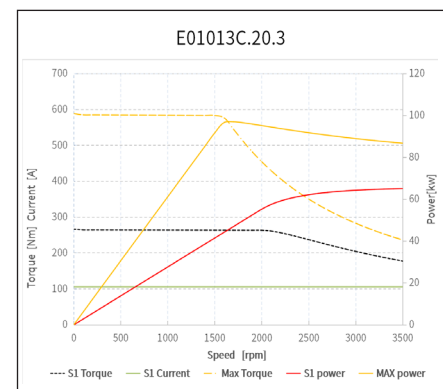
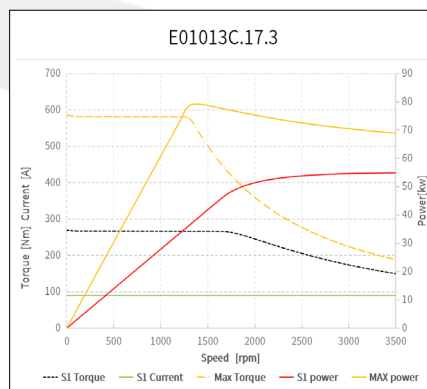
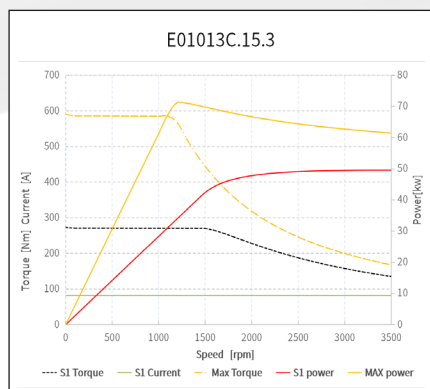
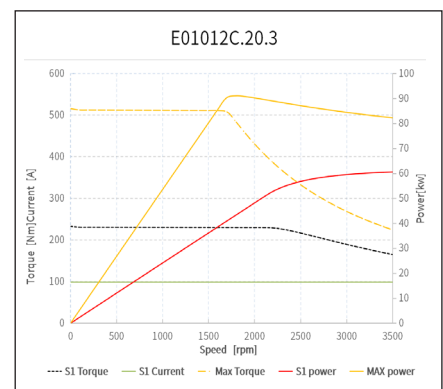
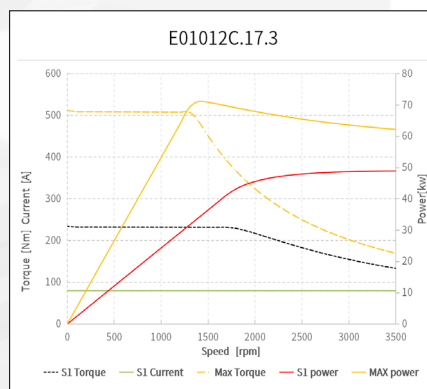
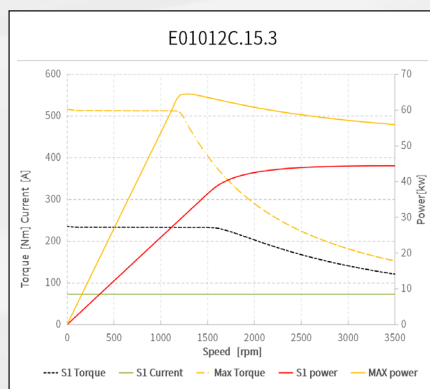
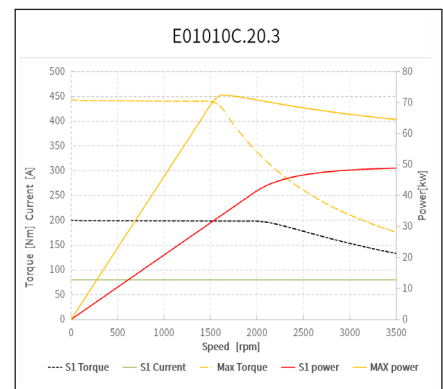
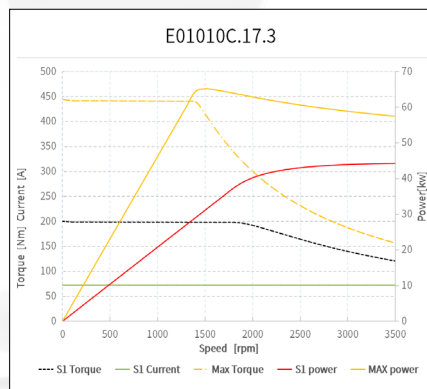
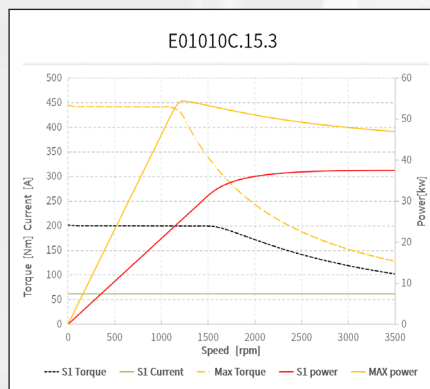
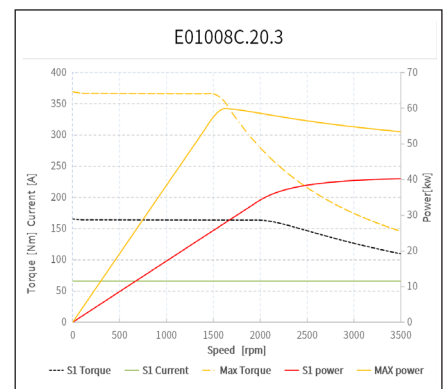
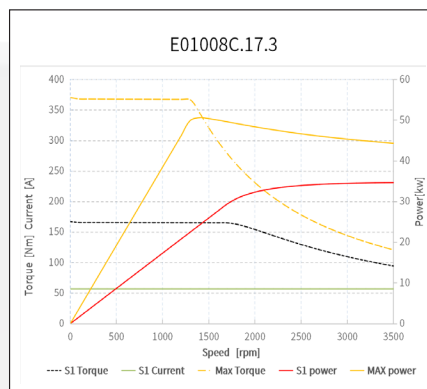
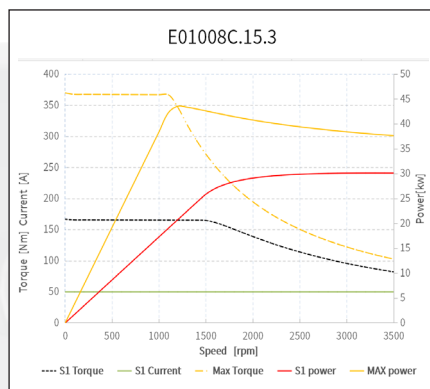
制动器的机械参数 / Technical Data of the Holding Brake		
制动转矩 Holding Torque	MBr [Nm]	140
额定电压 (± 10%) Rated Voltage(±10%)	Ubr [Vdc]	24
额定电流 Rated Current	Ibr [A]	2.3
重量 Mass	MBr [Kg]	11
惯量 nertia	JBr [Kgcm ²]	56
电机增加的长度 Additional Motor Length	Length [mm]	65

Performance Curve

电机性能曲线 (E010__C)

驱动器电压 Vdrive : 380Vac
 直流母线电压 Vdcbus: 537Vdc
 载波频率 PWM frequency: $\geq 4\text{kHz}$
 温升 DT: 100K
 环境温度 Tamb: 30°C





Technical Data

Express 系列伺服电机规格 (E012__F)

电机型号 Motor Code		E01215F			E01220F			E01225F			E01230F			E01235F		
额定转速 Rated Speed	wn [rpm]	1500	1700	2000	1500	1700	2000	1500	1700	2000	1500	1700	2000	1500	1700	2000
额定频率 Rated Freq	Fn [Hz]	100	113	133	100	113	133	100	113	133	100	113	133	100	113	133
极数 Number of poles	2p	8														
最大速度 Max Speed	wmax [rpm]	3500														
最大频率 Max Freq	Fmax [Hz]	233														
堵转电流 Stall Current	Io [A]	70	77	85	85	96	109	95	109	127	108	126	151	125	150	187
额定电流 Rated Current	In [A]	64	70	75	78	86	95	86	96	109	100	114	134	115	135	164
堵转扭矩 Stall Torque	To [Nm]	224			279			332			378			428		
额定扭矩 Rated Torque	Tn [Nm]	206	203	197	255	250	243	300	294	285	351	344	336	395	387	377
额定功率 Rated Power	Pn [kW]	32	36	41	40	45	51	47	52	60	55	61	70	62	69	79
扭矩常数 Torque Constant	Kt [Nm/A]	3.27	2.98	2.67	3.34	2.98	2.60	3.57	3.13	2.67	3.64	3.13	2.60	3.57	2.98	2.38
反电动势 Back EMF	EMF [V/ krpm]	198	180	162	203	180	158	216	189	162	221	189	158	216	180	144
绕组线电阻 Winding Resistance	Rw [ohm]	0.157	0.123	0.106	0.123	0.096	0.074	0.110	0.085	0.062	0.095	0.068	0.049	0.078	0.054	0.034
直轴线电感 Direct Inductance	Ld [mH]	4.1	3.4	2.7	3.4	2.7	2.1	3.2	2.5	1.8	2.9	2.1	1.5	2.4	1.7	1.1
交轴线电感 Quadrature Inductance	Lq [mH]	9.6	7.9	6.4	8.0	6.3	4.9	7.6	5.8	4.3	6.8	5.0	3.5	5.7	1.0	2.5
最大电流 Max Current	I _{max} [A]	155	171	190	190	214	245	210	240	280	240	280	335	280	336	420
最大扭矩 Max Torque	T _{max} [Nm]	467			585			700			800			920		
转动惯量 Rotor Inertia	Jm [kgcm ²]	253			310			370			427			485		
电机重量 Weight	M [kg]	102			116			130			144			158		

驱动器电压 Vdrive: 380Vac

直流母线电压 Vdcbus: 537Vdc

载波频率 PWM frequency: ≥ 4kHz

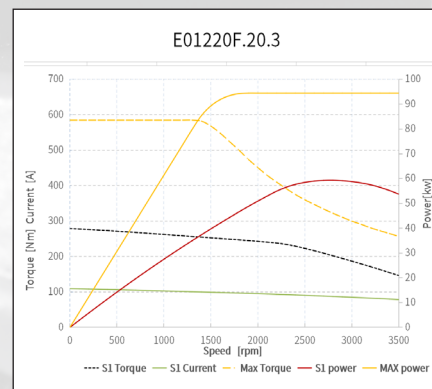
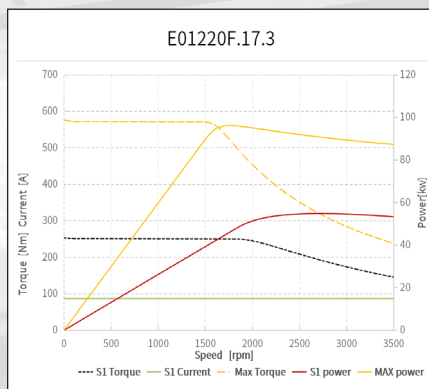
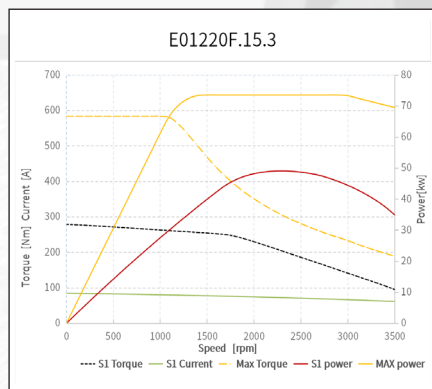
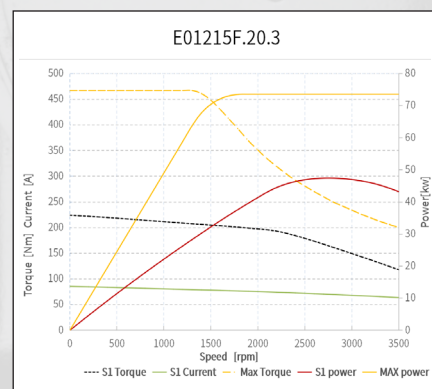
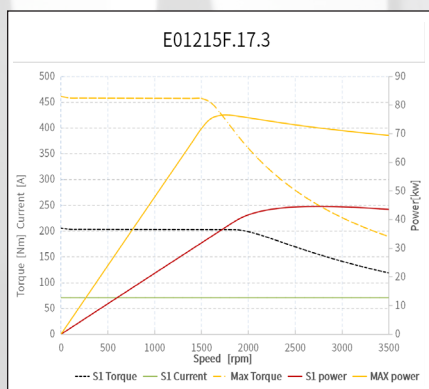
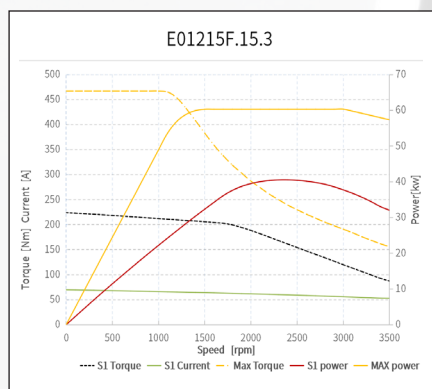
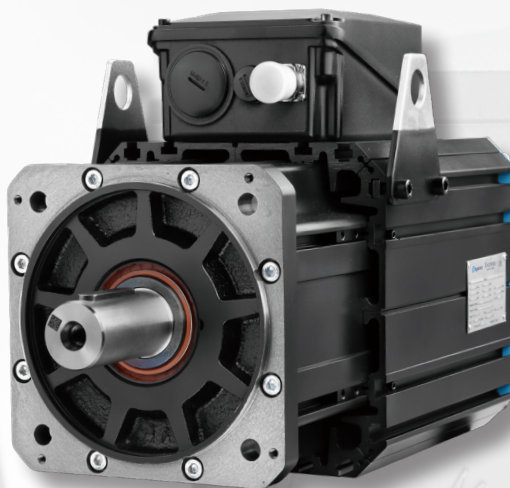
温升 DT: 100K

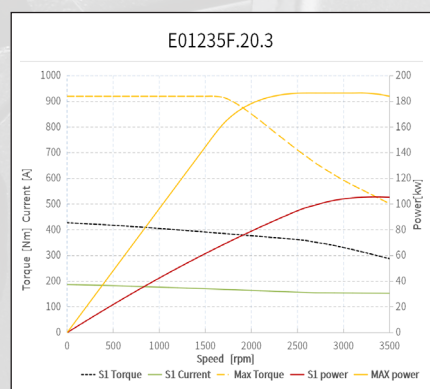
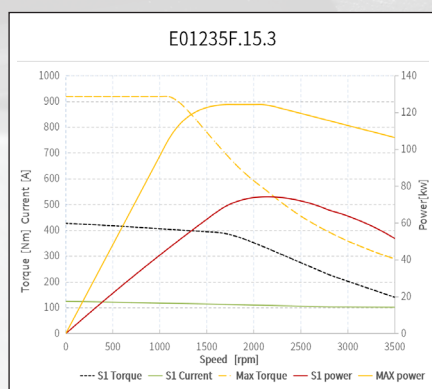
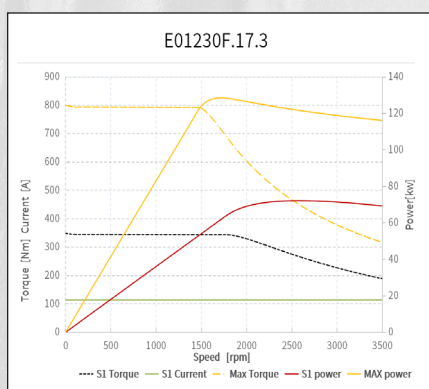
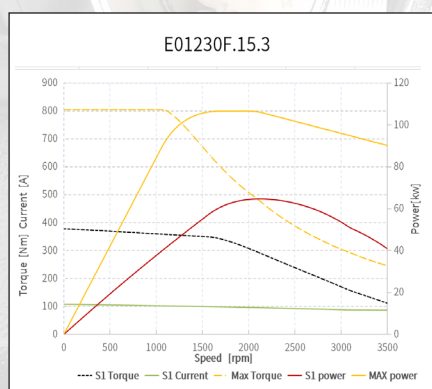
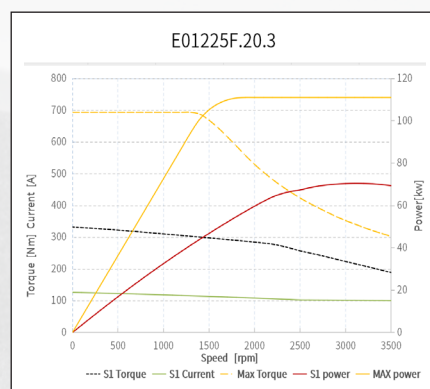
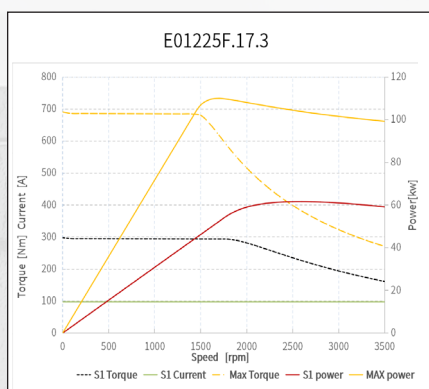
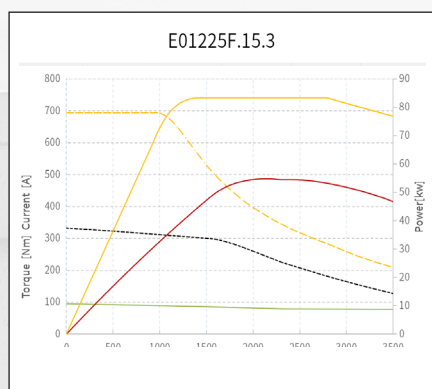
环境温度 Tamb : 30°C

Performance Curve

电机性能曲线 (E012__F)

驱动器电压 Vdrive: 380Vac
 直流母线电压 Vdcbus: 537Vdc
 载波频率 PWM frequency: $\geq 4\text{kHz}$
 温升 DT: 100K
 环境温度 Tamb: 30°C





电机型号 Motor Code		E01304F			E01306F			E01307F			E01308F			E01309F			E01311F			E01313F		
额定转速 Rated Speed	wn [rpm]	1000	1500	2000	1000	1500	2000	1000	1500	2000	1000	1500	2000	1000	1500	2000	1000	1500	2000	1000	1500	2000
额定频率 Rated Freq	Fn [Hz]	66.67	100	133.3	66.67	100	133.3	66.67	100	133.3	66.67	100	133.3	66.67	100	133.3	66.67	100	133.3	66.67	100	133.3
极数 Number of poles	2p	8																				
最大速度 Max Speed	wmax [rpm]	3500																				
最大频率 Max Freq	Fmax [Hz]	233																				
堵转电流 Stall Current	Io [A]	36.75	55.65	70.35	56.7	81.9	105	68.25	97.65	132.3	76.65	110.25	147	84	131.25	180.6	115.5	155.4	215.25	118.65	184.8	252
额定电流 Rated Current	In [A]	35	53	67	54	78	100	65	93	126	73	105	140	80	125	172	110	148	205	113	176	240
堵转扭矩 Stall Torque	To [Nm]	194.3	193.2	182.7	294	283.5	273	357	333.9	336	399	383.3	383.3	437.9	427.4	409.5	535.5	519.8	509.3	614.3	609	588
额定扭矩 Rated Torque	Tn [Nm]	185	184	174	280	270	260	340	318	320	380	365	365	417	407	390	510	495	485	585	580	560
额定功率 Rated Power	Pn [kW]	19.4	28.9	36.4	29.3	42.4	54.5	35.6	49.9	67	39.8	57.3	76.4	43.7	63.9	81.7	53.4	77.7	101.6	61.3	91.1	117.3
扭矩常数 Torque Constant	Kt [Nm/A]	4.86	3.24	2.43	4.86	3.24	2.43	4.73	3.19	2.36	4.86	3.24	2.43	4.86	3.03	2.13	4.45	3.16	2.22	4.82	3.06	2.18
反电动势 Back EMF	EMF [V/krpm]	294.1	196.067	146.9	294.1	196.067	146.9	285.9	192.8	142.95	294.1	195.9	147.15	293.8	183	128.5	269	191	134	291.7	185	132
绕组线电阻 Winding Resistance	Rw [ohm]	0.488	0.216	0.123	0.273	0.126	0.069	0.22	0.096	0.055	0.182	0.083	0.045	0.158	0.065	0.032	0.106	0.053	0.026	0.101	0.042	0.022
直轴线电感 Direct Inductance	Ld [mH]	10.86	4.82	2.35	7.24	3.22	3.7	5.86	2.29	1.47	5.43	2.07	1.25	4.14	1.57	0.76	3	1.44	0.9	2.82	1.15	0.6
交轴线电感 Quadrature Inductance	Lq [mH]	23.56	10.47	5.57	15.71	6.98	1.55	12.73	5.26	3.18	11.78	4.93	2.41	9.57	3.7	1.75	6.3	3.4	1.73	6.59	2.69	1.36
最大电流 Max Current	Imax [A]	89.7	132.5	171.7	139.7	194	268.7	160	229	311	190	257.5	350	193.1	315	450	280	425	580	281	480	670
最大扭矩 Max Torque	Tmax [Nm]	400			600			700			800			900			1100			1300		
转动惯量 Rotor Inertia	Jm [kgcm ²]	440			626			718			811			903			1111			1296		
电机重量 Weight	M [kg]	128			148			158			169			180			230			263		

驱动器电压 Vdrive: 380Vac

直流母线电压 Vdcbus: 537Vdc

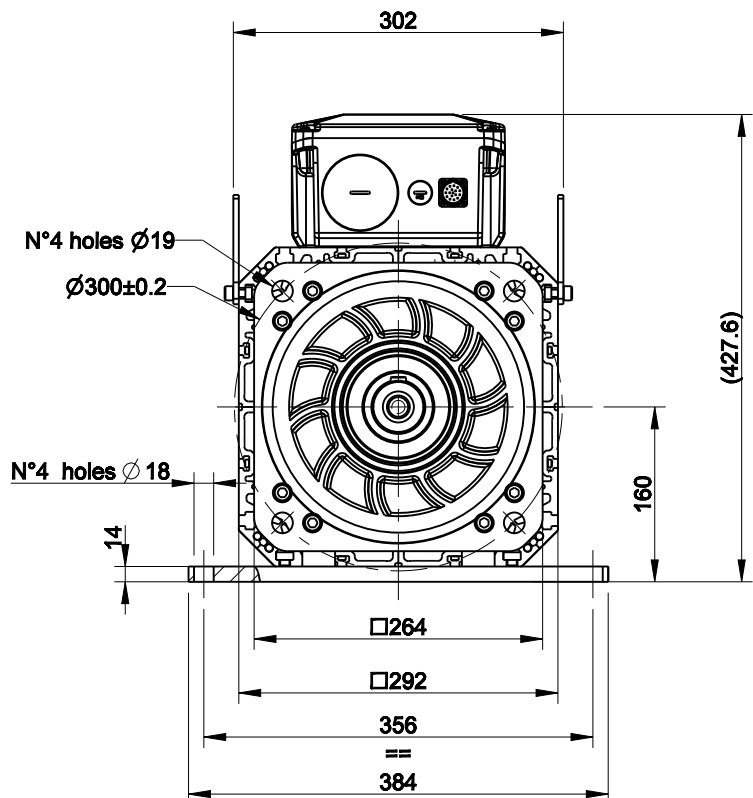
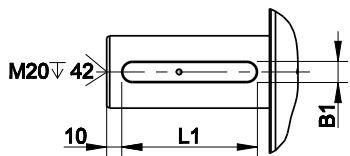
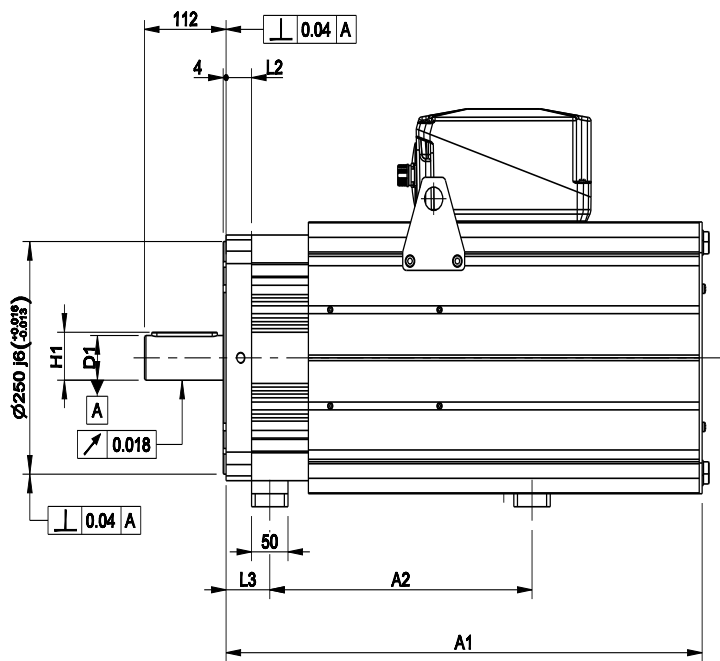
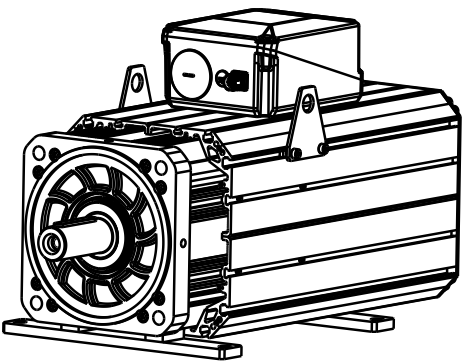
载波频率 PWM frequency: ≥ 4kHz

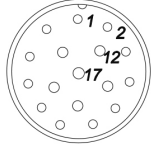
温升 DT: 100K

环境温度 Tamb : 30°C

制动器的机械参数 /Technical Data of the Holding Brake		
制动转矩 Holding Torque	MBr [Nm]	300
额定电压 (± 10%) Rated Voltage(±10%)	Ubr [Vdc]	24
额定电流 Rated Current	Ibr [A]	1.74
重量 Mass	MBr [Kg]	18
惯量 nertia	JBr [Kgcm ²]	200
电机增加的长度 Additional Motor Length	Length [mm]	80

	A1	A2	L1	L2	L3	B1	D1	H1
E01304F	503.5	210	90	35	60	14	48j6	51.5
E01306F	563.5	270	90	35	60	14	48j6	51.5
E01307F	593.5	300	90	35	60	14	48j6	51.5
E01308F	623.5	330	90	35	60	14	48j6	51.5
E01309F	653.5	360	90	35	60	14	48j6	51.5
E01311F	715.5	420	90	37	62	18	60m6	64
E01313F	775.5	480	90	37	62	18	60m6	64

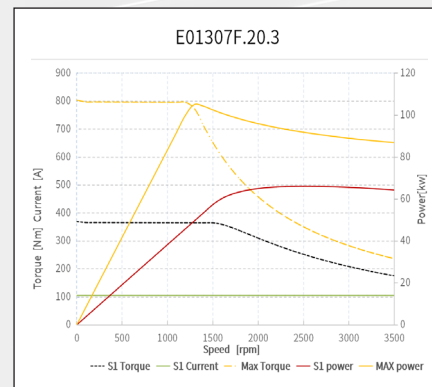
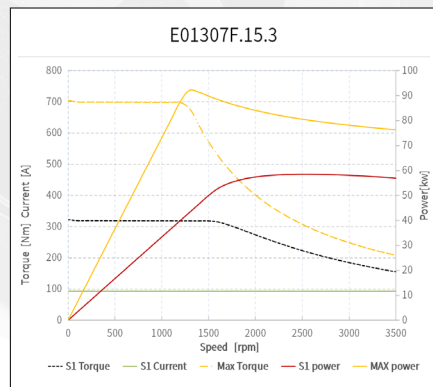
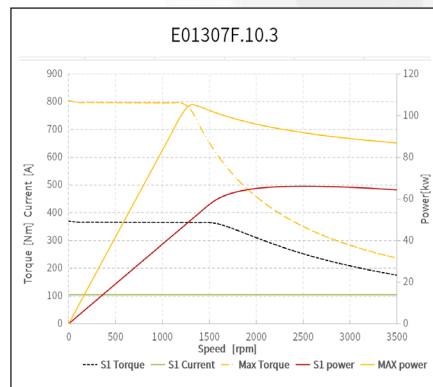
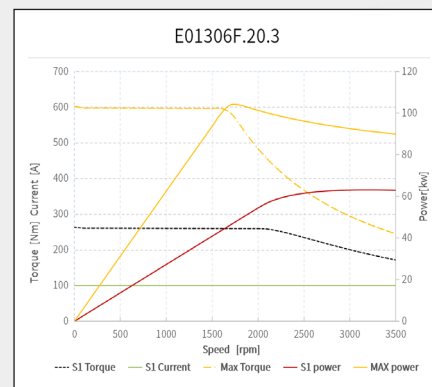
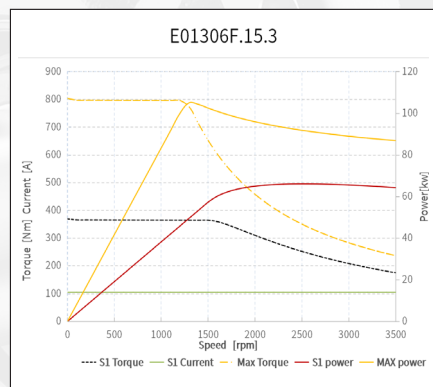
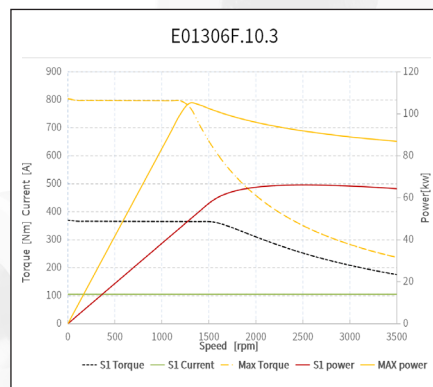
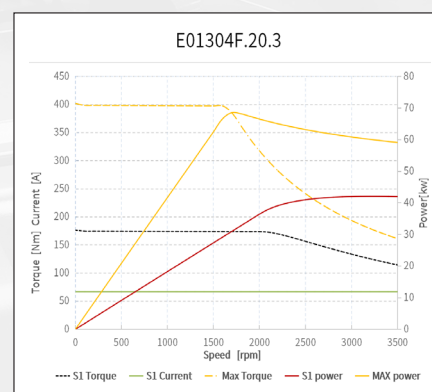
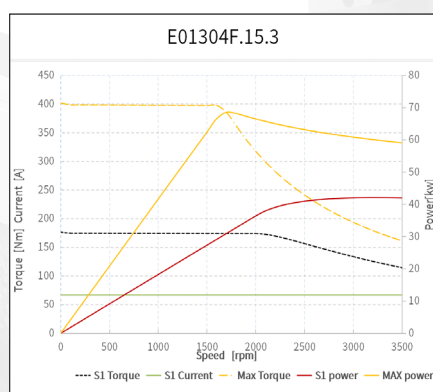
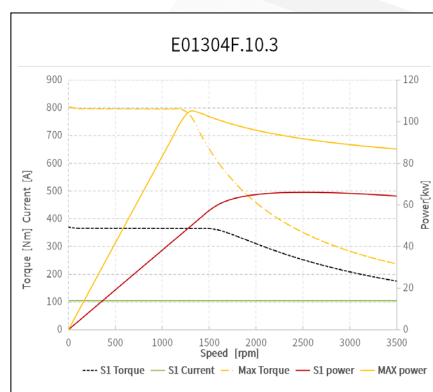
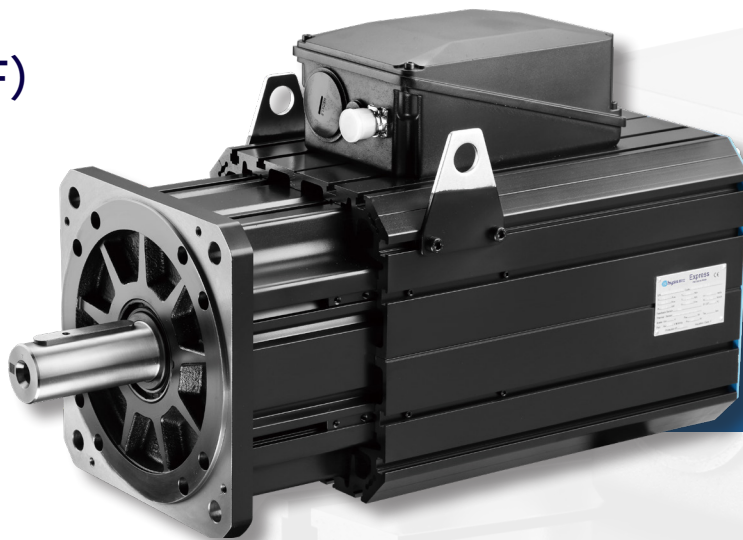


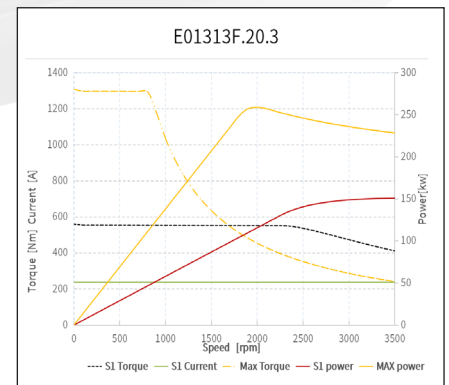
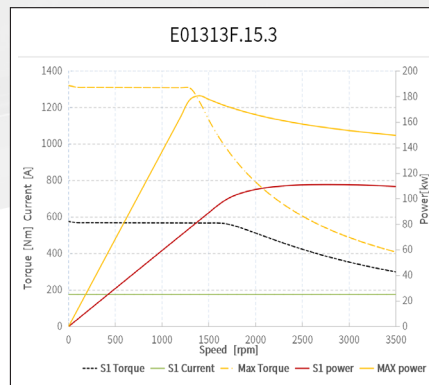
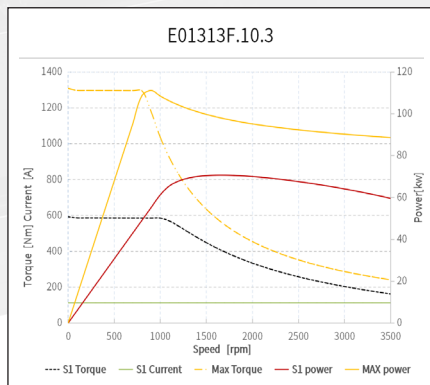
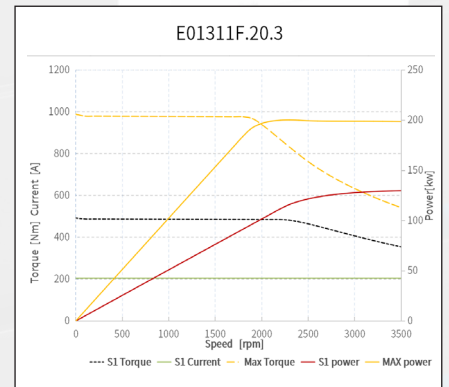
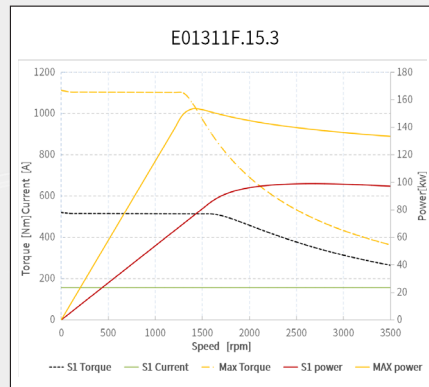
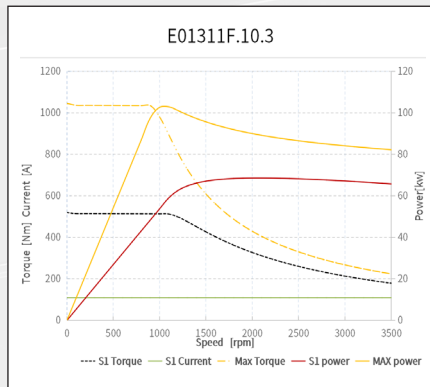
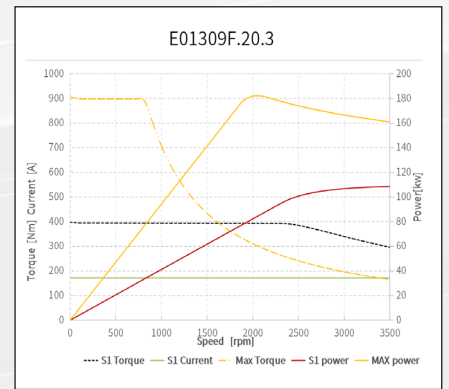
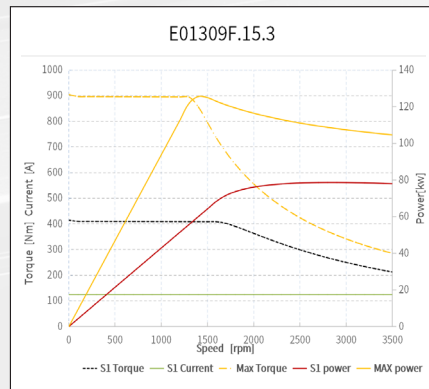
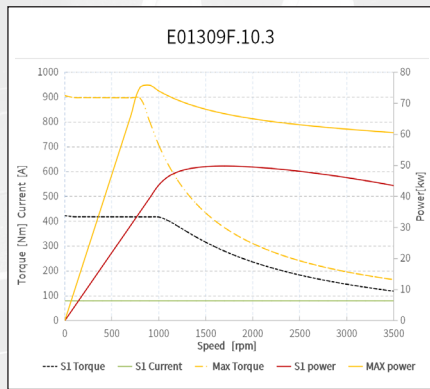
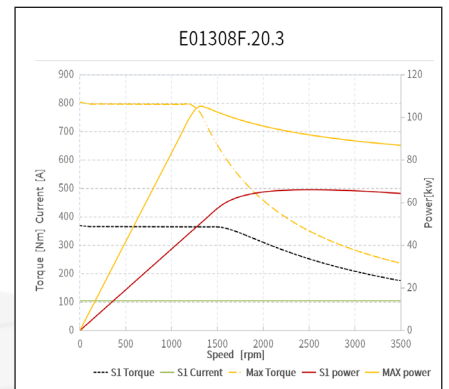
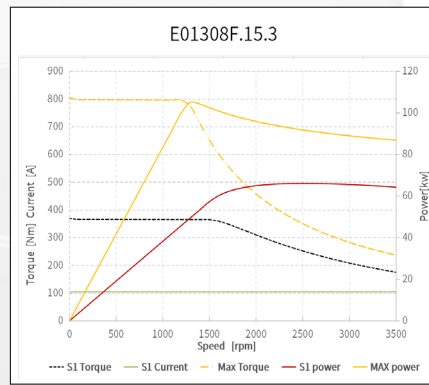
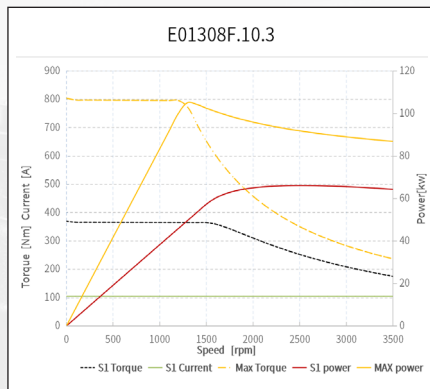
 信号插座 Signal Connector M23 Size 1-17 Pin		
针脚号 PIN	线色 WIRE COLOR	定义 FUNCTION
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2	n.c.	n.c.
3	n.c.	n.c.
4	YELLOW 黄	SIN-
5	RED 红	COS+
6	BLACK 黑	COS-
7	RED / WHITE 红 / 白	RESX+
8	BROWN 棕	KTY+
9	WHITE 白	KTY-
10	YELLOW / WHITE 黄 / 白	RESX-
11	n.c.	n.c.
12	n.c.	n.c.
13	n.c.	n.c.
14	BLUE 蓝	SIN+
15	n.c.	n.c.
16	BLUE 蓝	PTC+
17	BLUE 蓝	PTC-
旋转变压器 Resolver : 1X-BRX		

Performance Curve

电机性能曲线 (E013__F)

驱动器电压 Vdrive: 380Vac
 直流母线电压 Vdcbus: 537Vdc
 载波频率 PWM frequency: $\geq 4\text{kHz}$
 温升 DT: 100K
 环境温度 Tamb: 30°C





电机型号 Motor Code		E01304C			E01306C			E01307C			E01308C			E01309C			E01311C			E01313C		
额定转速 Rated Speed	wn [rpm]	1000	1500	2000	1000	1500	2000	1000	1500	2000	1000	1500	2000	1000	1500	2000	1000	1500	2000	1000	1500	2000
额定频率 Rated Freq	Fn [Hz]	66.67	100	133.3	66.67	100	133.3	66.67	100	133.3	66.67	100	133.3	66.67	100	133.3	66.67	100	133.3	66.67	100	133.3
极数 Number of poles	2p	8																				
最大速度 Max Speed	wmax [rpm]	3500																				
最大频率 Max Freq	Fmax [Hz]	233																				
堵转电流 Stall Current	Io [A]	48.3	72.8	90.3	71.9	112.35	139.65	77.7	118.65	151.2	91.35	141.75	166.95	107.1	156.45	204.75	131.25	194.25	249.9	153.3	216.3	294
额定电流 Rated Current	In [A]	46	69.5	86	68.5	107	133	74	113	144	87	135	159	102	149	195	125	185	238	146	206	280
堵转扭矩 Stall Torque	To [Nm]	228.9	221.6	219.5	342.3	339.2	330.8	392.7	388.5	383.3	446.3	441	432.6	507.2	496.7	488.3	611.1	601.7	589.1	706.7	696.2	682.5
额定扭矩 Rated Torque	Tn [Nm]	218	211	209	326	323	315	374	370	365	425	420	412	483	473	465	582	573	561	673	663	650
额定功率 Rated Power	Pn [kW]	22.8	33.1	43.8	34.1	50.7	66	39.2	58.1	76.4	44.5	66	86.3	50.6	74.3	97.4	60.9	90	117.5	70.5	104.1	136.1
冷却水流量 Minimum Flow Rate	Flow [L/min]	15			18			20			23			25			30			35		
扭矩常数 Torque Constant	Kt [Nm/A]	4.45	2.83	2.29	4.45	2.83	2.23	4.72	3.06	2.36	4.58	2.96	2.43	4.45	3.01	2.25	4.45	2.96	2.23	4.38	3.06	2.18
反电动势 Back EMF	EMF [V/krpm]	269.3	171	138.7	269	171	134.7	285.6	185	142.8	277	179	146.9	269	182	136	269	179	134.6	265	185	132
绕组线电阻 Winding Resistance	Rw [ohm]	0.43	0.176	0.111	0.24	0.097	0.058	0.224	0.093	0.053	0.173	0.072	0.049	0.15	0.067	0.038	0.107	0.048	0.026	0.087	0.043	0.022
直轴线电感 Direct Inductance	Ld [mH]	8.2	3.2	2.07	5.3	2.15	1.29	5.1	2.2	1.42	4.7	1.8	1.31	4.2	1.81	0.94	3.29	1.33	0.71	2.61	1.16	0.6
交轴线电感 Quadrature Inductance	Lq [mH]	18.2	7.5	4.97	12.3	5	3.12	11.6	4.8	3.17	10.7	4.1	3.04	6.7	3.45	2.08	5.73	2.84	1.72	4.98	2.64	1.37
最大电流 Max Current	Imax [A]	89.7	132.5	171.7	139.7	194	268.7	160	229	311	190	257.5	350	193.1	315	450	280	425	580	281	480	670
最大扭矩 Max Torque	Tmax [Nm]	400			600			700			800			900			1100			1300		
转动惯量 Rotor Inertia	Jm [kgcm ²]	440			626			718			811			903			1111			1296		
电机重量 Weight	M [kg]	123			146			159			179			190			219			241		

驱动器电压 Vdrive: 380Vac

直流母线电压 Vdcbus: 537Vdc

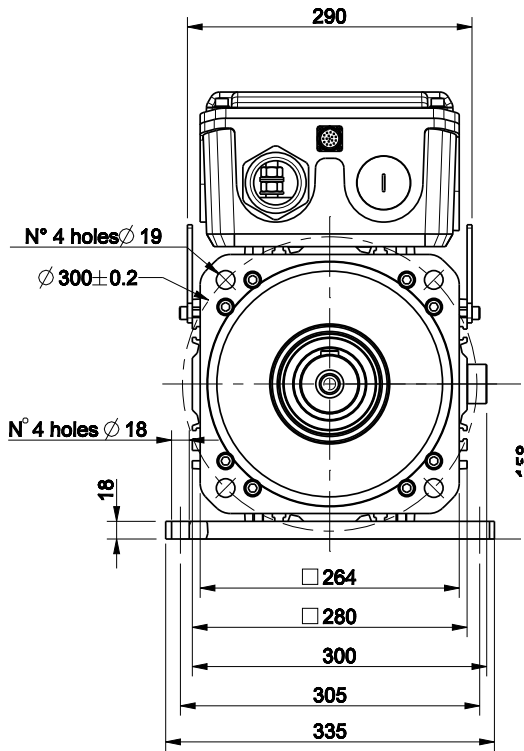
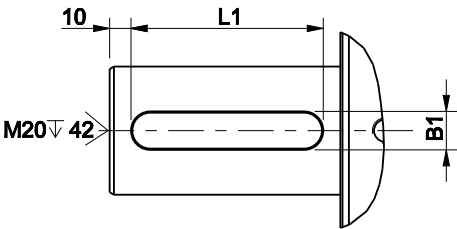
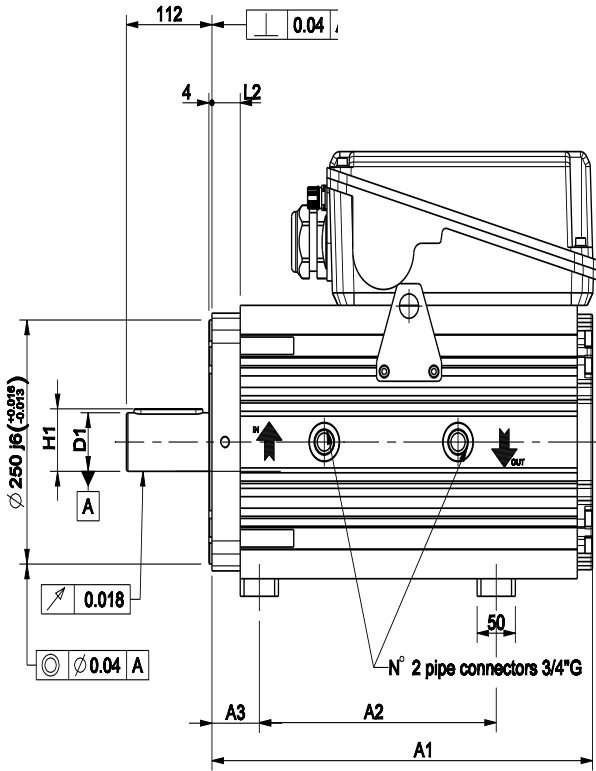
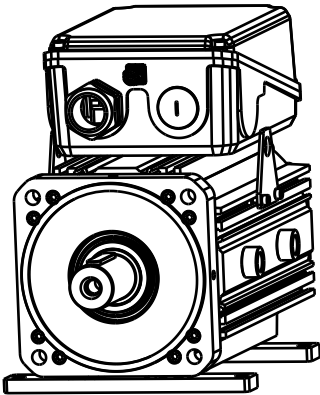
载波频率 PWM frequency: ≥ 4kHz

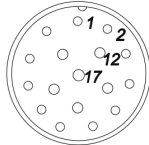
温升 DT: 100K

环境温度 Tamb : 30°C

制动器的机械参数 /Technical Data of the Holding Brake		
制动转矩 Holding Torque	MBr [Nm]	300
额定电压 (± 10%) Rated Voltage(± 10%)	Ubr [Vdc]	24
额定电流 Rated Current	Ibr [A]	1.74
重量 Mass	MBr [Kg]	18
惯量 nertia	JBr [Kgcm ²]	200
电机增加的长度 Additional Motor Length	Length [mm]	80

	A1	A2	L1	L2	L3	B1	D1	H1
E01304C	376	190	90	35	60	14	48j6	51.5
E01306C	436	250	90	35	60	14	48j6	51.5
E01307C	466	280	90	35	60	14	48j6	51.5
E01308C	496	310	90	35	60	14	48j6	51.5
E01309C	526	340	90	35	60	14	48j6	51.5
E01311C	588	400	90	37	62	18	60m6	64
E01313C	648	460	90	37	62	18	60m6	64



 信号插座 Signal Connector M23 Size 1-17 Pin		
针脚号 PIN	线色 WIRE COLOR	定义 FUNCTION
1	n.c.	n.c.
2	n.c.	n.c.
3	n.c.	n.c.
4	YELLOW 黄	SIN-
5	RED 红	COS+
6	BLACK 黑	COS-
7	RED / WHITE 红 / 白	RESX+
8	BROWN 棕	KTY+
9	WHITE 白	KTY-
10	YELLOW / WHITE 黄 / 白	RESX-
11	n.c.	n.c.
12	n.c.	n.c.
13	n.c.	n.c.
14	BLUE 蓝	SIN+
15	n.c.	n.c.
16	BLUE 蓝	PTC+
17	BLUE 蓝	PTC-
旋转变压器 Resolver : 1X-BRX		

Performance Curve

电机性能曲线 (E013__C)

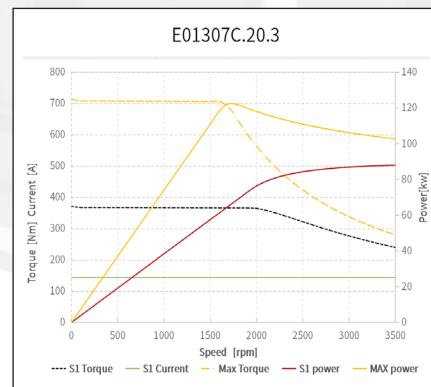
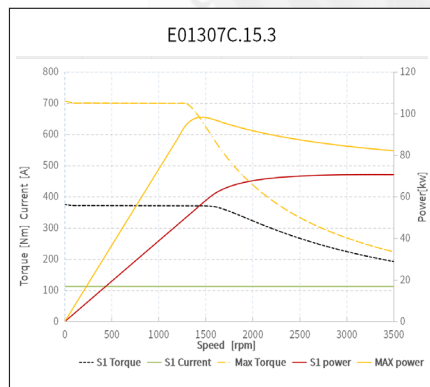
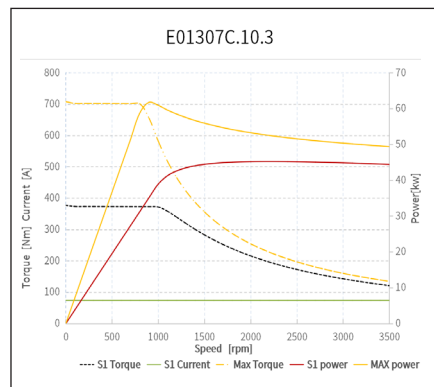
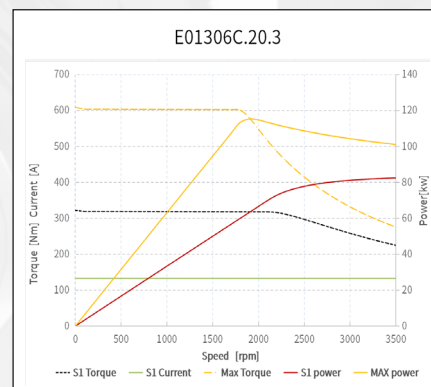
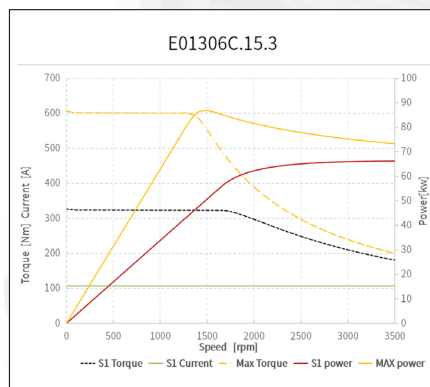
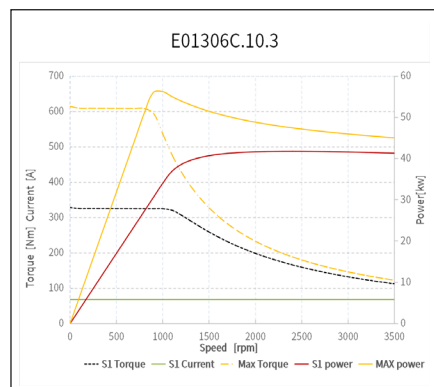
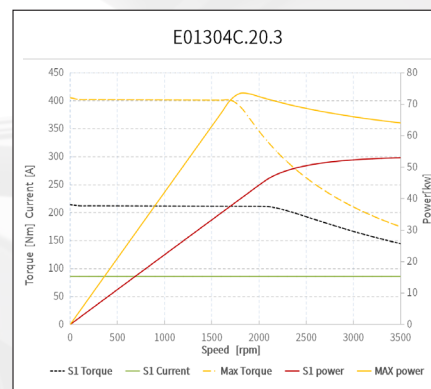
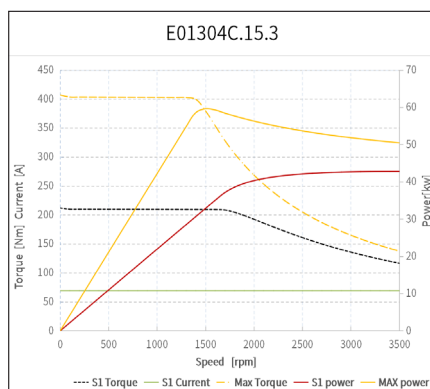
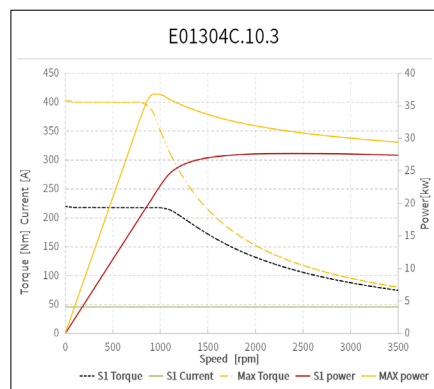
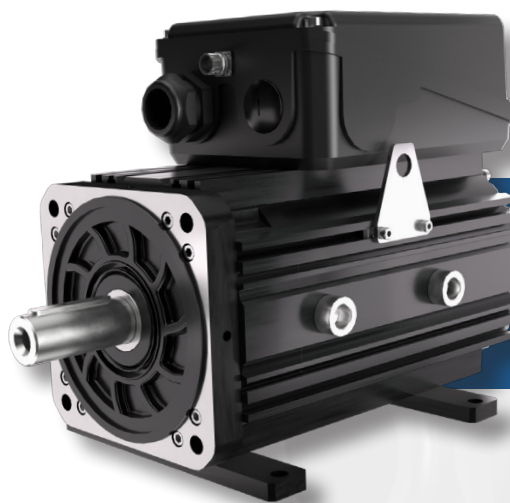
驱动器电压 Vdrive: 380Vac

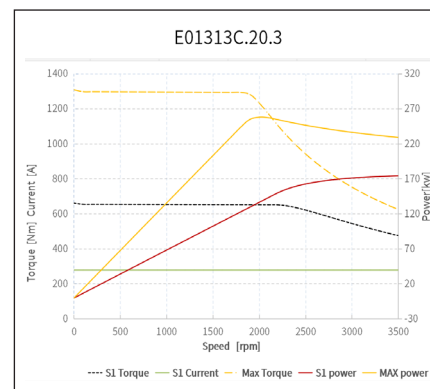
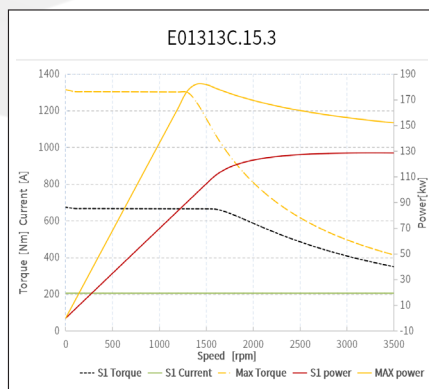
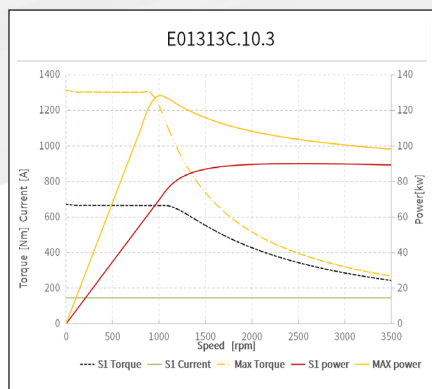
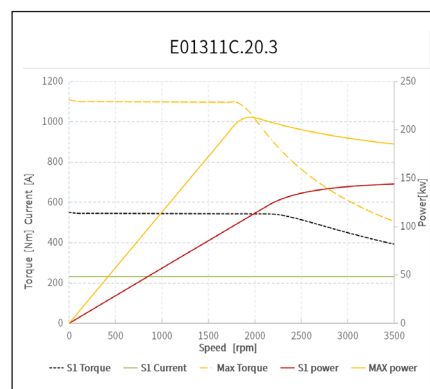
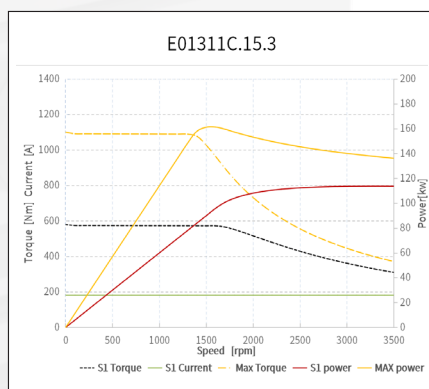
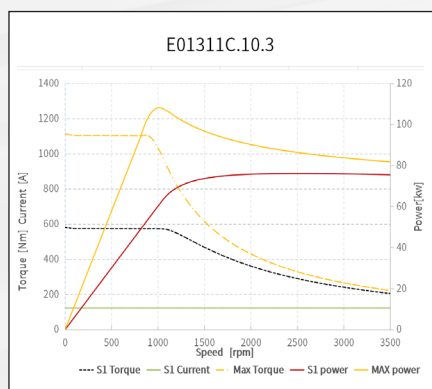
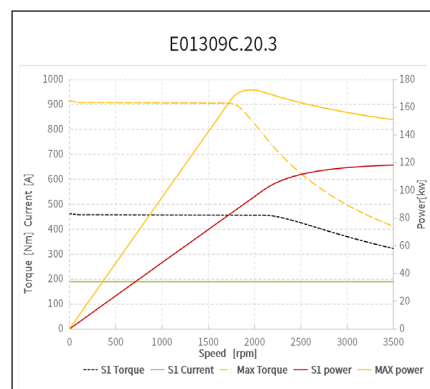
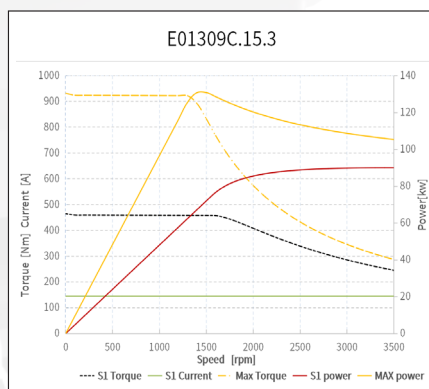
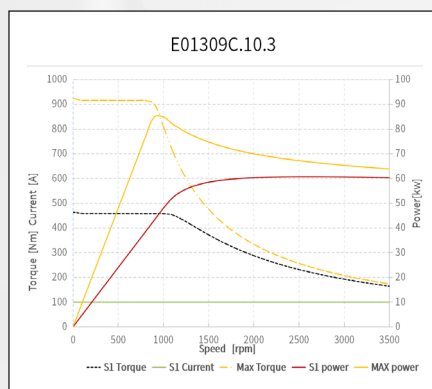
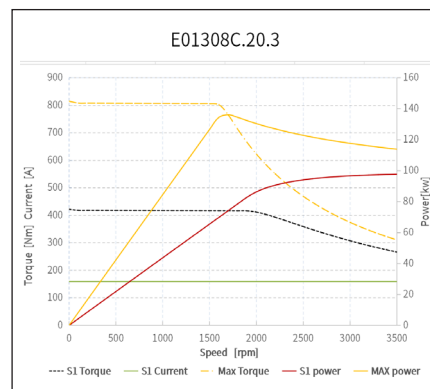
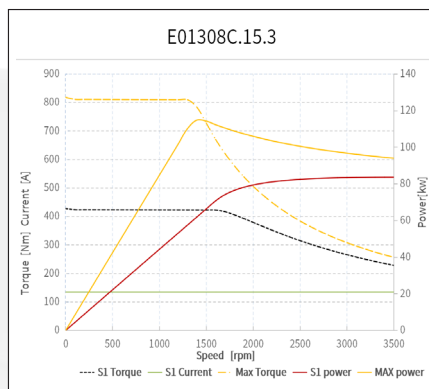
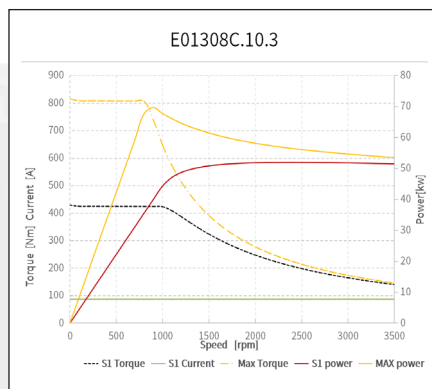
直流母线电压 Vdcbus: 537Vdc

载波频率 PWM frequency: $\geq 4\text{kHz}$

温升 DT: 100K

环境温度 Tamb: 30°C





电机型号 Motor Code		E01806F			E01808F			E01809F			E01811F			E01813F			E01815F			E01817F		
额定转速 Rated Speed	wn [rpm]	1000	1200	1500	1000	1200	1500	1000	1200	1500	1000	1200	1500	1000	1200	1500	1000	1200	1500	1000	1200	1500
额定频率 Rated Freq	Fn [Hz]	100	120	150	100	120	150	100	120	150	100	120	150	100	120	150	100	120	150	100	120	150
极数 Number of poles	2p	12																				
最大速度 Max Speed	wmax [rpm]	2000	2500	3000	2000	2500	3000	2000	2500	3000	2000	2500	3000	2000	2500	3000	2000	2500	3000	2000	2500	3000
最大频率 Max Freq	Fmax [Hz]	200	250	300	200	250	300	200	250	300	200	250	300	200	250	300	200	250	300	200	250	300
堵转电流 Stall Current	Io [A]	132	152	177	162	187	223	193	218	261	222	267	325	264	325	360	281	353	396	284	370	457
额定电流 Rated Current	In [A]	120	138	161	147	170	203	175	198	237	202	243	295	240	295	327	255	321	360	270	352	415
堵转扭矩 Stall Torque	To [Nm]	651	642	629	829	827	774	966	930	926	1169	1161	1122	1343	1320	1293	1478	1448	1403	1544	1498	1546
额定扭矩 Rated Torque	Tn [Nm]	592	584	572	754	752	704	878	845	842	1063	1055	1020	1221	1200	1175	1344	1316	1275	1470	1427	1405
额定功率 Rated Power	Pn [kW]	62	73	90	79	95	110	92	106	132	111	133	160	128	151	185	141	165	200	154	179	221
扭矩常数 Torque Constant	Kt [Nm/A]	4.76	4.08	3.40	4.83	4.23	3.32	4.76	4.08	3.37	4.97	4.14	3.30	4.90	3.92	3.44	5.09	3.96	3.37	5.34	3.98	3.32
反电动势 Back EMF	EMF [V/krpm]	288	247	206	292	256	201	288	247	204	301	251	199	297	237	208	308	240	204	323	241	201
绕组线电阻 Winding Resistance	Rw [ohm]	0.0903	0.0667	0.05	0.0643	0.0484	0.03	0.0524	0.0384	0.0267	0.044	0.031	0.0198	0.035	0.0224	0.0171	0.032	0.0194	0.015	0.0277	0.0156	0.0108
直轴线电感 Direct Inductance	Ld [mH]	1.66	1.22	0.84	1.26	0.96	0.59	1.09	0.80	0.56	0.95	0.66	0.42	0.79	0.50	0.37	0.73	0.44	0.33	0.65	0.37	0.25
交轴线电感 Quadrature Inductance	Lq [mH]	4.20	3.11	2.17	3.33	2.52	1.56	2.84	2.09	1.45	2.49	1.72	1.10	2.02	1.30	1.00	1.90	1.15	0.86	2.09	0.96	0.66
最大电流 Max Current	Imax [A]	275	315	332	285	330	408	347	405	485	402	483	603	550	685	650	600	765	721	653	870	820
最大扭矩 Max Torque	Tmax [Nm]	1270	1254	1141	1420	1434	1400	1680	1680	1677	2040	2043	2040	2660	2627	2303	2999	3000	2550	3545	3545	2830
转动惯量 Rotor Inertia	Jm [kgcm ²]	3890			5060			5650			6850			7980			9170			10355		
电机重量 Weight	M[kg]	315			357			377			418			460			498			545		

驱动器电压 Vdrive : 380Vac

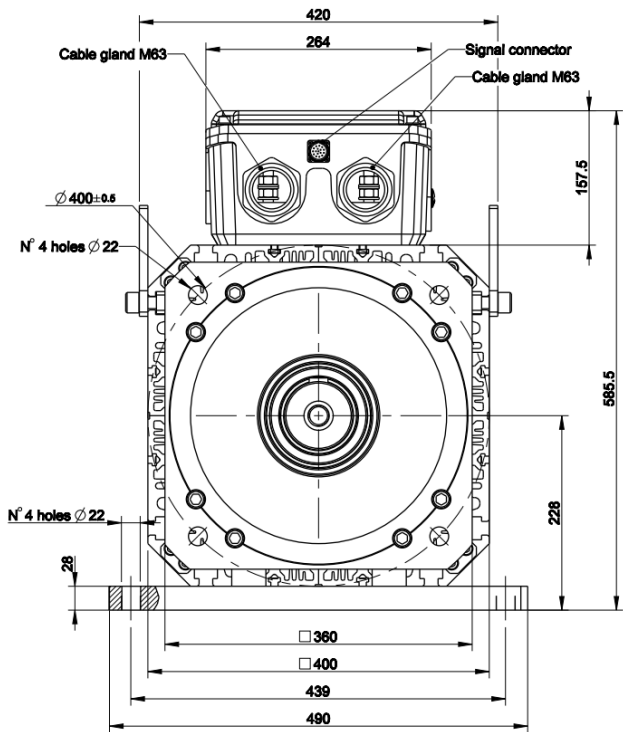
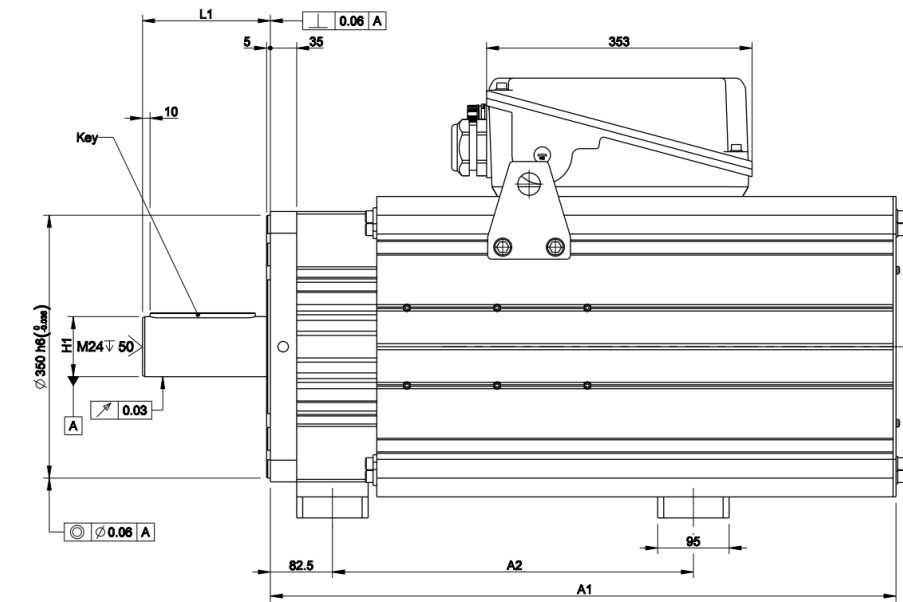
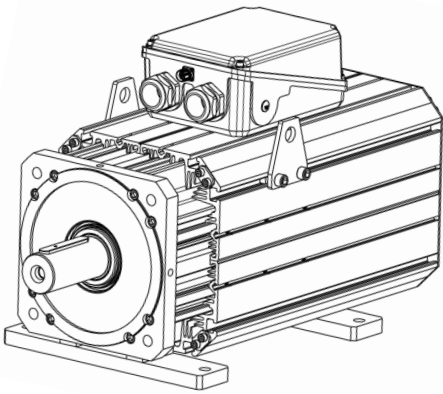
直流母线电压 Vdcbus : 537Vdc

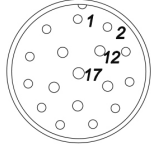
载波频率 PWM frequency: ≥ 4kHz

温升 DT : 100K

环境温度 Tamb : 30°C

	A1	A2	L1	H1	Key
E01806F	682	330	170	80m6	22x14x140
E01808F	742	390	170	80m6	22x14x140
E01809F	772	420	170	80m6	22x14x140
E01811F	832	480	170	80m6(90m6)	22x14x140(25x14x140)
E01813F	892	540	170	90m6	25x14x140
E01815F	962	610	170	90m6	25x14x140
E01817F	1012	660	170	90m6	25x14x140

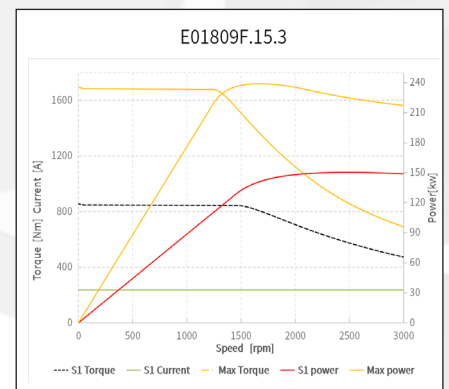
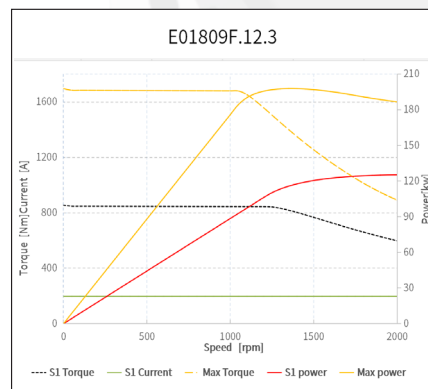
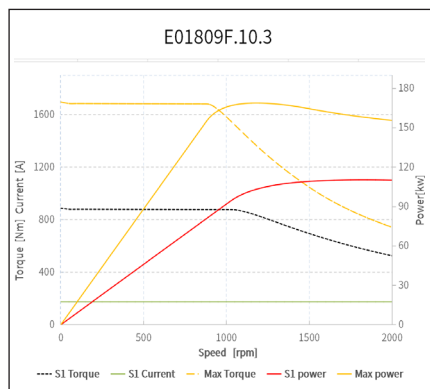
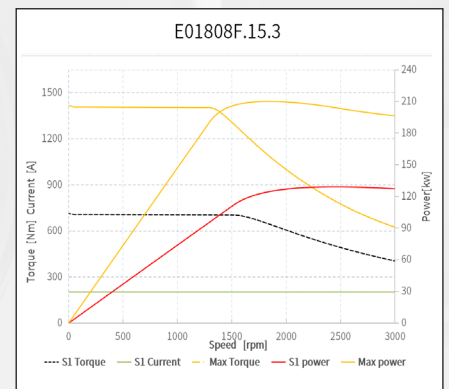
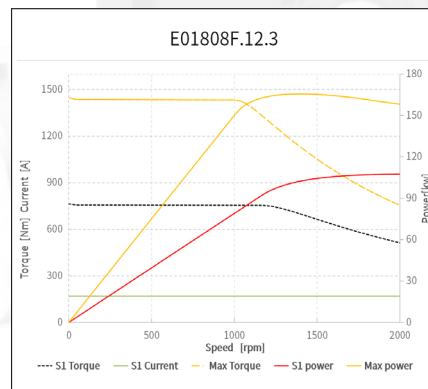
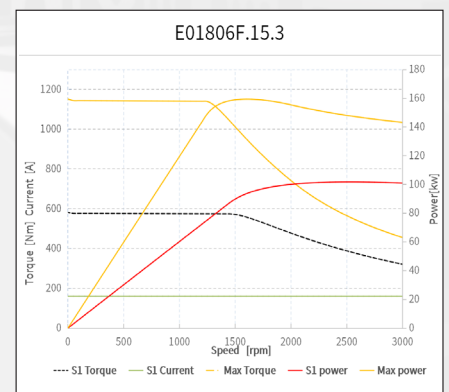
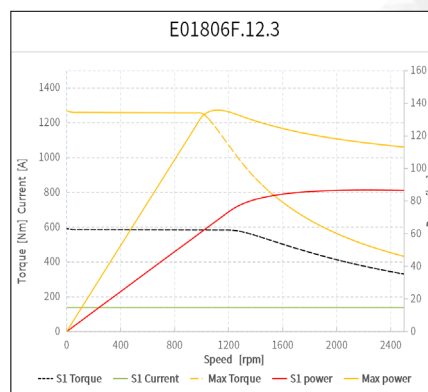
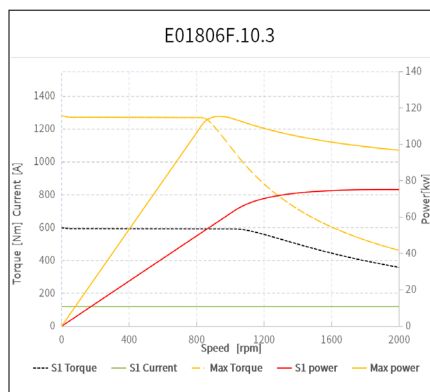
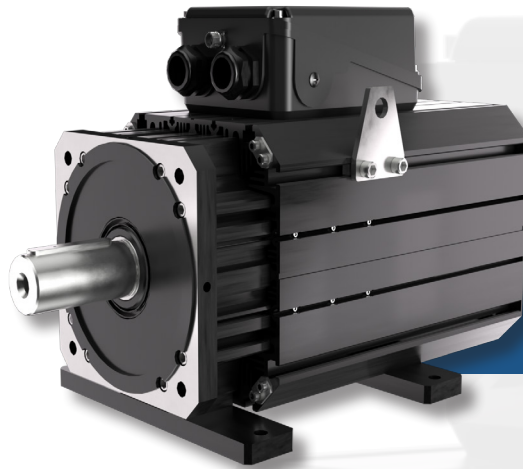


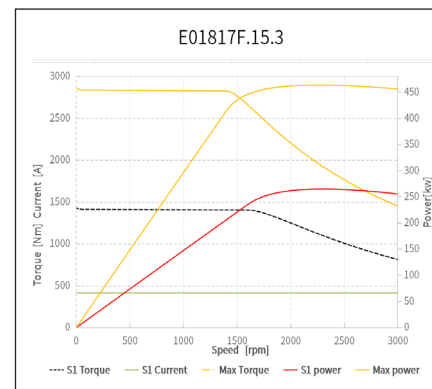
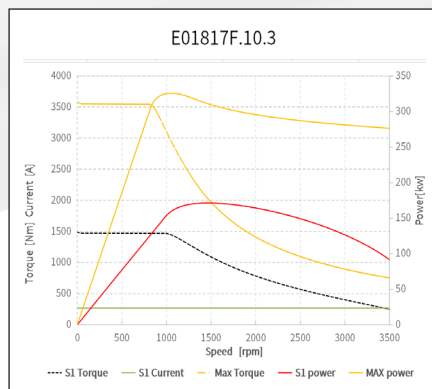
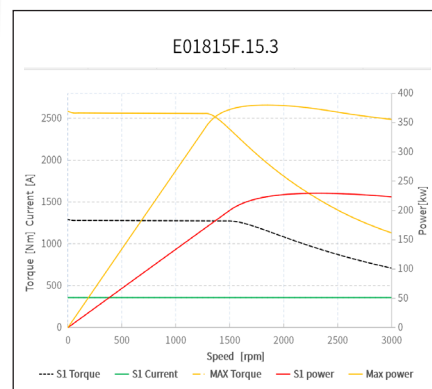
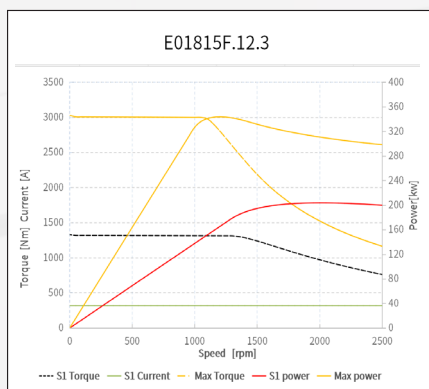
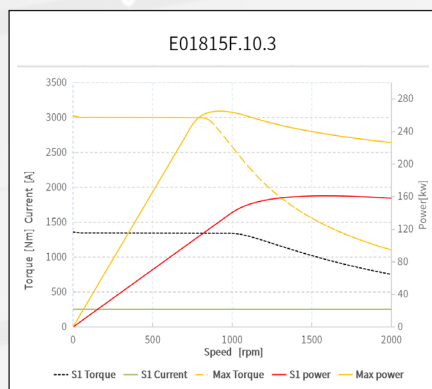
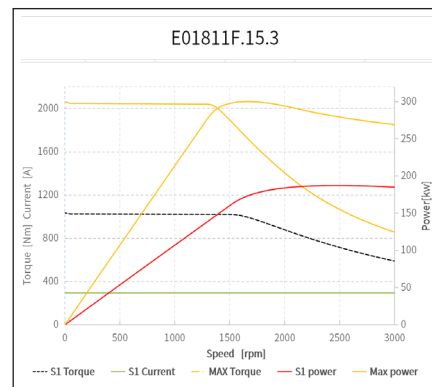
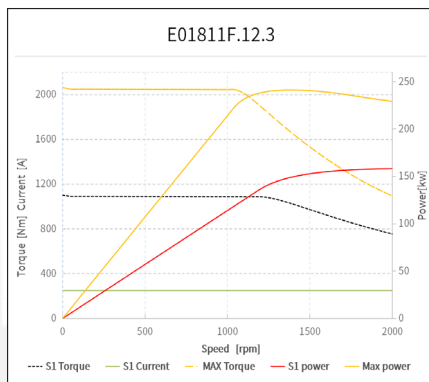
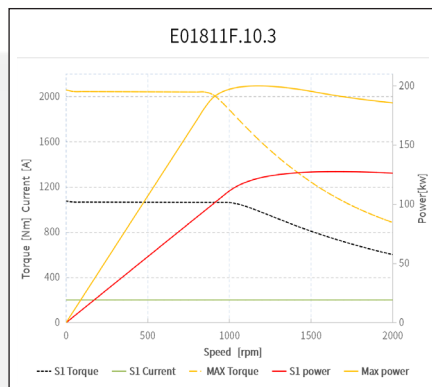
 信号插座 Signal Connector M23 Size 1-17 Pin		
针脚号 PIN	线色 WIRE COLOR	定义 FUNCTION
1	n.c.	n.c.
2	n.c.	n.c.
3	n.c.	n.c.
4	YELLOW 黄	SIN-
5	RED 红	COS+
6	BLACK 黑	COS-
7	RED / WHITE 红 / 白	RESX+
8	BROWN 棕	KTY+
9	WHITE 白	KTY-
10	YELLOW / WHITE 黄 / 白	RESX-
11	n.c.	n.c.
12	n.c.	n.c.
13	n.c.	n.c.
14	BLUE 蓝	SIN+
15	n.c.	n.c.
16	BLUE 蓝	PTC+
17	BLUE 蓝	PTC-
旋转变压器 Resolver : 1X-BRX		

Performance Curve

电机性能曲线 (E018__F)

驱动器电压 Vdrive : 380Vac
 直流母线电压 Vdcbus: 537Vdc
 载波频率 PWM frequency: $\geq 4\text{kHz}$
 温升 DT: 100K
 环境温度 Tamb: 30°C





电机型号 Motor Code		E01806C			E01808C			E01809C			E01811C			E01813C			E01815C			E01817C		
额定转速 Rated Speed	wn [rpm]	1000	1200	1500	1000	1200	1500	1000	1200	1500	1000	1200	1500	1000	1200	1500	1000	1200	1500	1000	1200	1500
额定频率 Rated Freq	Fn [Hz]	100	120	150	100	120	150	100	120	150	100	120	150	100	120	150	100	120	150	100	120	150
极数 Number of poles	2p	12																				
最大速度 Max Speed	wmax [rpm]	2000	2500	3000	2000	2500	3000	2000	2500	3000	2000	2500	3000	2000	2500	3000	2000	2500	3000	2000	2500	3000
最大频率 Max Freq	Fmax [Hz]	200	250	300	200	250	300	200	250	300	200	250	300	200	250	300	200	250	300	200	250	300
堵转电流 Stall Current	Io [A]	178.5	207.9	251.0	237.3	272.0	351.2	254.1	320.3	389.6	325.5	393.8	498.75	393.8	436.8	577.5	436.8	492.5	577.5	489.3	566.0	672
额定电流 Rated Current	In [A]	170	198	239	226	259	334.5	242	305	371	310	375	475	375	416	550	416	469	550	466	539	640
堵转扭矩 Stall Torque	To [Nm]	842.1	831.1	823.2	1119.3	1108.8	1097.3	1259	1243	1232.7	1548.8	1527.8	1499.75	1811.3	1781.9	1761.9	2064.3	2026.5	2001.3	2312.1	2285.9	2254.4
额定扭矩 Rated Torque	Tn [Nm]	802	791.5	784	1066	1056	1045	1199	1184	1174	1475	1455	1428	1725	1697	1678	1966	1930	1906	2202	2177	2147
额定功率 Rated Power	Pn [kW]	84	99.5	123.1	111.6	132.7	164.1	125.5	148.8	184.4	154.5	182.8	224.3	180.6	213.2	263.6	205.9	242.5	299.4	230.6	273.5	337.2
冷却水流量 Minimum Flow Rate	Flow [L/min]	15			18			18			20			25			25			30		
扭矩常数 Torque Constant	Kt [Nm/A]	4.51	3.83	3.15	4.51	3.9	3	4.73	3.72	3.04	4.54	3.71	2.89	4.39	3.9	2.93	4.51	3.94	3.38	4.47	3.83	3.19
反电动势 Back EMF	EMF [V/krpm]	272.5	231.5	190.5	272.5	236	181.5	286	225	184	274.5	224.5	174.9	265.7	236	177	272.5	238.5	204.4	270	231.5	193
绕组线电阻 Winding Resistance	Rw [ohm]	0.082	0.06	0.040	0.056	0.042	0.025	0.052	0.033	0.022	0.038	0.025	0.016	0.029	0.023	0.013	0.025	0.019	0.014	0.021	0.016	0.011
直轴线电感 Direct Inductance	Ld [mH]	1.49	1.07	0.74	1.11	0.84	0.5	1.08	0.67	0.45	0.82	0.55	0.33	0.65	0.51	0.29	0.59	0.45	0.33	0.51	0.38	0.26
交轴线电感 Quadrature Inductance	Lq [mH]	3.83	2.73	1.88	2.86	2.17	1.29	2.75	1.74	1.17	2.14	1.43	0.85	1.69	1.33	0.75	1.54	1.18	0.87	1.33	0.97	0.68
最大电流 Max Current	Imax [A]	280	329.4	400	373.3	431	560	400	509	622	509	622	800	622.2	700	933	700	800	933.3	800	933	1120
最大扭矩 Max Torque	Tmax [Nm]	1270	1254	1141	1420	1434	1400	1680	1680	1677	2040	2043	2040	2660	2627	2303	2999	3000	2550	3545	3545	2830
转动惯量 Rotor Inertia	Jm [kgcm ²]	3890			5060			5650			6850			7980			9170			10355		
电机重量 Weight	M[kg]	269			306			324			363			397			437			474		

驱动器电压 Vdrive : 380Vac

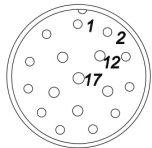
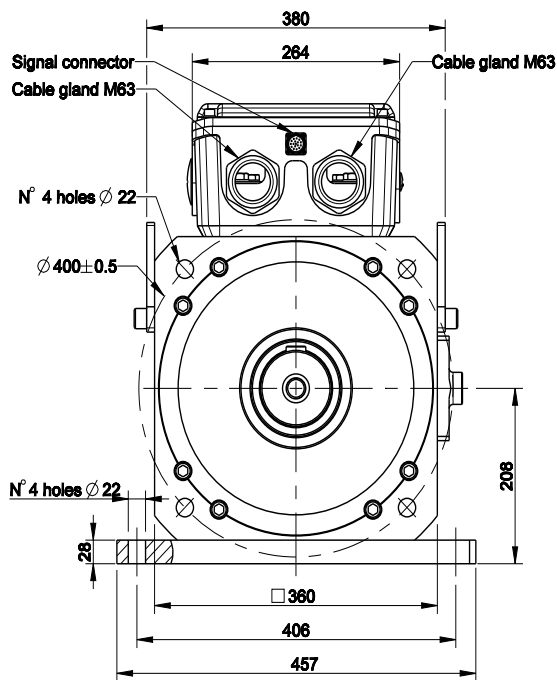
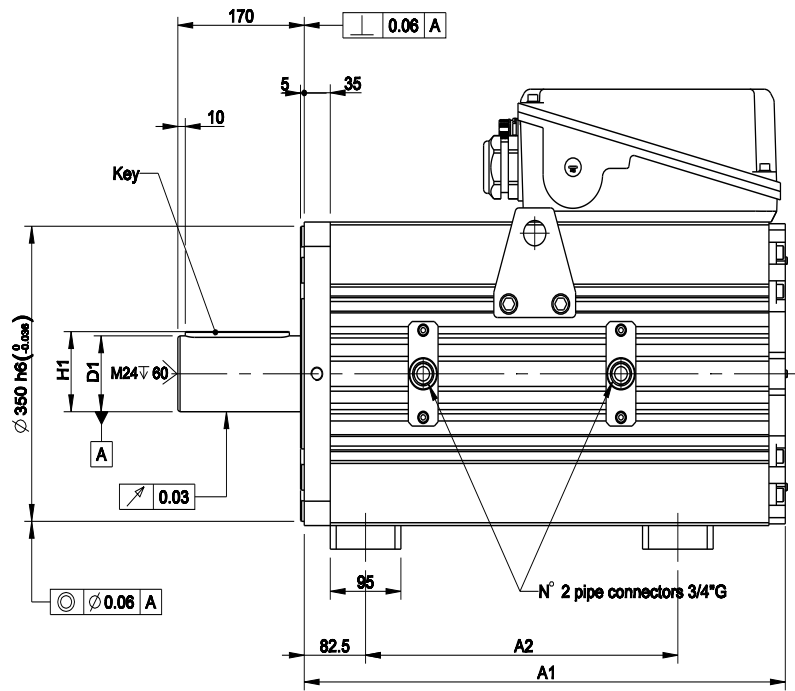
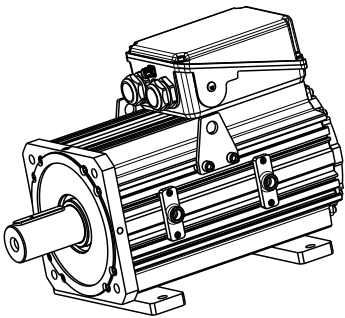
直流母线电压 Vdcbus : 537Vdc

载波频率 PWM frequency: $\geq 4\text{kHz}$

温升 DT : 100K

环境温度 Tamb : 30°C

	A1	A2	D1	H1	Key
E01806C	497	270	80m6	85	22x14x140
E01808C	557	330	80m6	85	22x14x140
E01809C	587	360	80m6	55	22x14x140
E01811C	647	420	80m6(90m6)	85(95)	22x14x140(25x14x140)
E01813C	707	480	90m6	95	25x14x140
E01815C	767	540	90m6	95	25x14x140
E01817C	827	600	90m6	95	25x14x140



信号插座
Signal Connector
M23 Size 1-17 Pin

针脚号 PIN	线色 WIRE COLOR	定义 FUNCTION
1	n.c.	n.c.
2	n.c.	n.c.
3	n.c.	n.c.
4	YELLOW 黄	SIN-
5	RED 红	COS+
6	BLACK 黑	COS-
7	RED / WHITE 红 / 白	RESX+
8	BROWN 棕	KTY+
9	WHITE 白	KTY-
10	YELLOW / WHITE 黄 / 白	RESX-
11	n.c.	n.c.
12	n.c.	n.c.
13	n.c.	n.c.
14	BLUE 蓝	SIN+
15	n.c.	n.c.
16	BLUE 蓝	PTC+
17	BLUE 蓝	PTC-
旋转变压器 Resolver : 1X-BRX		

Performance Curve

电机性能曲线 (E018__C)

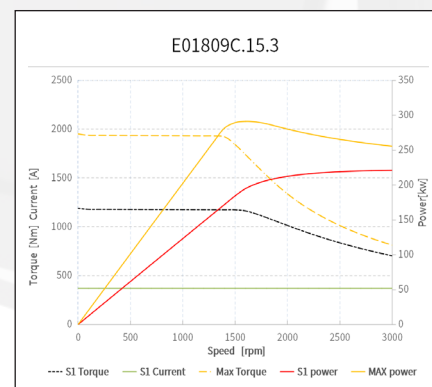
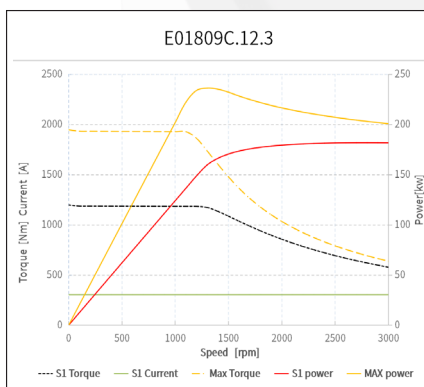
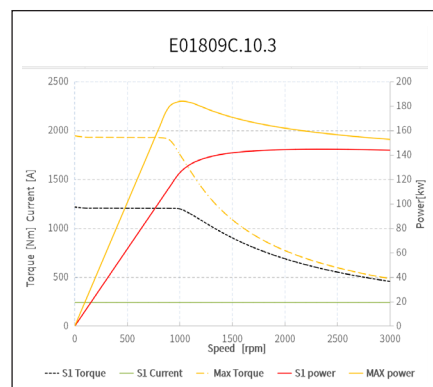
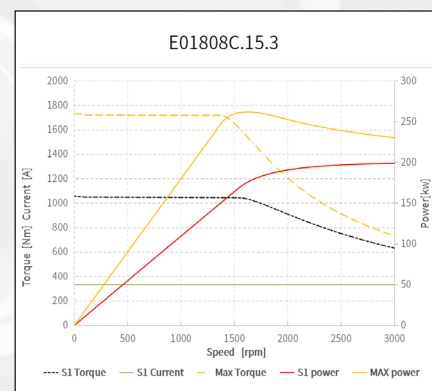
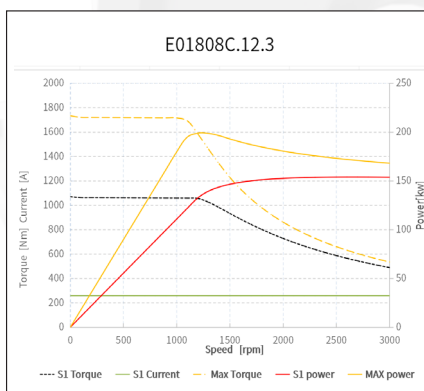
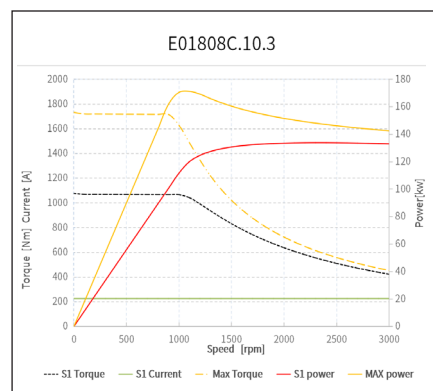
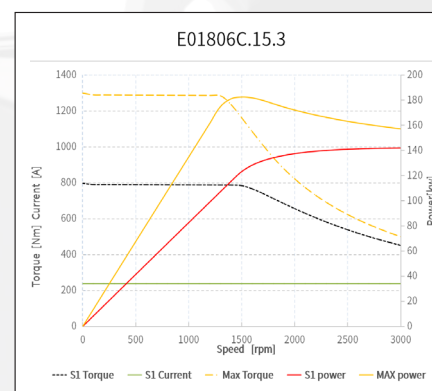
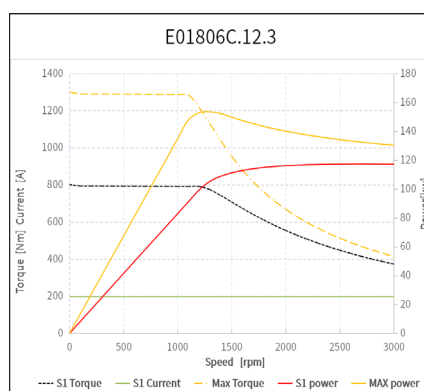
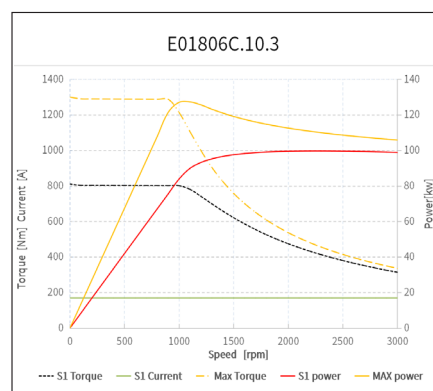
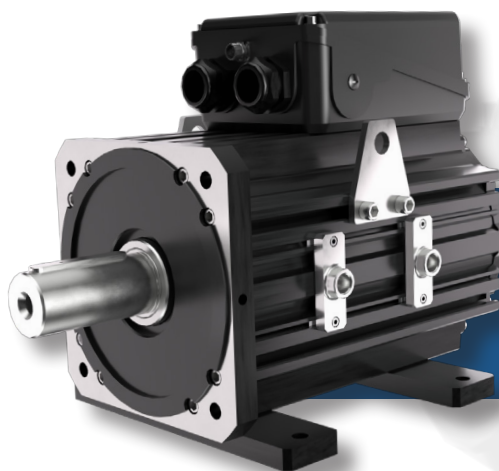
驱动器电压 Vdrive : 380Vac

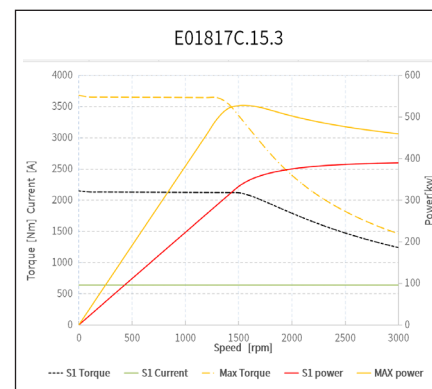
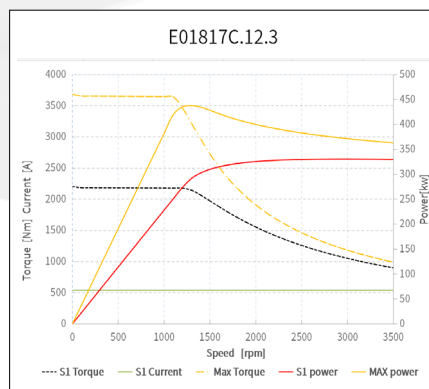
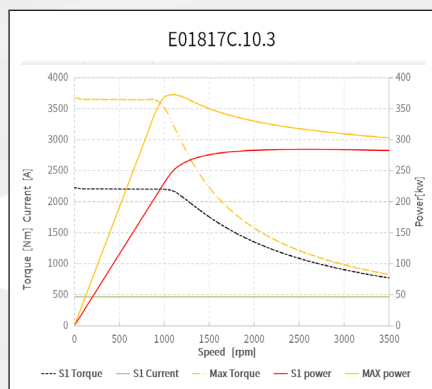
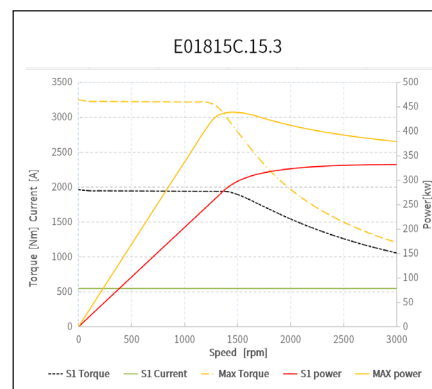
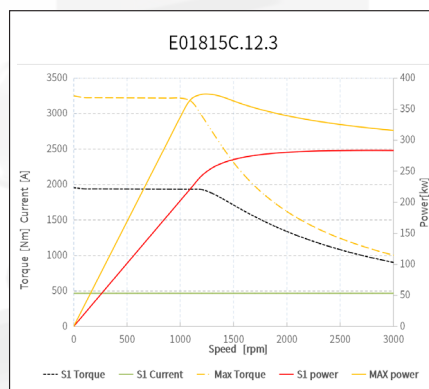
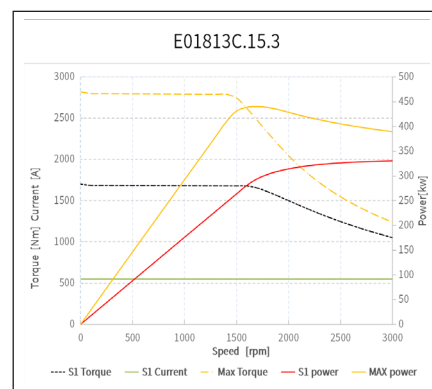
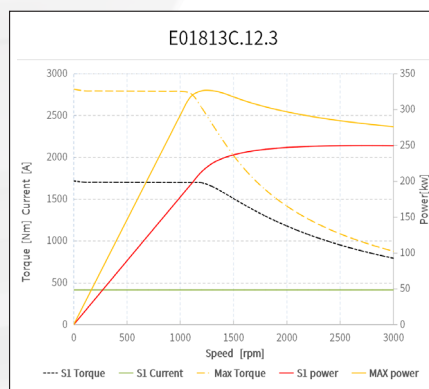
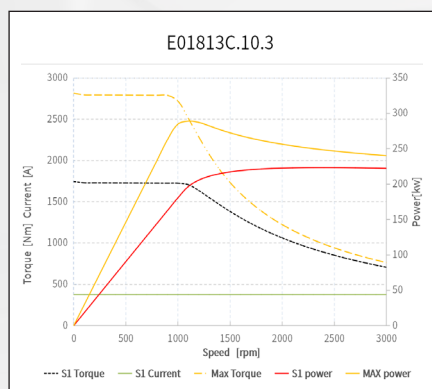
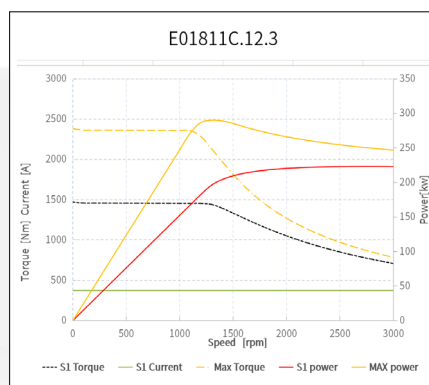
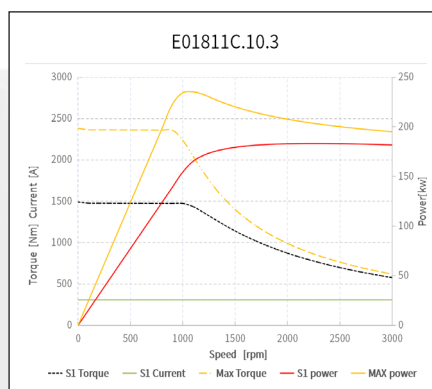
直流母线电压 Vdcbus: 537Vdc

载波频率 PWM frequency: $\geq 4\text{kHz}$

温升 DT: 100K

环境温度 Tamb: 30°C





Electro-hydraulic Servo System Selection

电液伺服系统选型

电液系统最大压力 (bar) Max Pressure of Hydraulic System		175		160		140	
油泵排量 (cc) Pump Displacement	额定转速 (rpm) Rated Speed	电机型号 Servo Motor Code	驱动器型号 Servo Drive Code	电机型号 Servo Motor Code	驱动器型号 Servo Drive Code	电机型号 Servo Motor Code	驱动器型号 Servo Drive Code
16	1500	E01004F153	PH600.011.43ARSF	E01004F153	PH600.011.43ARMF	E01004F153	PH600.011.43ARSF
	2000	E01004F203	PH600.011.43ARSF	E01004F203	PH600.011.43ARMF	E01004F203	PH600.011.43ARSF
25	1500	E01005F153	PH600.015.43ARSF	E01004F153	PH600.011.43ARMF	E01004F153	PH600.011.43ARSF
	2000	E01005F203	PH600.018.43ARSF	E01004F203	PH600.011.43ARMF	E01004F203	PH600.011.43ARSF
32	1500	E01005F153	PH600.015.43ARSF	E01005F153	PH600.015.43ARMF	E01005F153	PH600.015.43ARSF
	2000	E01005F203	PH600.018.43ARSF	E01005F203	PH600.018.43ARMF	E01005F203	PH600.018.43ARSF
40	1500	E01007F153	PH600.018.43ARSF	E01007F153	PH600.018.43ARMF	E01005F153	PH600.015.43ARSF
	2000	E01007F203	PH600.022.43ARSF	E01007F203	PH600.022.43ARMF	E01005F203	PH600.018.43ARSF
50	1500	E01008F153	PH600.022.43ARSF	E01007F153	PH600.018.43ARMF	E01007F153	PH600.018.43ARSF
	2000	E01008F203	PH600.030.43ARSF	E01008F203	PH600.030.43ARMF	E01007F203	PH600.022.43ARSF
63	1500	E01010F153	PH600.030.43ARSF	E01010F153	PH600.030.43ARMF	E01008F153	PH600.022.43ARSF
	2000	E01010F203	PH600.030.43ARSF	E01010F203	PH600.030.43ARMF	E01008F203	PH600.030.43ARSF
80	1500	E01013F153	PH600.030.43ARSF	E01012F153	PH600.030.43ARMF	E01010F153	PH600.030.43ARSF
	2000	E01013F203	PH600.037.43ARSF	E01012F203	PH600.037.43ARMF	E01010F203	PH600.030.43ARSF
100	1500	E01220F153	PH600.045.43ARSF	E01215F153	PH600.037.43ARMF	E01013F153	PH600.030.43ARSF
	2000	E01220F203	PH600.055.43ARSF	E01215F203	PH600.045.43ARMF	E01013F203	PH600.037.43ARSF
125	1500	E01225F153	PH600.055.43ARSF	E01220F153	PH600.045.43ARMF	E01220F153	PH600.045.43ARSF
	2000	E01225F203	PH600.055.43ARSF	E01225F203	PH600.055.43ARMF	E01220F203	PH600.055.43ARSF
160	1500	E01235F153	PH600.075.43BRSF	E01230F153	PH600.055.43ARMF	E01225F153	PH600.055.43ARSF
	2000	E01235F203	PH600.090.43BRSF	E01230F203	PH600.075.43BRMF	E01225F203	PH600.055.43ARSF

环境温度 Tamb[°C] : 30°C

以上选型适用于注塑机，其他行业液压选型请向菲仕咨询。

对于保压时间或高速高压较长的场合，具体选型请向菲仕咨询。

All codes selected as above apply to injection molding machine, if you need more information, please contact with us.

Regarding long holding pressure or high speed/high pressure applications, please contact with us for more details.

Accessory Configuration

配件配置

型号 Model	输入滤波器 Input Filter	输出滤波器 Output Filter	交流输入电抗器 AC Input Reactor	直流电抗器 DC Reactor	交流输出电抗器 AC Output Reactor	制动电阻 Brake resistor	磁环 Magnet ring
PH600.007.43ARSF	FLT-P04032L-B	FLT-L04032L-B	ACL2-7R5-4	DCL35A04504-1	OCL2-7R5-4	40Ω 1000W	63*38*25
PH600.011.43ARSF	FLT-P04032L-B	FLT-L04032L-B	ACL2-011-4	DCL35A04504-1	OCL2-011-4	40Ω 1000W	63*38*25
PH600.015.43ARSF	FLT-P04045L-B	FLT-L04045L-B	ACL2-015-4	DCL50A03004-1	OCL2-015-4	40Ω 1000W	63*38*25
PH600.018.43ARSF	FLT-P04045L-B	FLT-L04045L-B	ACL2-018-4	DCL50A03004-1	OCL2-018-4	40Ω 1000W	63*38*25
PH600.022.43ARSF	FLT-P04065L-B	FLT-L04065L-B	ACL2-022-4	DCL70A06204-1	OCL2-022-4	15Ω 1500W	80*52*20
PH600.030.43ARSF	FLT-P04065L-B	FLT-L04065L-B	ACL2-037-4	DCL110A03004-2	OCL2-037-4	15Ω 1500W	80*52*20
PH600.037.43ARSF	FLT-P04100L-B	FLT-L04100L-B	ACL2-037-4	DCL110A03004-2	OCL2-037-4	10Ω 2000W	80*52*20
PH600.045.43ARSF	FLT-P04100L-B	FLT-L04100L-B	ACL2-045-4	DCL180A01504-2	OCL2-045-4	10Ω 2000W	80*52*20
PH600.055.43ARSF	FLT-P04150L-B	FLT-L04150L-B	ACL2-055-4	DCL180A01504-2	OCL2-055-4	10Ω 2000W	80*52*20
PH600.075.43BRSF	FLT-P04150L-B	FLT-L04150L-B	ACL2-075-4	/	OCL2-075-4	2个20Ω 2000w 电阻并联 resistors in parallel connection	102*65*20
PH600.090.43BRSF	FLT-P04240L-B	FLT-L04240L-B	ACL2-110-4	/	OCL2-110-4	2个10Ω 2000w 电阻并联 resistors in parallel connection	102*65*20
PH600.110.43BRSF	FLT-P04240L-B	FLT-L04240L-B	ACL2-110-4	/	OCL2-110-4	2个10Ω 2000w 电阻并联 resistors in parallel connection	102*65*20

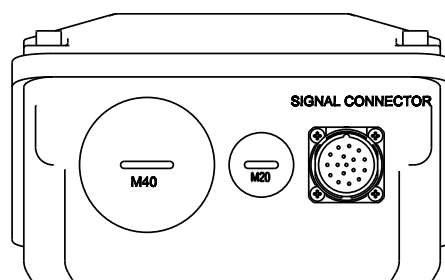
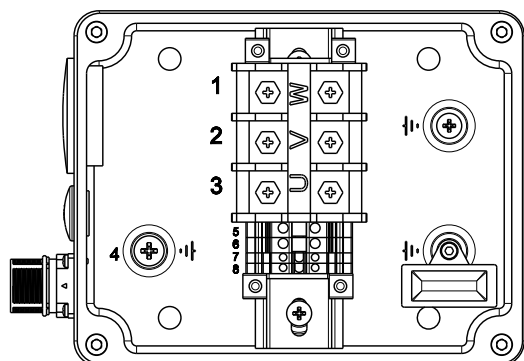
编码器线规格 Encoder Cable Model	XXX 长度 (m) Length		X 屏蔽方式 Shielding Method		X 是否拖链 Yes/No Drag Chain		X 外皮护套材料 Outer Sheath Material		XXX 特殊要求 Special Requirements	
CR-I709-A609- _ _ _ _ _	030	3	G	总屏蔽 Overall Shield	S	标准非拖链 Standard is no Drag Chain	V	PVC	X01	客户名称或其他特殊要求 Customer Name or Other Special Requirements
	050	5	I	总屏蔽且内屏蔽 Overall and Internal Shielding	T	拖链 Drag Chain	U	PUR		
	100	10	N	无屏蔽 Unshielded						
	150	15								
	200	20								

代码示例:

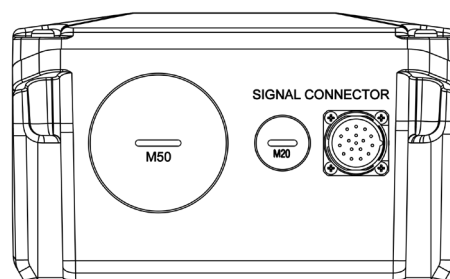
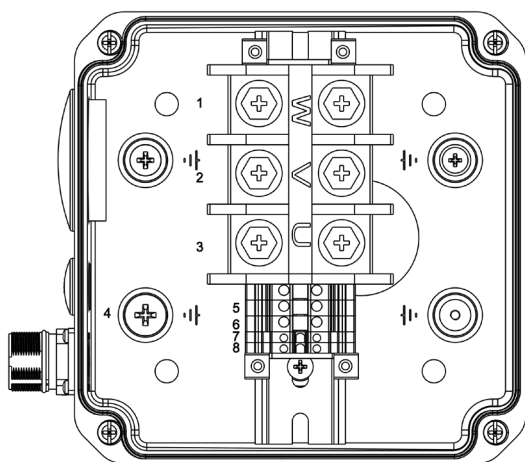
CR-I709-A609-030-GSV: 3m 长旋变编码器线, 总屏蔽、标准非拖链、PVC 外皮护套;

Code Example:

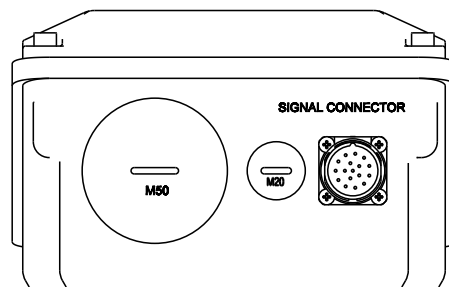
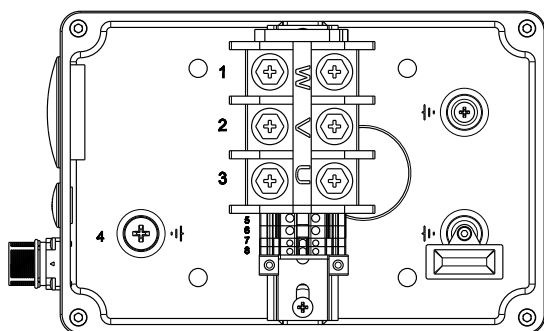
CR-I709-A609-030-GSV: 3m resolver encoder cable, Overall Shield、Standard is no Drag Chain、PVC cable sheath;



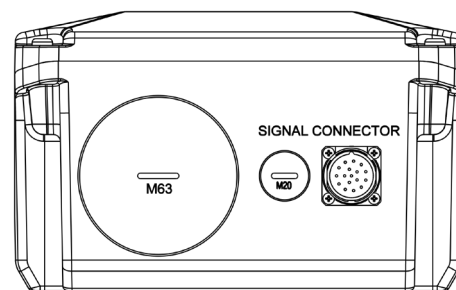
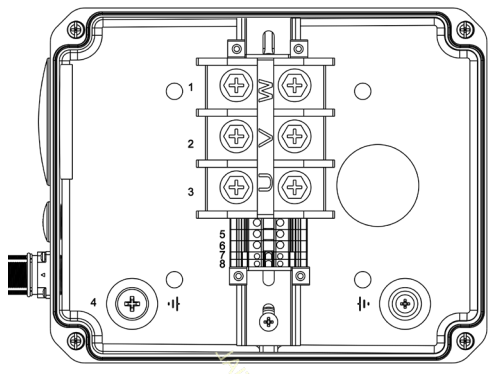
接线盒 180×142
CONNECTION BOX 180×142



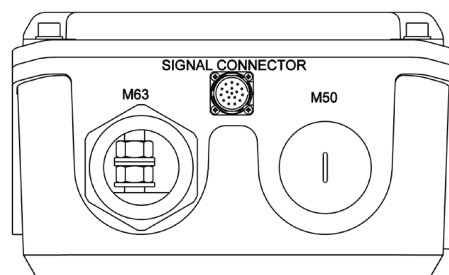
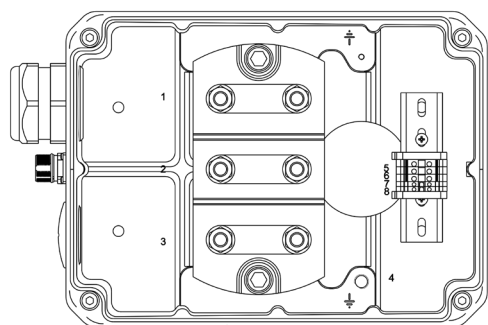
接线盒 175×175
CONNECTION BOX 175×175



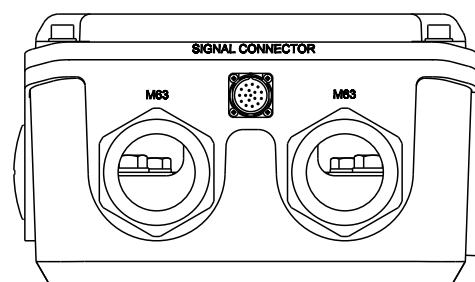
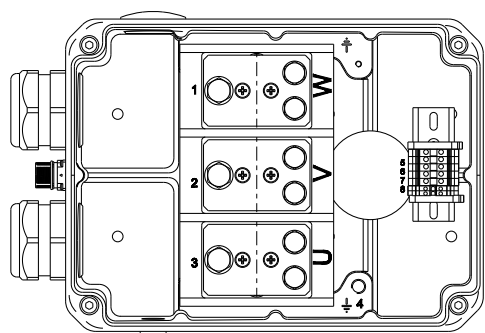
接线盒 240×160
CONNECTION BOX 240×160



接线盒 240×195
CONNECTION BOX 240×195



接线盒 353×264
CONNECTION BOX 353×264



接线盒 353×264
CONNECTION BOX 353×264

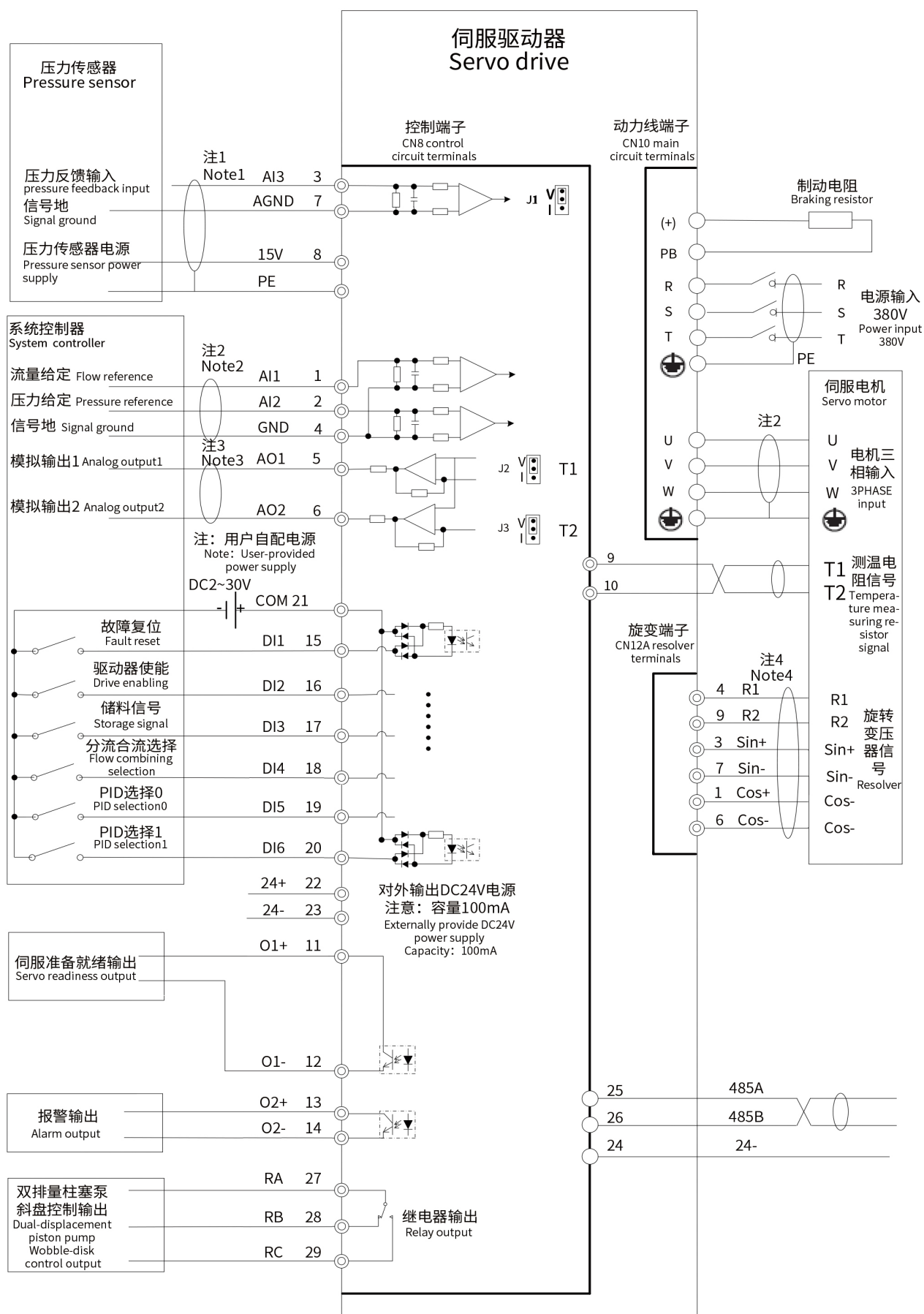
接线定义 /Connection box configuration	
1	Phase W
2	Phase V
3	Phase U
4	GND
5	风扇 /Fan *
6	风扇 /Fan *

接线定义 /Connection box configuration	
7	制动器 Brake (+ 24V) *
8	制动器 Brake (0V) *
9	内部接线用 /Reserved for internal use*
10	内部接线用 /Reserved for internal use*
11	内部接线用 /Reserved for internal use*

(*) 如果存在的情况下
If present!

Connection Diagram

注塑机专用接线图



菲仕总部 PHYSIS HEADQUARTER

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