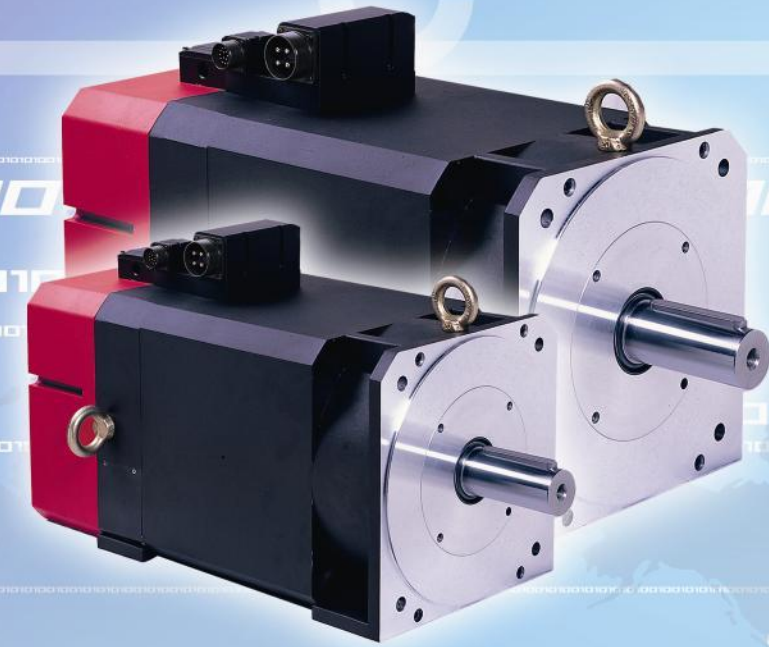




Super Success Technology Corp.

Super Success Technology Corp.



## 伺服系統控制器

Servo System Controller

**Motake** 金永機電有限公司  
KIM-YONG MECHATRONIC CO.



營業項目：步進、伺服、無刷行星式減速機  
AC永磁、感應、高速伺服馬達  
臺製、進口高性能變頻器  
微中小型齒輪、渦輪減速機  
交直流無刷馬達與減速機  
空油壓零件與系統整合元件  
空油壓恆壓系統整合

地址：台中市太平區德安街85巷6號  
電話：(04)2271-1388  
傳真：(04)2271-1387  
http://www.blcmmotor.com.tw  
E-mail: ky22656712@gmail.com

型錄資料，請搜尋YAHOO! 金永機電部落格(部落格相簿)

# Servo Drives Class



## Drives 伺服驅動器



▼ 伺服驅動器  
SSD series



◀ 伺服驅動器  
SSD series



▶ 伺服驅動器  
CSD series



◀ 電源供給模組  
CPN series

▶ 變頻模組  
CSI series



▲ 控制卡  
Control Board

## 伺服驅動器編碼

舉例 ex : SSD-20

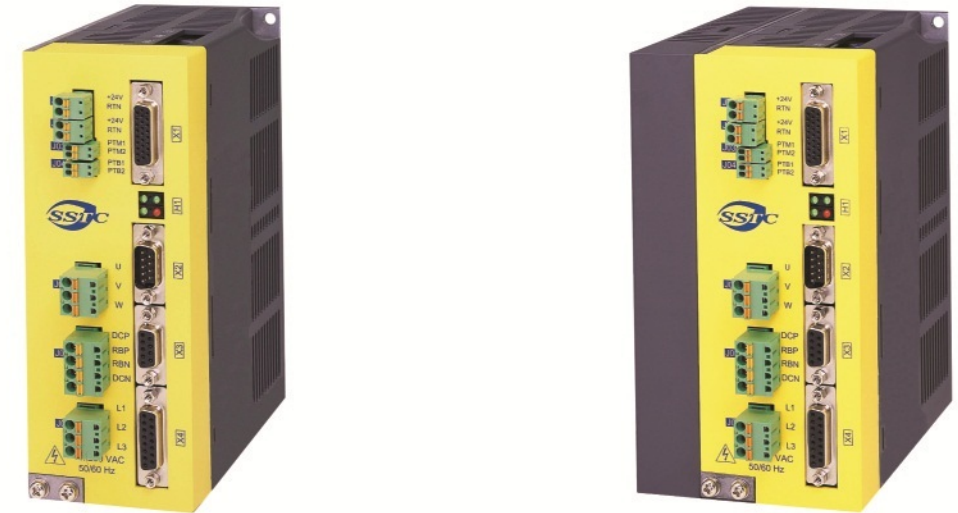
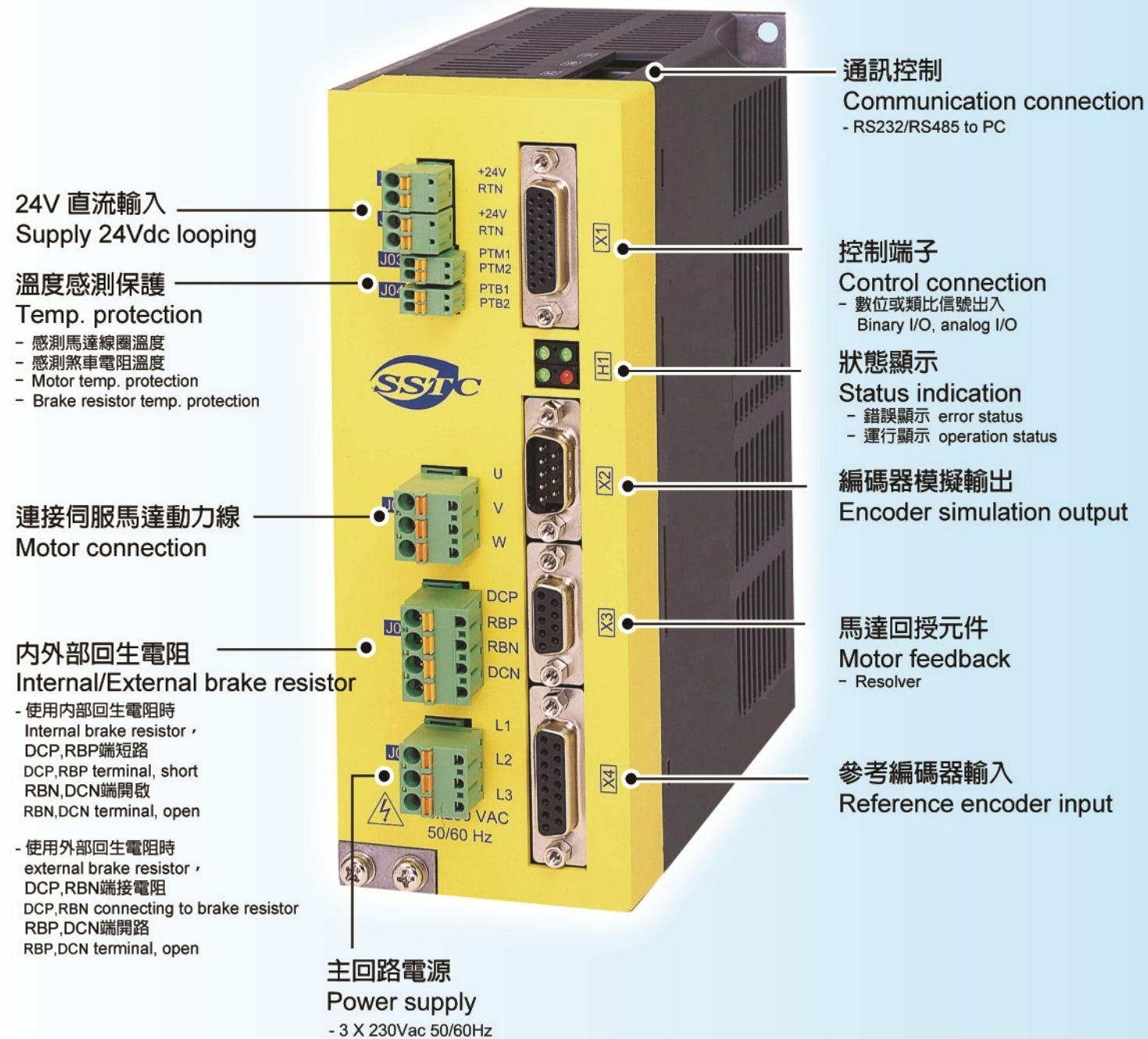
伺服驅動器 Compact Servo Drives - 230Vac	SSD	-	20
伺服驅動器 Compact Servo Drives - 400Vac	CSD		
伺服變頻模組 Compact Servo Inverter Modules - 540~650Vdc	CSI		
電源供給模組 Compact Power Supply Modules, No Regenerative braking - 400Vac	CPN		

功率 單位：kw {0.1kVA or 0.1kw}

### 標準定義 Definition

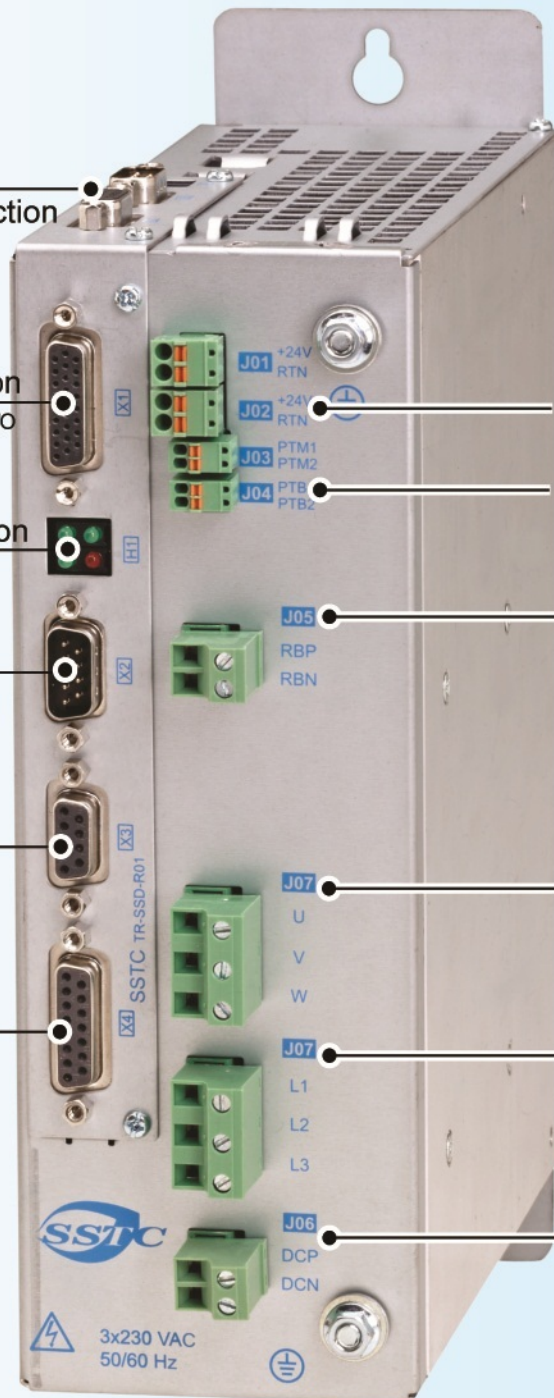
驅動器名稱定義 Drives Name	代號 Code
<b>S</b> mart <b>S</b> ervo <b>D</b> rives	SSD
<b>C</b> ompact <b>S</b> ervo <b>D</b> rives	CSD
<b>C</b> ompact <b>S</b> ervo <b>I</b> nverter Modules	CSI
<b>C</b> ompact <b>P</b> ower Supply Modules, <b>N</b> o Regenerative braking	CPN

AC交流伺服驅動器



技術資料 Technical Data	單位 Unit	SSD-08	SSD-16	SSD-20
輸入電壓 Input voltage	Vac		3 x 230 ±10%	
頻率 Input frequency	Hz		50 / 60	
輸出電壓 Output voltage	Vac		3x190	
輸出頻率 Output frequency	Hz		0 ~ 800	
額定輸出電流 Nominal output current	A	2.5	5	6.6
最大輸出電流 Max.output current	A/s	5 / 25	10 / 25	13.2 / 25
額定輸出功率 Nominal output power	kVA	0.8	1.6	2
效率 Efficiency	%		approx. 94	
功率因數 Power factor	PF		>0.9	
控制方式 Control method	-		PWM	
控制模式 Control mode	-		torque, speed, positioning	
保護方式 Protection methods	-		過電流、過電壓、低電壓、過載保護、短路保護、過溫保護、接地保護、編碼器異常保護 Over current, over voltage, Low voltage, overload protection, shortcircuit protection, over temperature protection, ground fault protection, encoder abnormal protection	
冷卻方式 Cooling method	-	natural cooling	fan cooling	fan cooling
切換頻率 Switching frequency	kHz		10	
外加最小剎車電阻(選購) Braking resistor of (BR) (option)	ohm	100	100	100
機構尺寸 Dimension	單位 Unit	SSD-08	SSD-16	SSD-20
高度 Height	mm	156.3	156.3	156.3
深度 Depth	mm	178	178	178
寬度 Width	mm	67	93	93
重量 Weight	kg	1.2	1.9	1.9

**AC交流伺服驅動器**



通訊控制  
Communication connection  
- RS232/RS485 to PC

控制端子 Control connection  
- 數位或類比信號出入 binary I/O, analog I/O

狀態顯示 Status indication  
- 錯誤顯示 error status  
- 運行顯示 operation status

編碼器模擬輸出  
Encoder simulation output

馬達回授元件  
Motor feedback  
- Resolver

參考編碼器輸入  
Reference encoder input

24V 直流輸入 Supply 24Vdc looping

溫度感測保護 Temp. protection  
- 感測馬達線圈溫度 Motor temp. protection  
- 感測煞車電阻溫度 Brake resistor temp. protection

煞車電阻 Brake resistor

連接伺服馬達動力線  
Motor connection

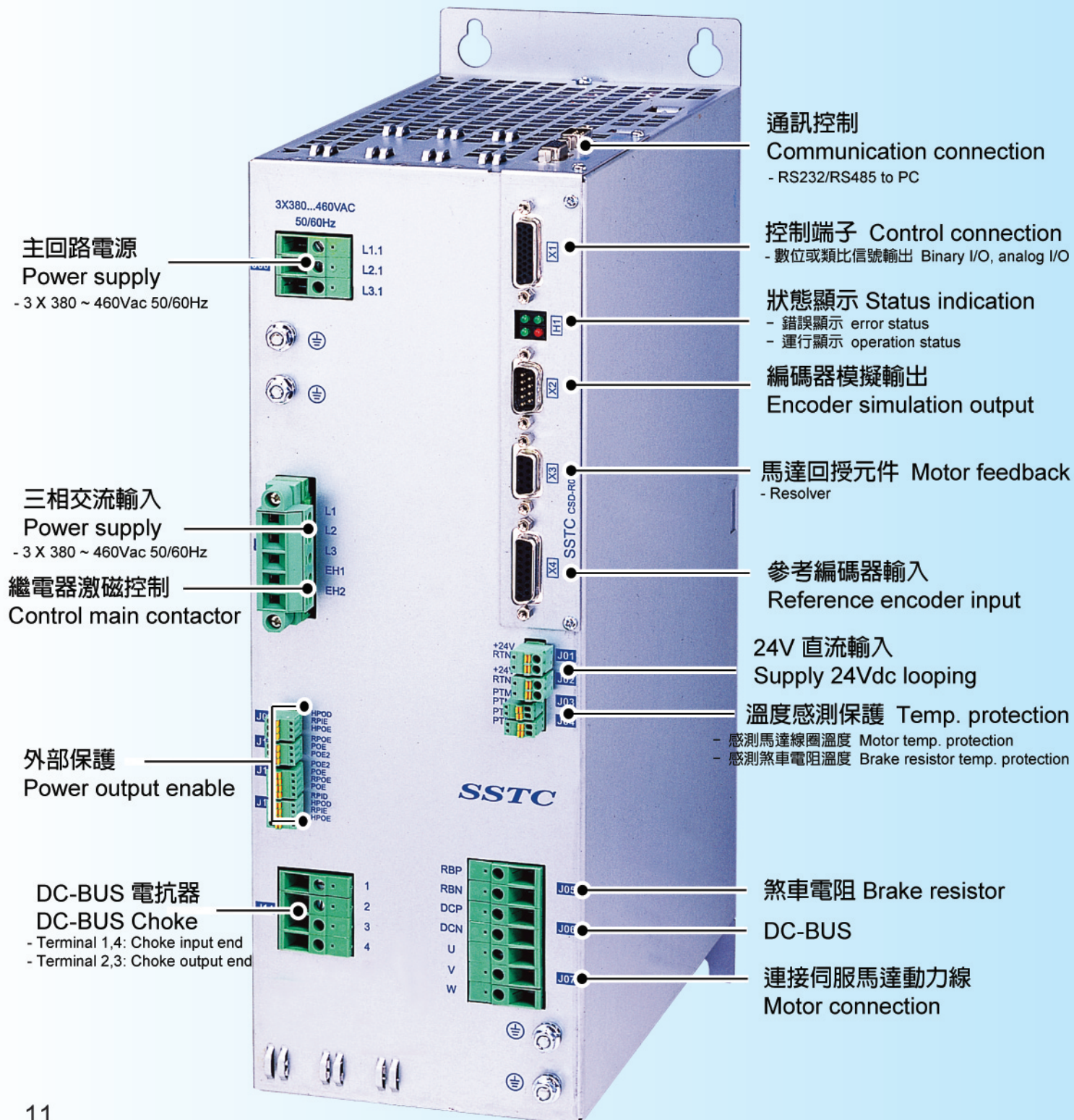
主回路電源 Power supply  
- 3 X 230Vac 50/60Hz

DC-BUS



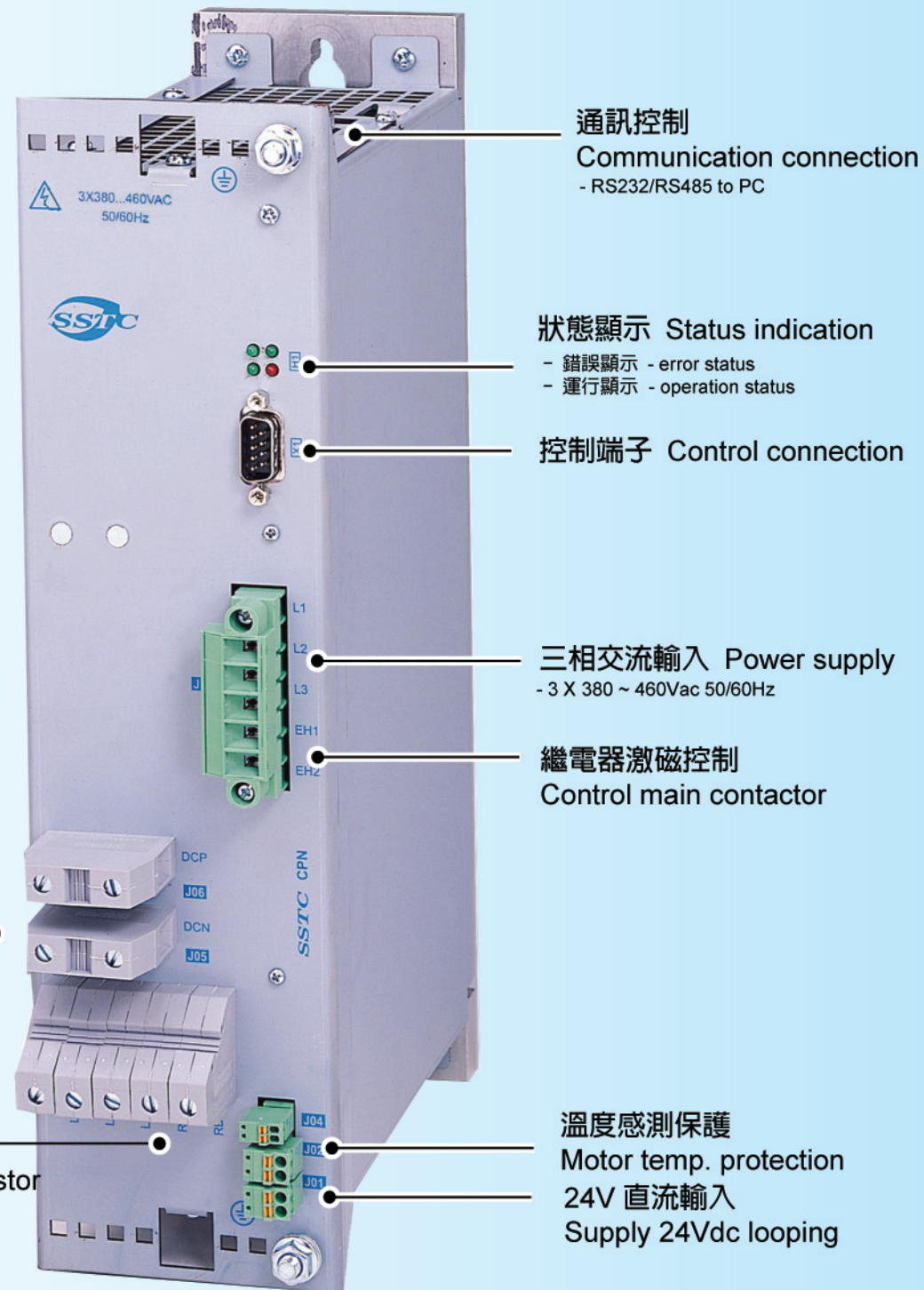
技術資料 Technical Data	單位 Unit	SSD-30	SSD-55	SSD-80
輸入電壓 Input voltage	Vac	3 x 230 ±10%		
輸入頻率 Input frequency	Hz	50/60		
輸出電壓 Output voltage	Vac	3x190		
輸出頻率 Output frequency	Hz	0 ~ 800		
額定輸出電流 Nominal output current	A	10	17	25
最大輸出電流 Max. output current	A/s	20/25	34/25	50/25
額定輸出功率 Nominal output power	kVA	3	5.5	8
效率 Efficiency	%	approx. 94		
功率因數 Power factor	PF	>0.9		
控制方式 Control method	-	PWM		
控制模式 Control mode	-	torque, speed, positioning		
保護方式 Protection methods	-	過電流、過電壓、低電壓、過載保護、短路保護、過溫保護、接地保護、編碼器異常保護 Over current, over voltage, Low voltage, overload protection, shortcircuit protection, over temperature protection, ground fault protection, encoder abnormal protection		
冷卻方式 Cooling method	-	fan cooling	fan cooling	fan cooling
切換頻率 Switching frequency	kHz	10		
外加最小制動電阻(選購) Braking resistor of (BR) (option)	ohm	100	40	20
機構尺寸 Dimension	單位 Unit	SSD-30	SSD-55	SSD-80
高度 Height	mm	207	207	207
深度 Depth	mm	267	267	267
寬度 Width	mm	77	119	139
重量 Weight	kg	2.8	3.5	7.6

## AC交流伺服驅動器



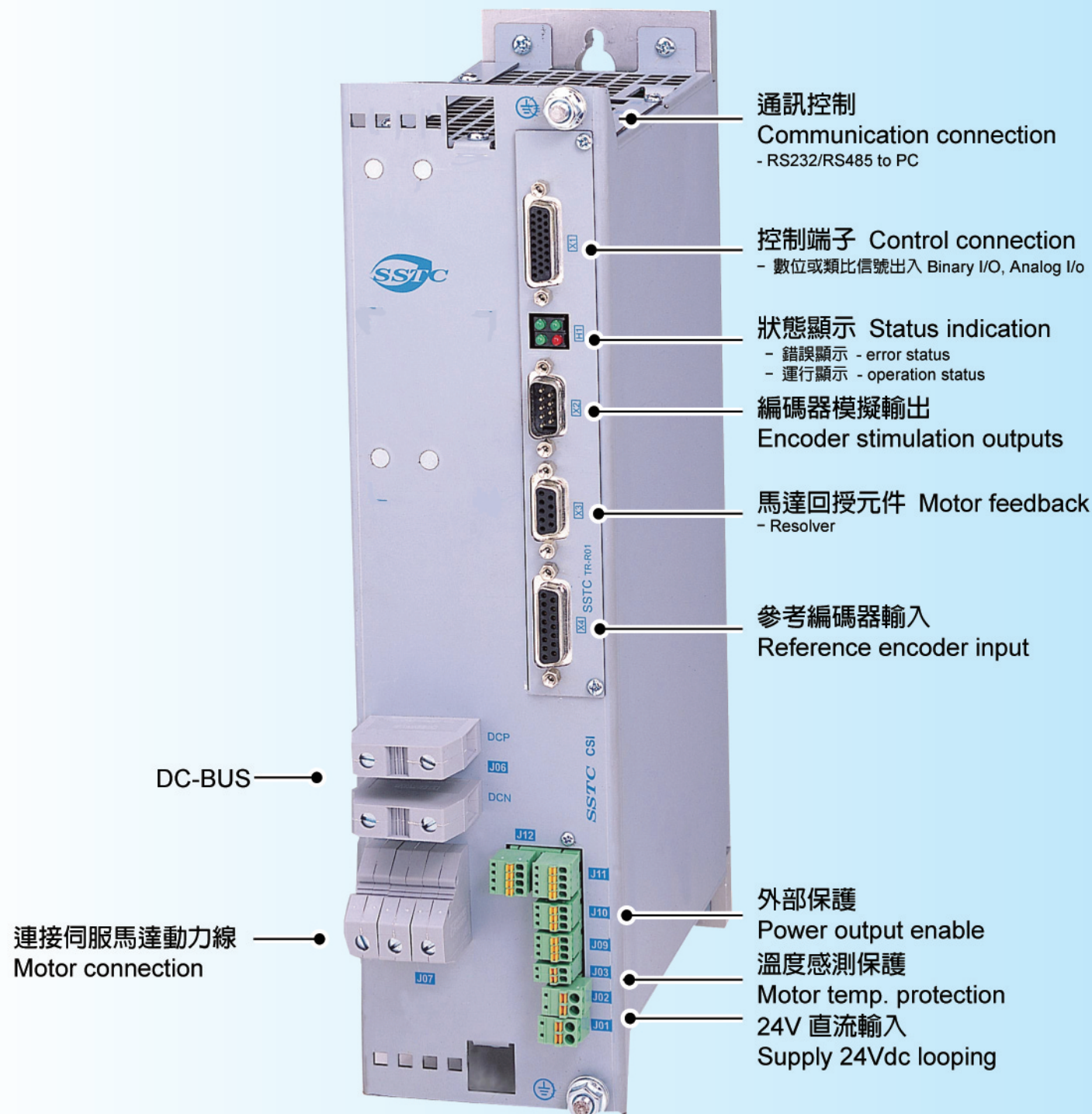
技術資料 Technical Data	單位 Unit	CSD-60	CSD-100	CSD-140
輸入電壓 Input voltage	Vac		3 x 380 ~ 460	
輸入頻率 Input frequency	Hz		50 / 60	
輸入電流 Input current	A	9	15	21
輸出電壓 Output voltage	Vac		350	
額定輸出電流 Nominal output current	A	10	16.5	23
最大輸出電流 Max. output current	A / s	20 / 25	33 / 25	46 / 25
額定輸出功率 Nominal output power	kVA	6	10	14
輸出頻率 Output frequency	Hz		0 ~ 800	
功率因數 Power factor	PF		>0.9	
效率 Efficiency	%		95	
控制方式 Control method	-		PWM	
切換頻率 Switching frequency	kHz		10	
外加最小制車電阻 (選購) Braking resistor of (BR) (option)	ohm	50	50	50
機構尺寸 Dimension	單位 Unit	CSD-60	CSD-100	CSD-140
高度 Height	mm	359	359	359
深度 Depth	mm	243	243	243
寬度 Width	mm	130	130	130
重量 Weight	kg	10.5	10.5	12.2

電源供給模組



技術資料 Technical Data	單位 Unit	CPN-100	CPN-200	CPN-400	CPN-600	CPN-1200
輸入電壓 Input voltage	Vac	3 $\Psi$ x380~460, 50/60 Hz				
工作電源電壓 Supply voltage	Vdc	24V $\pm$ 15%, 漣波最大. 5%				
24V 輸入功率 24V Input power	W	7.5	7.5	9	15	15
效率 Efficiency	%	99				
功率因數 Power factor	PF	0.9				
冷卻系統 Cooling		冷卻板最高環境溫度40°C Back panel for installation on cooling plate/heat sink in max., ambient temperature 40°C				
輸入電流 Input current	A	15	30	60	90	180
輸出額定功率 Output nominal power	kVA	10	20	40	60	120
DC BUS輸出電壓 DC BUS output voltage	Vdc	540 ~ 650				
DC BUS額定輸出電流 DC BUS nominal output current	A	19	37	74	-	225
過載監測 Overload motoring	kW/s	20 / 60	40 / 60	80 / 60	120 / 60	200 / 60
煞車電晶體 Brake transistor		內建 integrated				
煞車電阻 Brake resistor (option)	ohm	20	20	8	8	4
保護/監測功能 Protective/monitoring functions		線電流過大、外部煞車電阻短路、散熱片或外部煞車電阻過溫 line overcurrent, short circuit ext. brake resistor, overtemp. heat sink and ext. brake resistor				
機構尺寸 Dimension	單位 Unit	CPN-100	CPN-200	CPN-400	CPN-600	CPN-1200
W x 333 x 255	mm	W = 85		W = 170		W = 255
重量 Weight	kg	4.2		8		16

## 伺服變頻模組



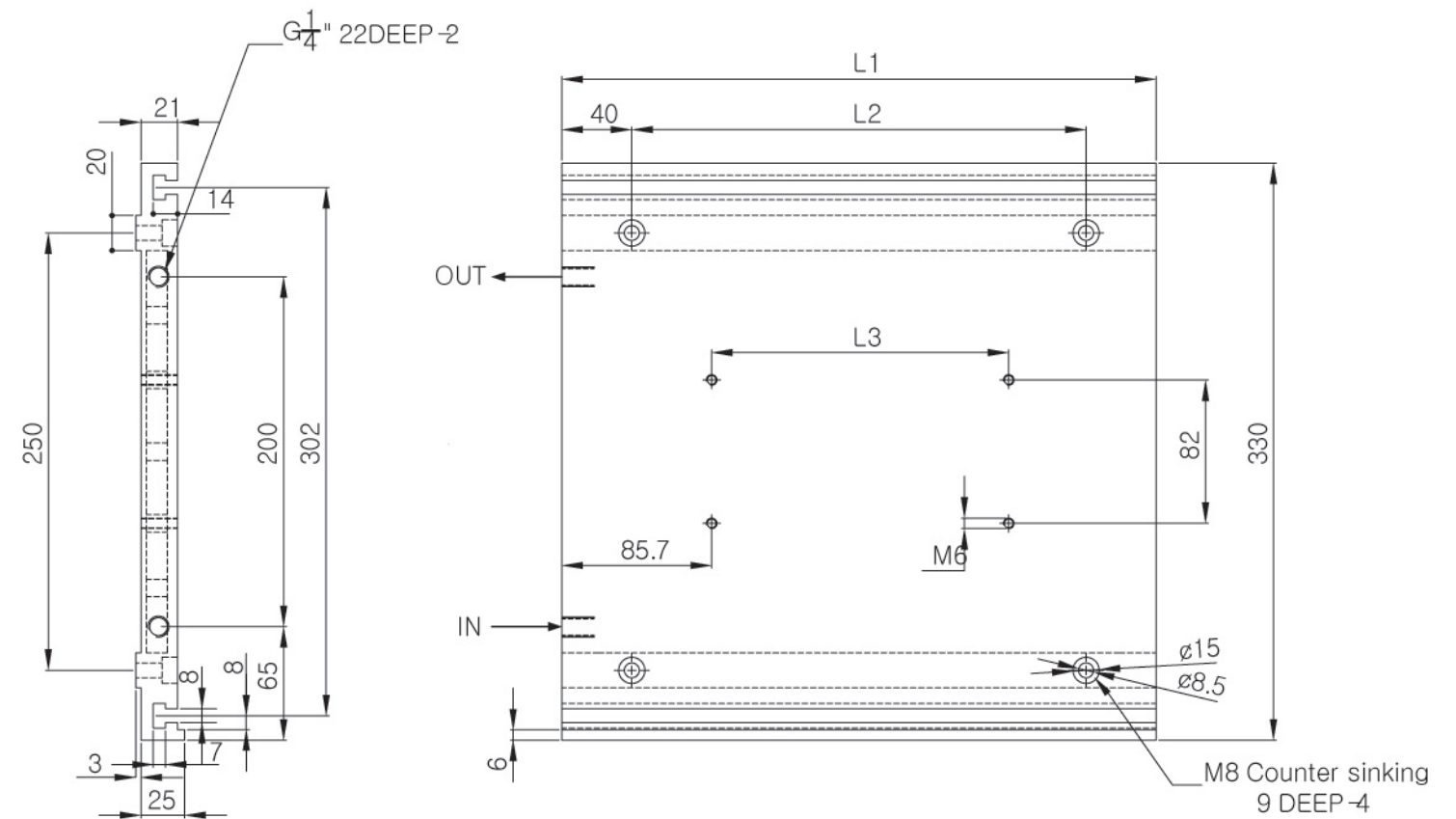
技術資料 Technical Data	單位 Unit	CSI-20	CSI-50	CSI-100	CSI-200	CSI-400	CSI-600	CSI-1000
輸入電壓 Input voltage	Vdc	540 ~ 650						
工作電源電壓 Supply voltage	Vdc	24V ±15%, 漣波最大. 5%						
輸入功率 Input power	W	12	12	13	13	13	17	30
效率 Efficiency	%	98						
冷卻系統 Cooling		冷卻板最高環境溫度40° C Back panel for installation on cooling plate/heat sink in max., ambient temperature 40°C						
控制方式 Control method		PWM						
切換頻率 Switching frequency	kHz	10						
輸入電流 Input current	A	3.8	9.3	18.5	37	74	112	187
輸出額定功率 Output nominal power	kVA	2	5	10	20	40	60	100
輸出電壓 Output voltage	Vac	0 ~ 350						
PWM輸出頻率 (10kHz切換) Output frequency with 10kHz PWM frequency	Hz	0 ~ 800						
額定輸出電流 Nominal output current	A	3.3	8.3	16.5	33	66	99	165
最大輸出電流 Peak output current for max.	A	6.6	16.5	33	66	132	198	272
保護/監測功能 Protective/monitoring functions	sec	10	10	10	10	10	10	7
		-	-	-	-	-	-	330 A / 10 s
機構尺寸 Dimension	單位 Unit	CSI-20	CSI-50	CSI-100	CSI-200	CSI-400	CSI-600	CSI-1000
W x 333 x 255	mm	W = 55		W = 85		W = 170		W = 255
重量 Weight	kg	3		4.2		8		16

選購品  
Option

電容緩衝器  
Capacitance buffer



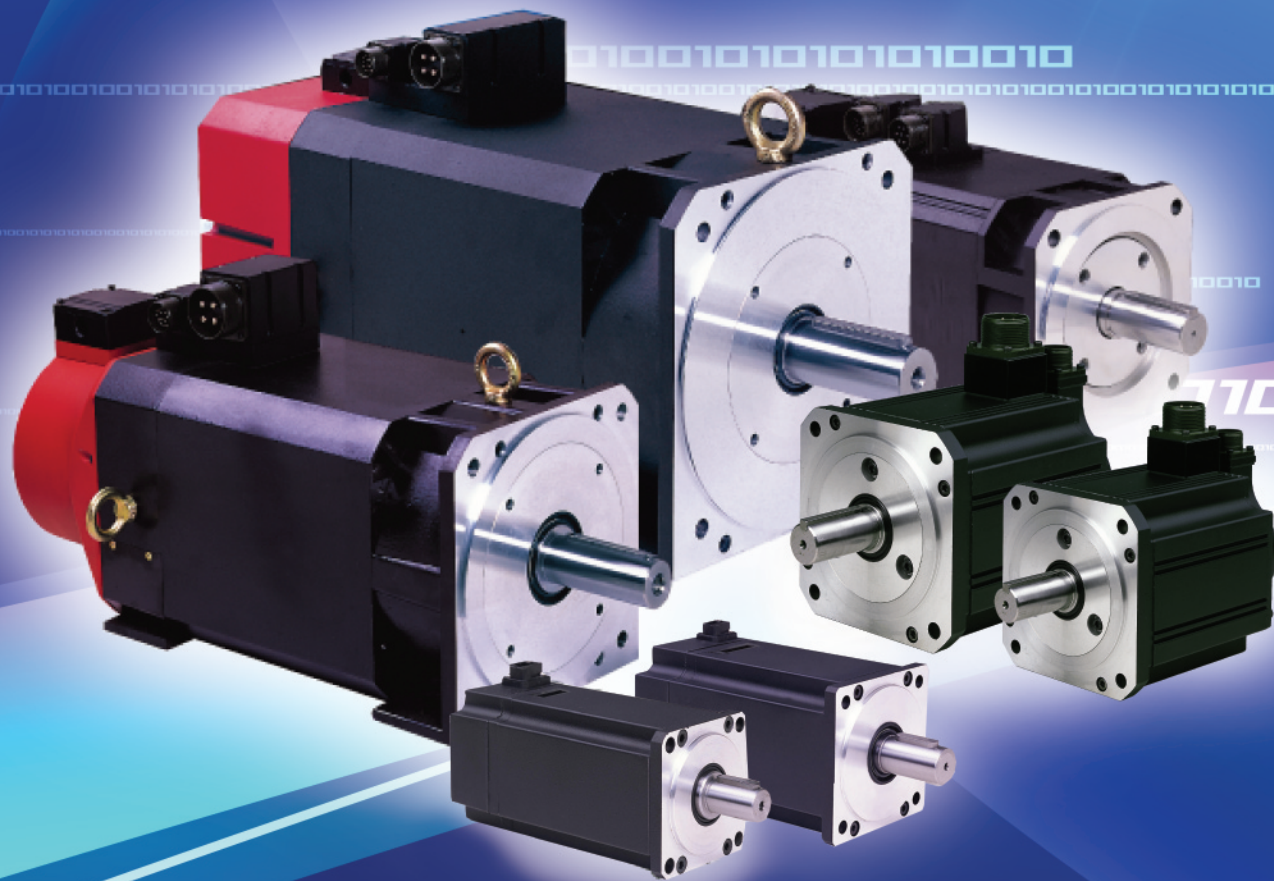
冷卻板  
Cooling Plate



Designation	L1	L2	L3
CP-340	340	260	1 x 170
CP-510	510	430	4 x 85
CP-680	680	600	6 x 85

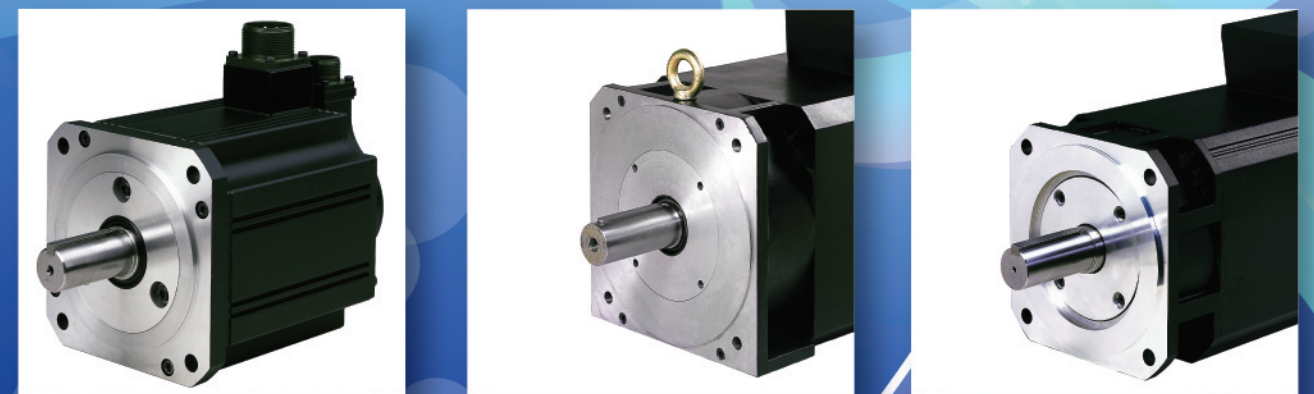
技術資料 Technical Data	單位 Unit	
輸入電壓 Input voltage	Vdc	0 ~ 850
最大電量 Max. power	Q	1.7
機構尺寸 Dimension	mm	85 x 333 x 255

# Servo Motor Class



# AC Servo Motors

伺服馬達



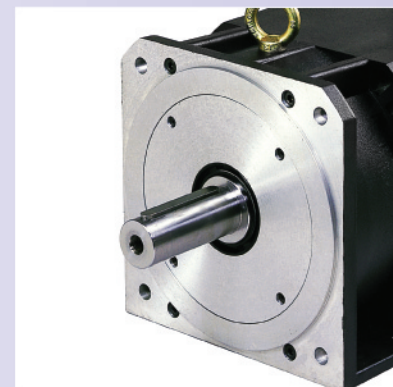
▼ 伺服同步馬達  
SS series



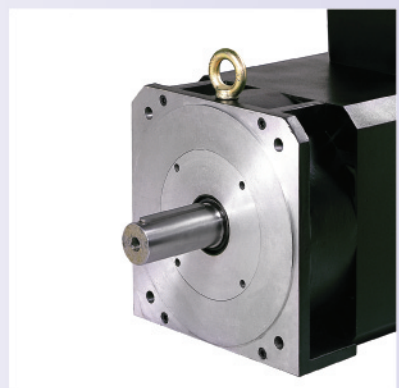
◀ 伺服同步馬達  
SS series



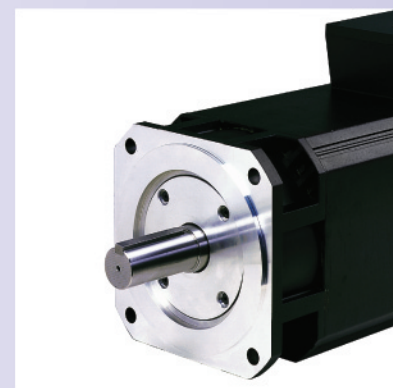
▶ 伺服異步馬達  
SA series



◀ 伺服同步馬達  
SS series



▶ 伺服異步馬達  
SA series



▲ 伺服主軸馬達  
SM series

## 伺服馬達編碼

舉例 ex : SS-03-01-8-RBF-3000-C

		SS - 03 - 01 - 8 - RBF - 3000 - C					
同步馬達	Servo Synchronous Motor	SS	03				
異步馬達	Servo Asynchronous Motor	SA	04				
主軸馬達	Servo Main Spindle Motor	SM	07				
			09				
馬達框號	單位 : mm Edge Dimensions of Motor in mm		10				
			13				
			18				
馬達轉矩	Motor torque 單位 : Nm						
馬達極數	Motor poles						
回授元件	Feedback Device						
煞車	Brake						R
風扇	Fan						B
							F
額定轉速	Nominal speed 單位 : rpm						
接頭類型	Connector Type						
							C
							M
							S
							B

### 標準定義 Definition

回授元件 Encoder	代號 Code
Single-turn absolute value encoder with SinCos signals, Hiperface	S
Multi-turn absolute value encoder with SinCos signals, Hiperface	M
Incremental encoder, Pulses	P
Incremental encoder, SinCos	W
Resolver	R
None	0 (Zero)
Customer Design	C
煞車 Brake	代號 Code
with Brake	B
None	0 (Zero)
風扇 Fan	代號 Code
with Fan	F
None	0 (Zero)
接頭類型 Connector Type	代號 Code
凸型接頭 CV	C
軍規接頭 MS	M
歐規接頭 SFMB	S
線盒 BOX	B

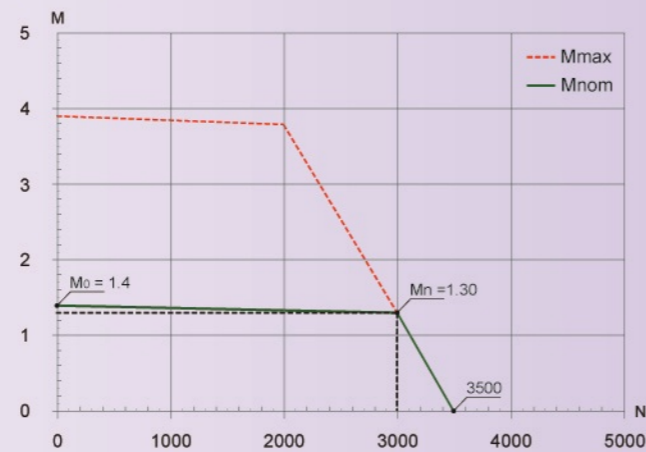
伺服馬達類型 | SS03

特性曲線說明：

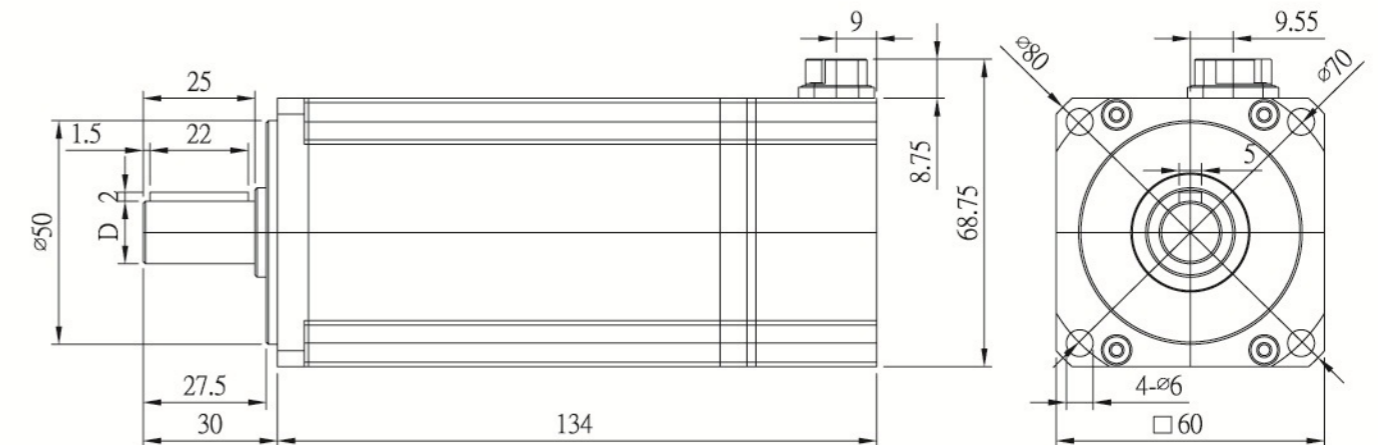
特性曲線圖裡，其上方的特性曲線 ( $M_{max}$ ) 表示在相同的轉速下，可能產生的最大轉矩。  
而下方的特性曲線 ( $M_{nom}$ ) 表示為允許溫度內的連續轉矩。



SS03 - 01



In the figure,  $M_{max}$  means under the same speed, the motor's biggest torque.  
 $M_{nom}$  means under the permitted temperature, the motor's serial torque.



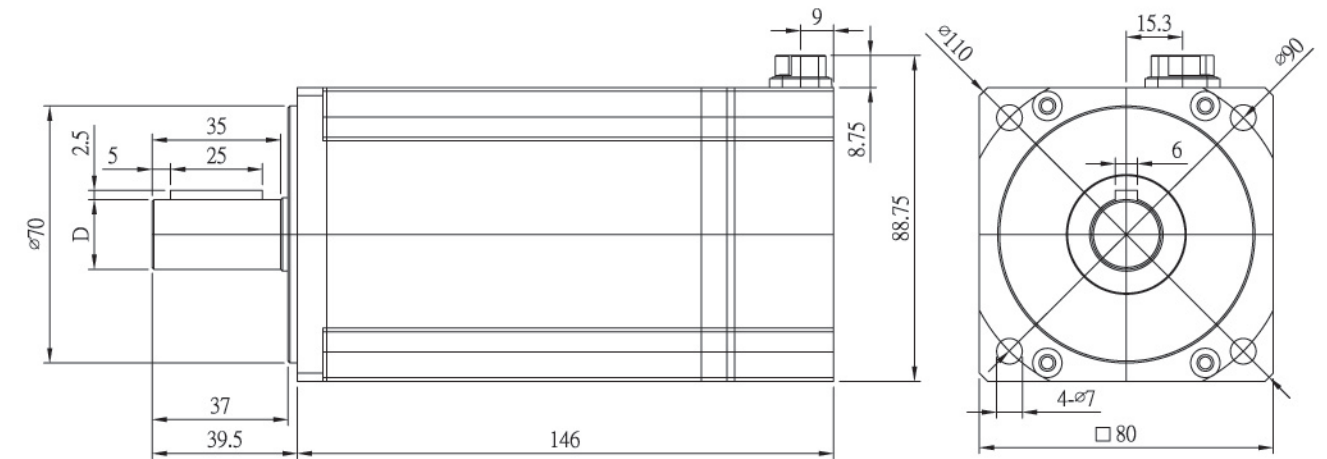
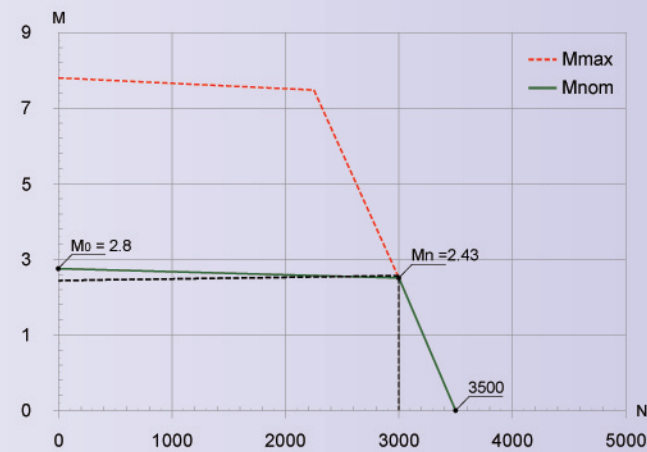
技術資料 Technical Data	代號 Code	單位 Unit	SS03-01-6
額定轉速 nominal speed	$N_n$	rpm	3000
額定功率 nominal power	$P_n$	kW	0.4
額定轉矩 nominal torque	$M_n$	Nm	1.30
額定電壓 nominal voltage	$V_n$	V	190
額定電流 nominal current	$I_n$	Amp	1.55
最高轉速 max. speed	$N_{max}$	rpm	3500
零速轉矩 zero speed torque	$M_0$	Nm	1.40
電壓常數 voltage constant	$K_E$	V/krpm	56.70
轉矩常數 torque constant	$K_T$	Nm/Amp	0.63
線圈電阻 terminal motor resistance	$R_{2ph}$	ohm	15.2
線圈電感 terminal motor inductance	$L_{2ph}$	mH	41
轉動慣量 rotor inertia	J	kg·m <sup>2</sup>	0.62E-04

技術資料 Technical Data	代號 Code	單位 Unit	SS03-01-6
回授元件 feedback device	-	-	Resolver
環境溫度 ambient temperature	-	°C	0 ~ 40
絕緣等級 insulative class	-	-	H
環境溼度 humidity	-	%	< 90
馬達尺寸圖 Dimension	代號 Code	單位 Unit	SS03-01-6
出力軸尺寸 shaft	D	mm	14 <sup>+0</sup> <sub>-0.011</sub> (h6)

伺服馬達類型 | SS04

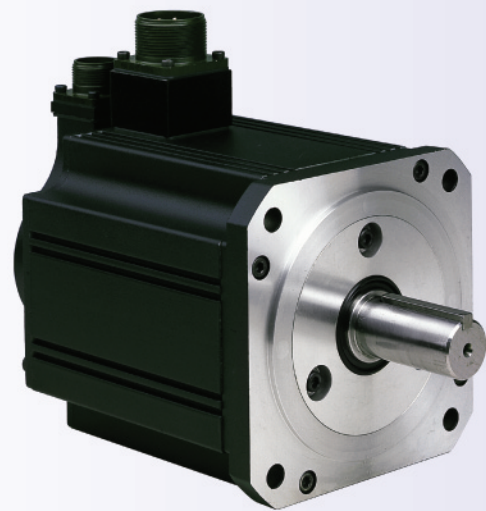


SS04 - 02

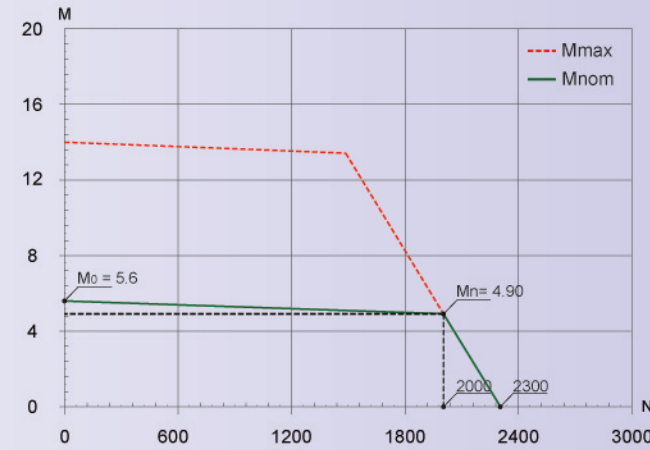


技術資料 Technical Data	代號 Code	單位 Unit	SS04-02-8
額定轉速 nominal speed	$N_n$	rpm	3000
額定功率 nominal power	$P_n$	kW	0.75
額定轉矩 nominal torque	$M_n$	Nm	2.43
額定電壓 nominal voltage	$V_n$	V	190
額定電流 nominal current	$I_n$	Amp	3.32
最高轉速 max. speed	$N_{max}$	rpm	3500
零速轉矩 zero speed torque	$M_0$	Nm	2.80
電壓常數 voltage constant	$K_E$	V/krpm	56.70
轉矩常數 torque constant	$K_T$	Nm/Amp	0.73
線圈電阻 terminal motor resistance	$R_{2ph}$	ohm	2.94
線圈電感 terminal motor inductance	$L_{2ph}$	mH	19.92
轉動慣量 rotor inertia	$J$	kg·m <sup>2</sup>	1.55E-04
技術資料 Technical Data	代號 Code	單位 Unit	SS04-02-8
回授元件 feedback device	-	-	Resolver
環境溫度 ambient temperature	-	°C	0 ~ 40
絕緣等級 insulative class	-	-	H
環境溼度 humidity	-	%	< 90
馬達尺寸圖 Dimension	代號 Code	單位 Unit	SS04-02-8
出力軸尺寸 shaft	D	mm	19 <sup>+0</sup> <sub>-0.013</sub> (h6)

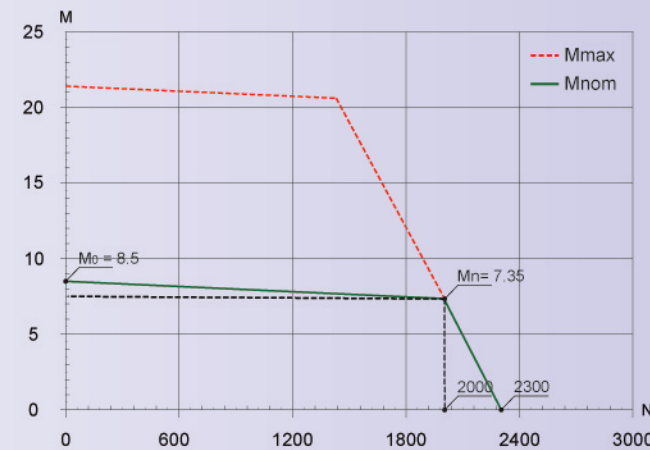
## 伺服馬達類型 | SS07



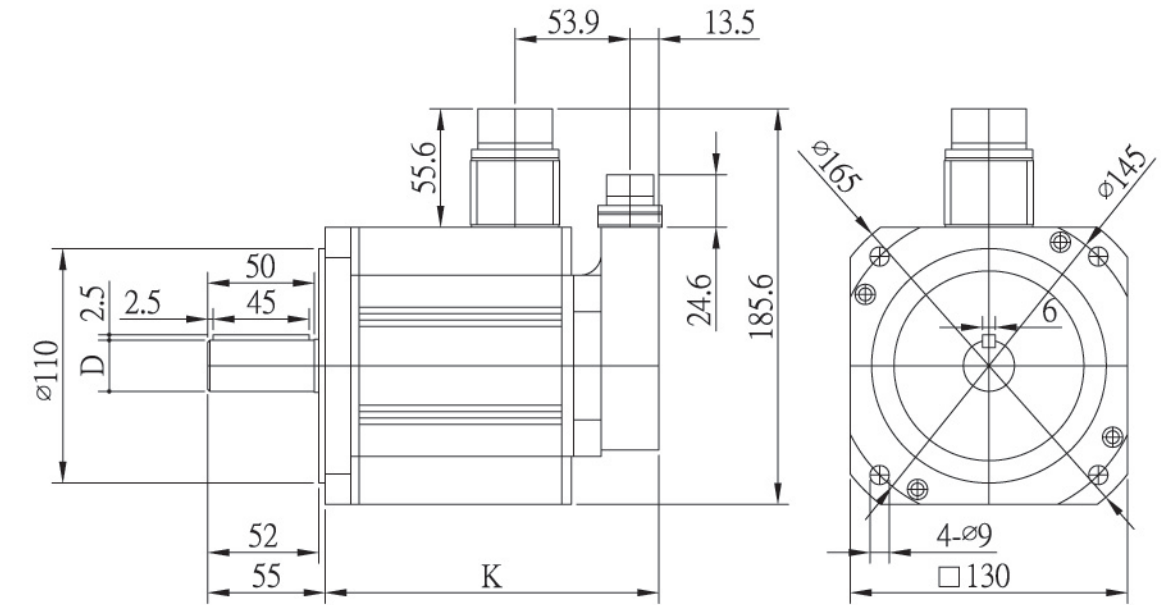
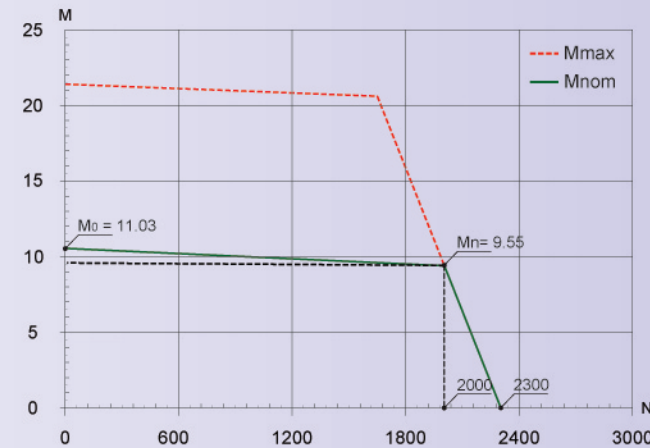
SS07 - 05



SS07 - 07

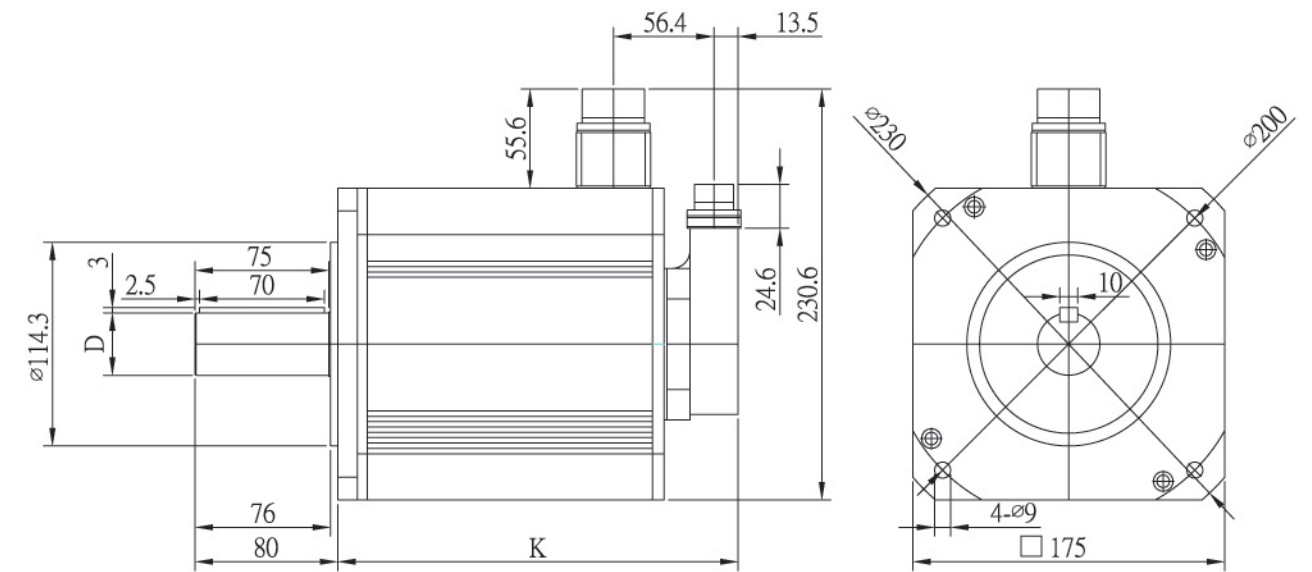
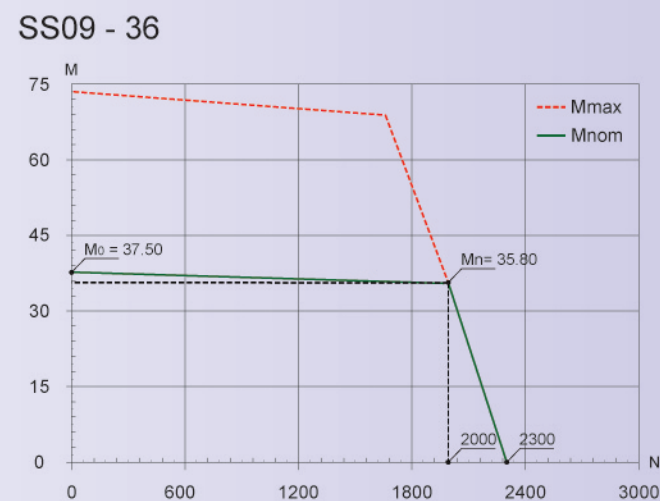
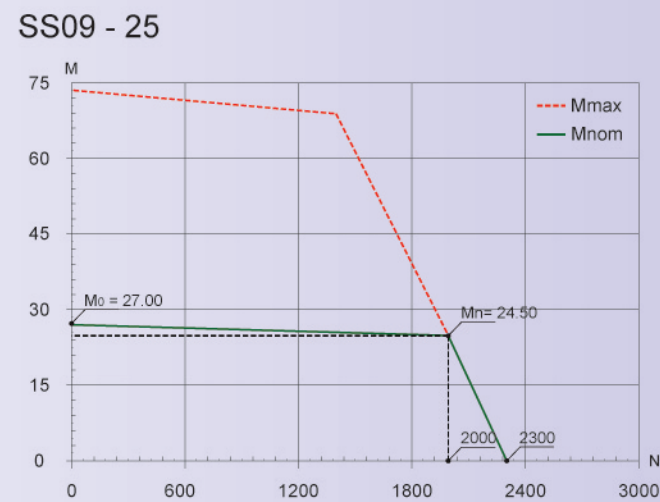
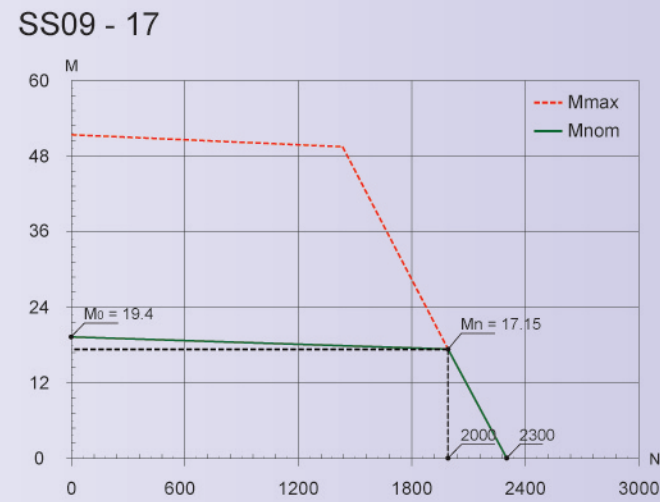


SS07 - 10



技術資料 Technical Data	代號 Code	單位 Unit	SS07-05-8	SS07-07-8	SS07-10-8
額定轉速 nominal speed	$N_n$	rpm	2000	2000	2000
額定功率 nominal power	$P_n$	kW	1.0	1.5	2.0
額定轉矩 nominal torque	$M_n$	Nm	4.90	7.35	9.55
額定電壓 nominal voltage	$V_n$	V	190	190	190
額定電流 nominal current	$I_n$	Amp	3.81	5.30	7.48
最高轉速 max. speed	$N_{max}$	rpm	2300	2300	2300
零速轉矩 zero speed torque	$M_0$	Nm	5.60	8.50	11.03
電壓常數 voltage constant	$K_E$	V/krpm	85	85	85
轉矩常數 torque constant	$K_T$	Nm/Amp	1.29	1.39	1.28
線圈電阻 terminal motor resistance	$R_{2ph}$	ohm	2.70	1.83	1.12
線圈電感 terminal motor inductance	$L_{2ph}$	mH	24.06	17.12	10.45
轉動慣量 rotor inertia	$J$	kg·m <sup>2</sup>	13.6E-04	20.28E-04	29.44E-04
技術資料 Technical Data	代號 Code	單位 Unit	SS07-05-8	SS07-07-8	SS07-10-8
回授元件 feedback device	-	-	Resolver	Resolver	Resolver
環境溫度 ambient temperature	-	°C	0 ~ 40	0 ~ 40	0 ~ 40
絕緣等級 insulative class	-	-	H	H	H
環境溼度 humidity	-	%	< 90	< 90	< 90
馬達尺寸圖 Dimension	代號 Code	單位 Unit	SS07-05-8	SS07-07-8	SS07-10-8
馬達長度 motor length	K	mm	156.5	181.5	216.5
出力軸尺寸 shaft	D	mm	24 <sup>+0</sup> <sub>-0.013</sub> (h6)	24 <sup>+0</sup> <sub>-0.013</sub> (h6)	24 <sup>+0</sup> <sub>-0.013</sub> (h6)

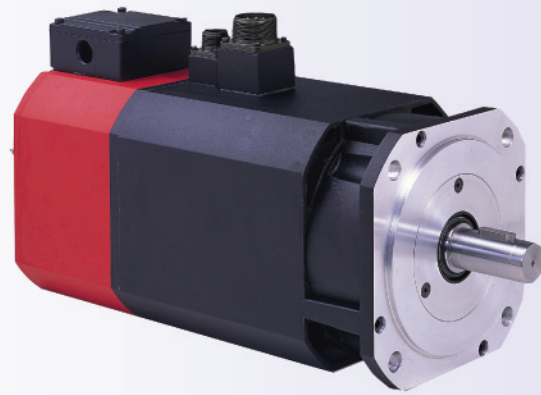
伺服馬達類型 | SS09



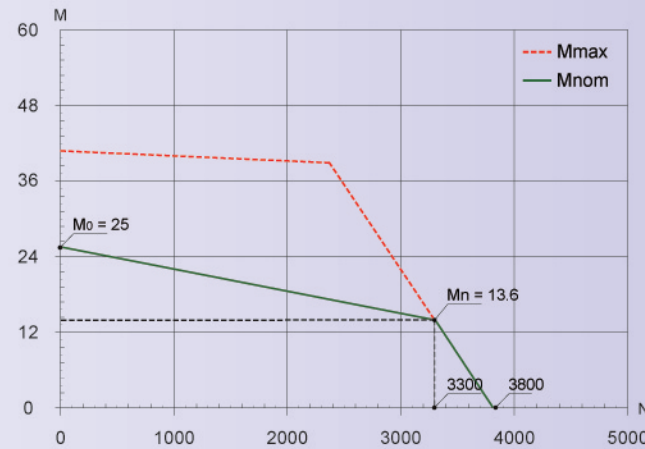
技術資料 Technical data		代號 Code	單位 Unit	SS09-17-8	SS09-25-8	SS09-36-8
額定轉速 nominal speed	$N_n$	rpm	2000	2000	2000	
額定功率 nominal power	$P_n$	kW	3.5	5.0	7.5	
額定轉矩 nominal torque	$M_n$	Nm	17.15	24.50	35.8	
額定電壓 nominal voltage	$V_n$	V	190/350	190/350	350	
額定電流 nominal current	$I_n$	Amp	13.00/7.20	18.10/10.70	13.3	
最高轉速 max. speed	$N_{max}$	rpm	2300	2300	2300	
零速轉矩 zero speed torque	$M_0$	Nm	19.40	27.00	37.50	
電壓常數 voltage constant	$K_E$	V/Krpm	90/170	90/170	170	
轉矩常數 torque constant	$K_T$	Nm/Amp	1.28/2.38	1.32/2.29	2.69	
線圈電阻 terminal motor resistance	$R_{2ph}$	ohm	0.46/1.83	0.33/1.17	0.63	
線圈電感 terminal motor inductance	$L_{2ph}$	mH	4.39/17.59	3.47/11.99	6.87	
轉動慣量 rotor inertia	J	kg·m <sup>2</sup>	70.40E-04	87.70E-04	174.67E-04	
技術資料 Technical data		代號 Code	單位 Unit	SS09-17-8	SS09-25-8	SS09-36-8
回授元件 feedback device	-	-	Resolver	Resolver	Resolver	
環境溫度 ambient temperature	-	°C	0 ~ 40	0 ~ 40	0 ~ 40	
絕緣等級 insulative class	-	-	H	H	H	
環境溼度 humidity	-	%	< 90	< 90	< 90	
馬達尺寸圖 Dimension		代號 Code	單位 Unit	SS09-17-8	SS09-25-8	SS09-36-8
馬達長度 motor length	K	mm	224.5	244.5	344.5	
出力軸尺寸 shaft	D	mm	35 <sup>+0</sup> <sub>-0.016</sub> (h6)	35 <sup>+0</sup> <sub>-0.016</sub> (h6)	35 <sup>+0</sup> <sub>-0.016</sub> (h6)	

### 伺服馬達類型 | SS09

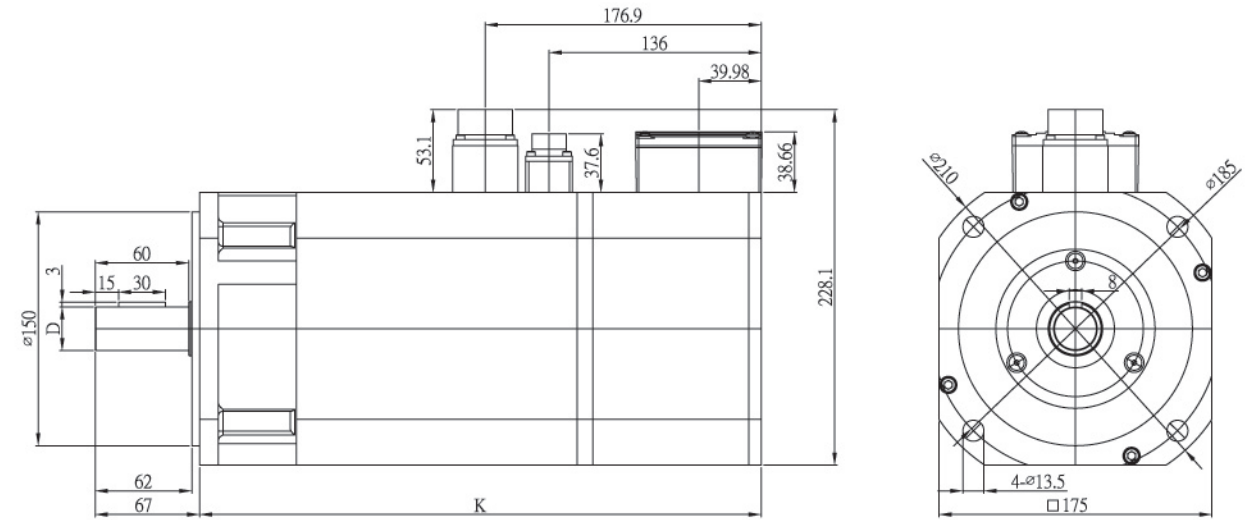
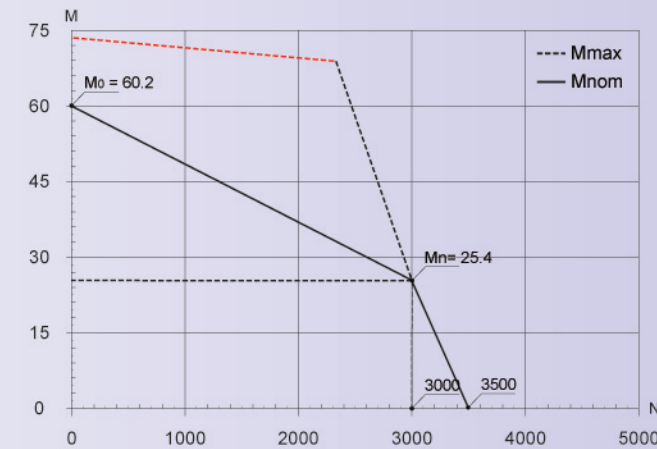
#### High Speed Synchronous Motor



SS09 - 14



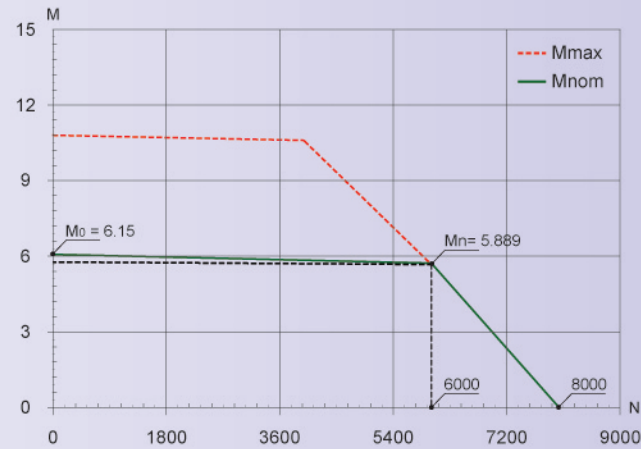
SS09 - 26



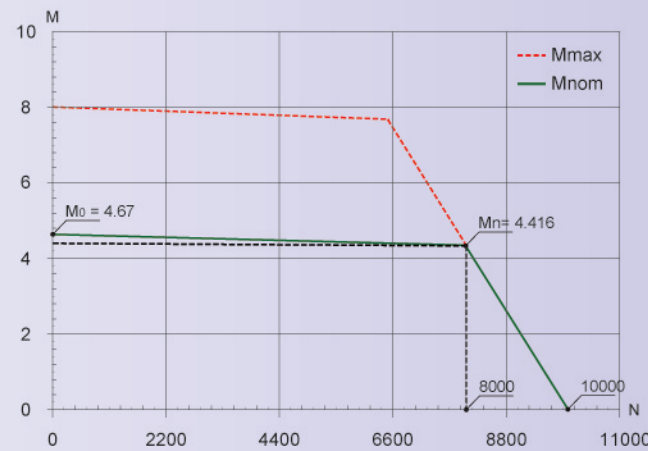
技術資料 Technical data	代號 Code	單位 Unit	SS09-14-8	SS09-26-8
額定轉速 nominal speed	$N_n$	rpm	3300	3000
額定功率 nominal power	$P_n$	kW	4.7	8
額定轉矩 nominal torque	$M_n$	Nm	13.6	25.4
額定電壓 nominal voltage	$V_n$	V	350	350
額定電流 nominal current	$I_n$	Amp	10.6	15.70
最高轉速 max. speed	$N_{max}$	rpm	3800	3500
零速轉矩 zero speed torque	$M_0$	Nm	25	60.2
電壓常數 voltage constant	$K_E$	V/Krpm	107	117
轉矩常數 torque constant	$K_T$	Nm/Amp	2.38	1.64
線圈電阻 terminal motor resistance	$R_{2ph}$	ohm	0.61	0.55
線圈電感 terminal motor inductance	$L_{2ph}$	mH	6.08	5.75
轉動慣量 rotor inertia	J	kg·m <sup>2</sup>	73.24E-04	90.04E-04
強制風扇 force fan	-	Vac	-	3x220 or 3x380
技術資料 Technical data	代號 Code	單位 Unit	SS09-14-8	SS09-26-8
回授元件 feedback device	-	-	Resolver	Resolver
環境溫度 ambient temperature	-	°C	0 ~ 40	0 ~ 40
絕緣等級 insulative class	-	-	H	H
環境溼度 humidity	-	%	< 90	< 90
馬達尺寸圖 Dimension	代號 Code	單位 Unit	SS09-14-8	SS09-26-8
馬達長度 motor length	K	mm	252	360
出力軸尺寸 shaft	D	mm	28 <sup>+0</sup> <sub>-0.013</sub> (h6)	28 <sup>+0</sup> <sub>-0.013</sub> (h6)

伺服馬達類型 | SS09  
High Speed Synchronous Motor

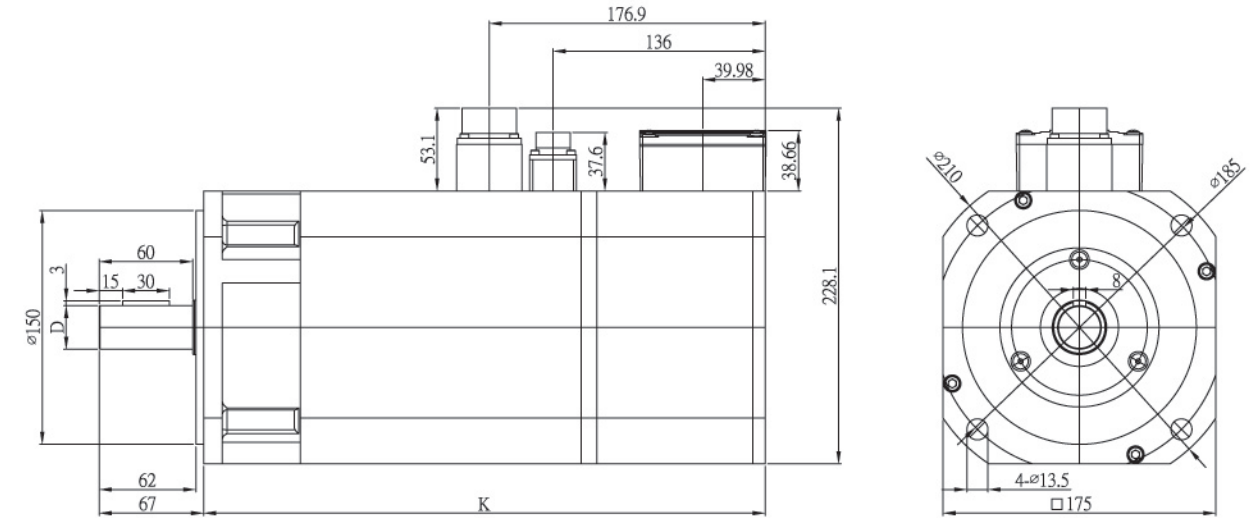
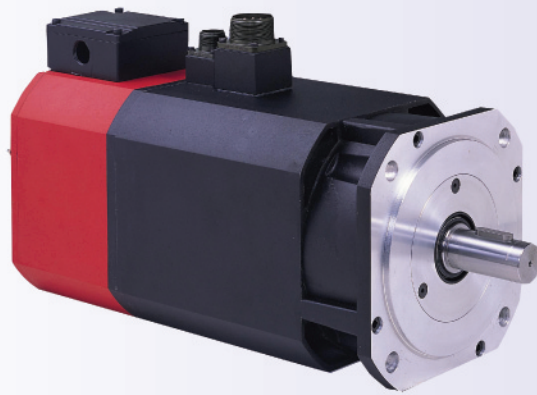
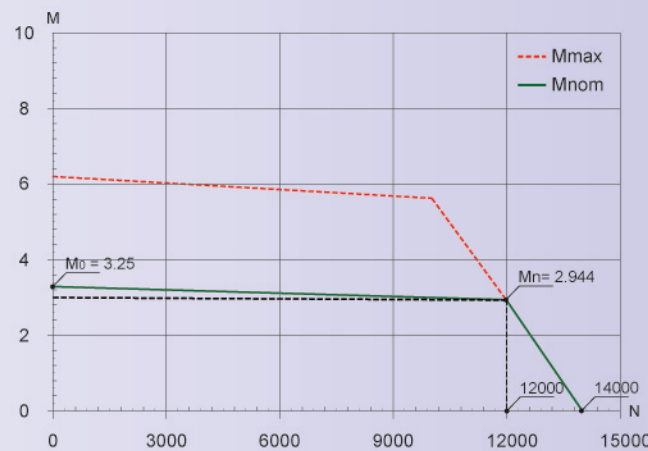
SS09 - 06 - 4 - R0F - 6000



SS09 - 04 - 4 - R0F - 8000



SS09 - 03 - 4 - R0F - 12000



技術資料 Technical data 代號 Code 單位 Unit SS09-06-4 SS09-04-4 SS09-03-4

額定轉速	nominal speed	$N_n$	rpm	6000	8000	12000
額定功率	nominal power	$P_n$	kW	3.7	3.7	3.7
額定轉矩	nominal torque	$M_n$	Nm	5.89	4.42	2.94
額定電壓	nominal voltage	$V_n$	V	350	350	350
額定電流	nominal current	$I_n$	Amp	7.3	7.4	7.8
最高轉速	max. speed	$N_{max}$	rpm	8000	10000	14000
零速轉矩	zero speed torque	$M_0$	Nm	6.15	4.67	3.25
電壓常數	voltage constant	$K_E$	V/krpm	56.66	42.50	28.33
轉矩常數	torque constant	$K_T$	Nm/Amp	0.81	0.60	0.38
線圈電阻	terminal motor resistance	$R_{2ph}$	ohm	0.65	0.59	0.47
線圈電感	terminal motor inductance	$L_{2ph}$	mH	9.42	7.99	6.17
轉動慣量	rotor inertia	J	kg·m <sup>2</sup>	65.16E-04	53.63E-04	41.10E-04
強制風扇	force fan	-	Vac	3x220 or 3x380		

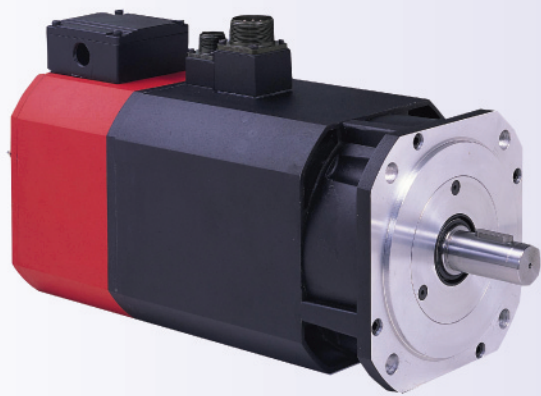
技術資料 Technical data 代號 Code 單位 Unit SS09-06-4 SS09-04-4 SS09-03-4

回授元件	feedback device	-	-	Resolver	Resolver	Resolver
環境溫度	ambient temperature	-	°C	0 ~ 40	0 ~ 40	0 ~ 40
絕緣等級	insulative class	-	-	H	H	H
環境溼度	humidity	-	%	< 90	< 90	< 90

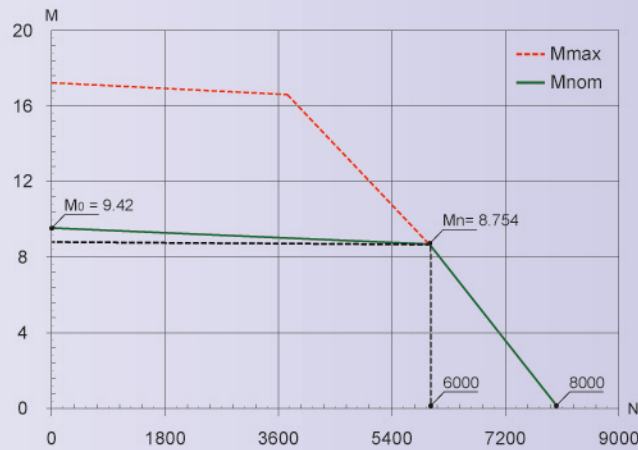
馬達尺寸圖 Dimension 代號 Code 單位 Unit SS09-06-4 SS09-04-4 SS09-03-4

馬達長度	motor length	K	mm	290	305	320
出力軸尺寸	shaft	D	mm	28 <sup>+0</sup> <sub>-0.013</sub> (h6)	28 <sup>+0</sup> <sub>-0.013</sub> (h6)	28 <sup>+0</sup> <sub>-0.013</sub> (h6)

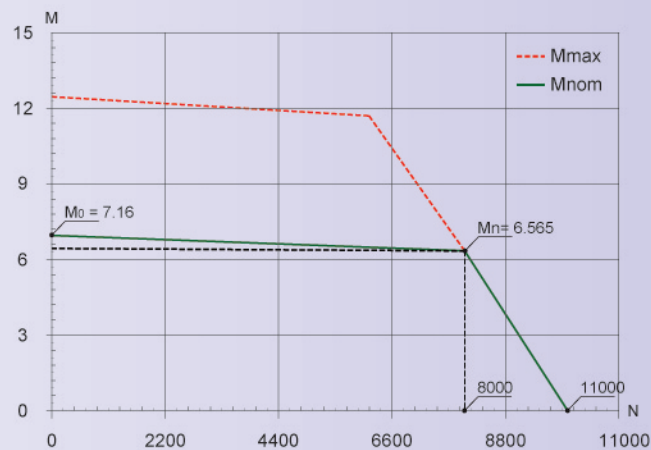
伺服馬達類型 | SS09  
High Speed Synchronous Motor



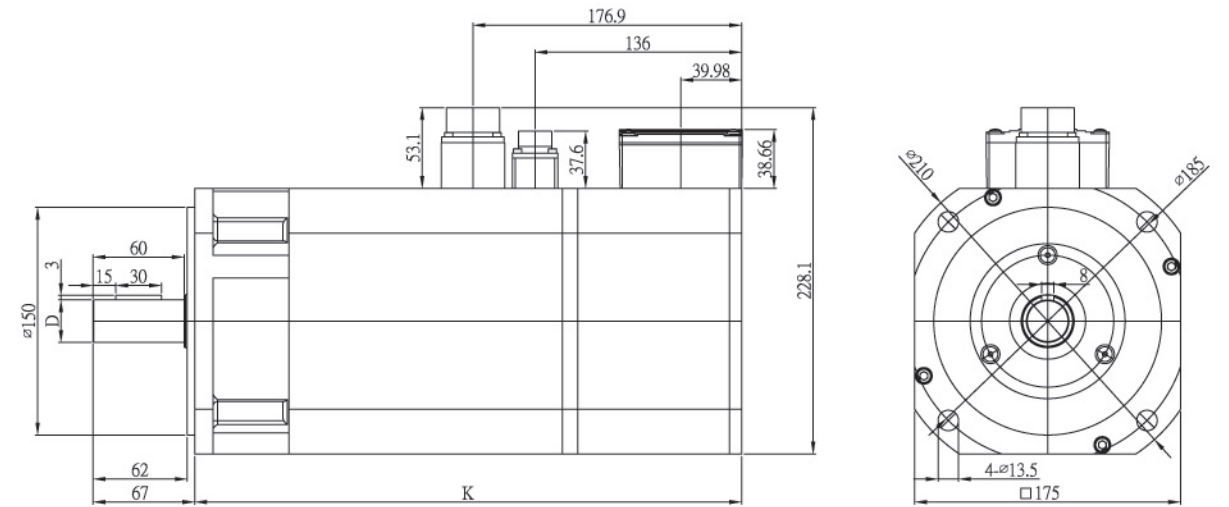
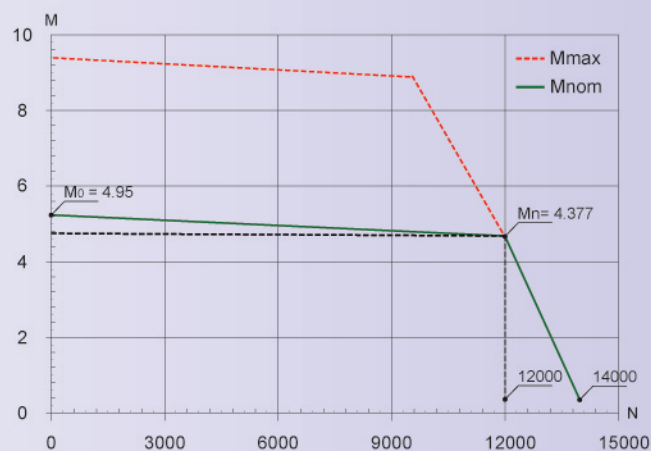
SS09 - 09 - 4 - R0F - 6000



SS09 - 07 - 4 - R0F - 8000



SS09 - 04 - 4 - R0F - 12000



技術資料 Technical data 代號 Code 單位 Unit SS09-09-4 SS09-07-4 SS09-04-4

額定轉速	nominal speed	$N_n$	rpm	6000	8000	12000
額定功率	nominal power	$P_n$	kW	5.5	5.5	5.5
額定轉矩	nominal torque	$M_n$	Nm	8.75	6.57	4.38
額定電壓	nominal voltage	$V_n$	V	350	350	350
額定電流	nominal current	$I_n$	Amp	10.9	11.0	11.2
最高轉速	max. speed	$N_{max}$	rpm	8000	10000	14000
零速轉矩	zero speed torque	$M_0$	Nm	9.42	7.16	4.95
電壓常數	voltage constant	$K_E$	V/krpm	56.66	42.50	28.33
轉矩常數	torque constant	$K_T$	Nm/Amp	0.80	0.60	0.39
線圈電阻	terminal motor resistance	$R_{2ph}$	ohm	0.38	0.34	0.30
線圈電感	terminal motor inductance	$L_{2ph}$	mH	6.24	5.19	4.14
轉動慣量	rotor inertia	J	kg·m <sup>2</sup>	80.54E-04	65.16E-04	49.79E-04
強制風扇	force fan	-	Vac	3x220 or 3x380		

技術資料 Technical data 代號 Code 單位 Unit SS09-09-4 SS09-07-4 SS09-04-4

回授元件	feedback device	-	-	Resolver	Resolver	Resolver
環境溫度	ambient temperature	-	°C	0 ~ 40	0 ~ 40	0 ~ 40
絕緣等級	insulative class	-	-	H	H	H
環境溼度	humidity	-	%	< 90	< 90	< 90

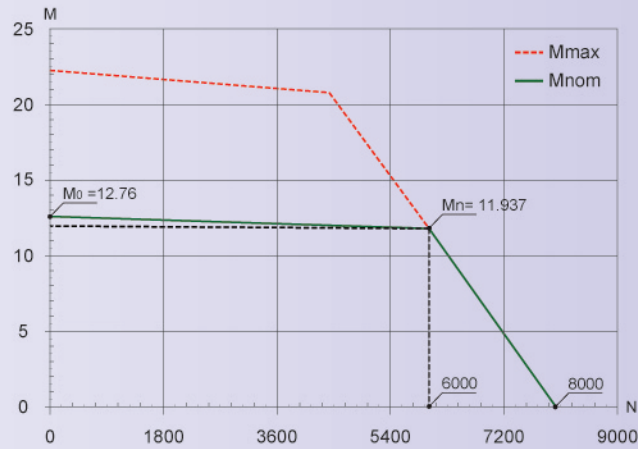
馬達尺寸圖 Dimension 代號 Code 單位 Unit SS09-09-4 SS09-07-4 SS09-04-4

馬達長度	motor length	K	mm	300	320	340
出力軸尺寸	shaft	D	mm	28 <sup>+0</sup> <sub>-0.013</sub> (h6)	28 <sup>+0</sup> <sub>-0.013</sub> (h6)	28 <sup>+0</sup> <sub>-0.013</sub> (h6)

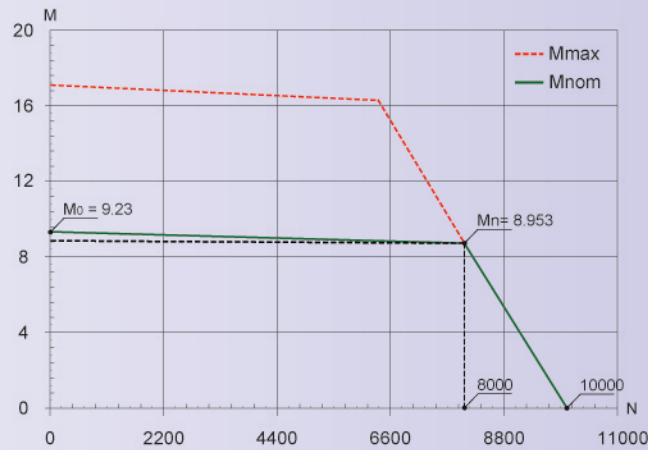
### 伺服馬達類型 | SS09

#### High Speed Synchronous Motor

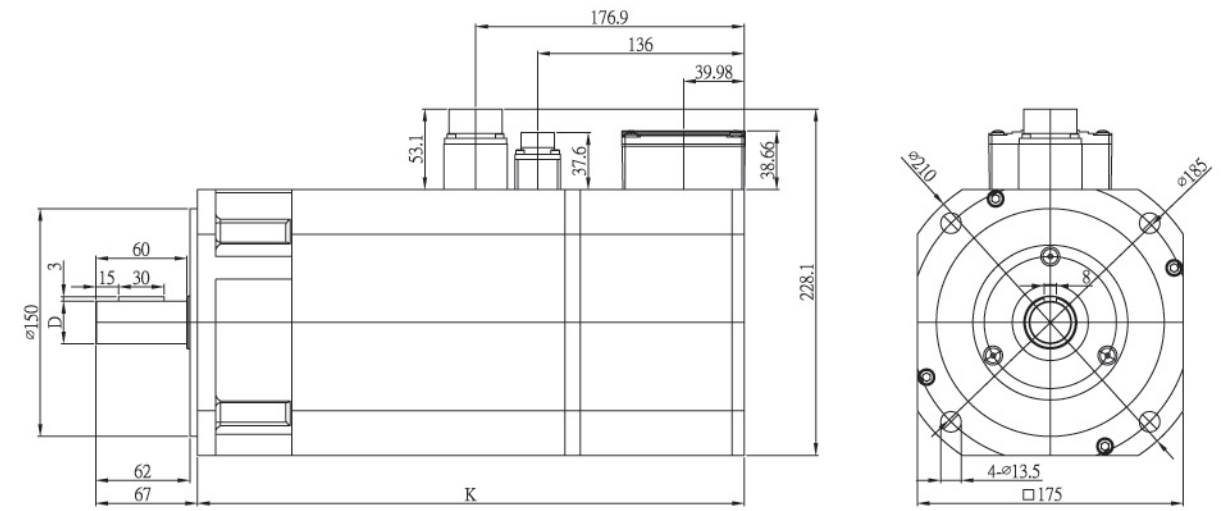
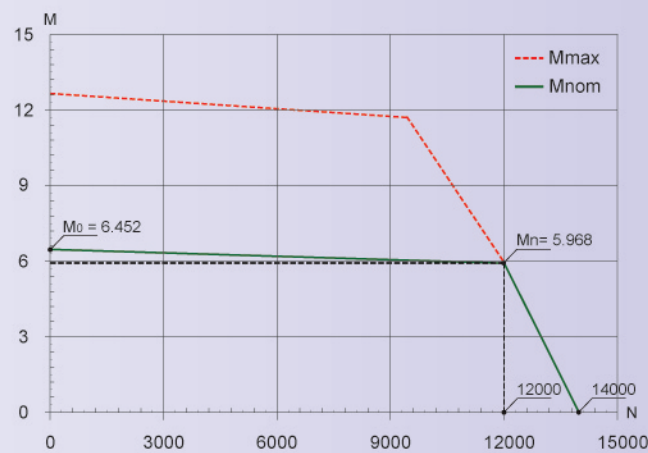
SS09 - 12 - 4 - R0F - 6000



SS09 - 09 - 4 - R0F - 8000



SS09 - 06 - 4 - R0F - 12000



#### 技術資料 Technical data 代號 Code 單位 Unit

技術資料 Technical data	代號 Code	單位 Unit	SS09-12-4	SS09-09-4	SS09-06-4
額定轉速 nominal speed	$N_n$	rpm	6000	8000	12000
額定功率 nominal power	$P_n$	kW	7.5	7.5	7.5
額定轉矩 nominal torque	$M_n$	Nm	11.94	8.95	5.97
額定電壓 nominal voltage	$V_n$	V	350	350	350
額定電流 nominal current	$I_n$	Amp	14.6	14.6	14.9
最高轉速 max. speed	$N_{max}$	rpm	8000	10000	14000
零速轉矩 zero speed torque	$M_0$	Nm	12.76	9.23	6.45
電壓常數 voltage constant	$K_E$	V/krpm	56.66	42.50	28.33
轉矩常數 torque constant	$K_T$	Nm/Amp	0.82	0.60	0.40
線圈電阻 terminal motor resistance	$R_{2ph}$	ohm	0.28	0.22	0.16
線圈電感 terminal motor inductance	$L_{2ph}$	mH	4.76	3.69	2.48
轉動慣量 rotor inertia	J	kg·m <sup>2</sup>	95.92E-04	80.54E-04	65.16E-04
強制風扇 force fan	-	Vac	3 x 220 or 3 x 380		

#### 技術資料 Technical data 代號 Code 單位 Unit

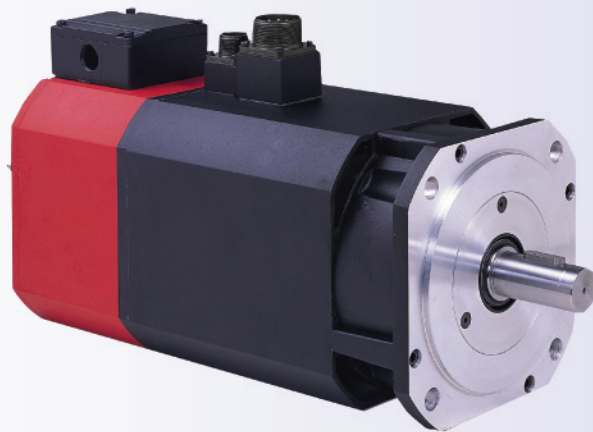
技術資料 Technical data	代號 Code	單位 Unit	SS09-12-4	SS09-09-4	SS09-06-4
回授元件 feedback device	-	-	Resolver	Resolver	Resolver
環境溫度 ambient temperature	-	°C	0 ~ 40	0 ~ 40	0 ~ 40
絕緣等級 insulative class	-	-	H	H	H
環境溼度 humidity	-	%	< 90	< 90	< 90

#### 馬達尺寸圖 Dimension 代號 Code 單位 Unit

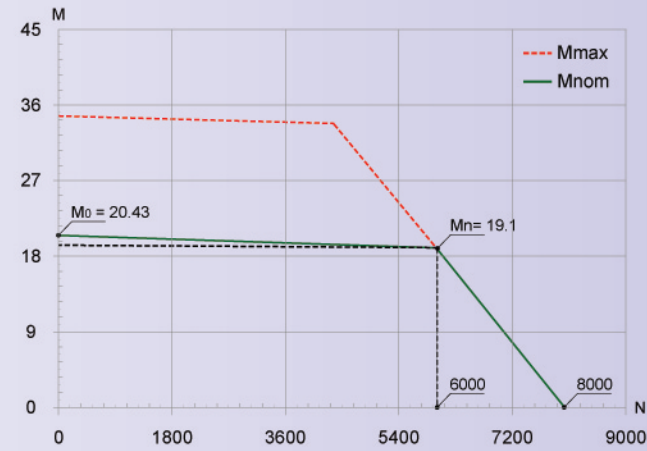
馬達尺寸圖 Dimension	代號 Code	單位 Unit	SS09-12-4	SS09-09-4	SS09-06-4
馬達長度 motor length	K	mm	320	340	360
出力軸尺寸 shaft	D	mm	28 <sup>+0</sup> <sub>-0.013</sub> (h6)	28 <sup>+0</sup> <sub>-0.013</sub> (h6)	28 <sup>+0</sup> <sub>-0.013</sub> (h6)

## 伺服馬達類型 | SS09

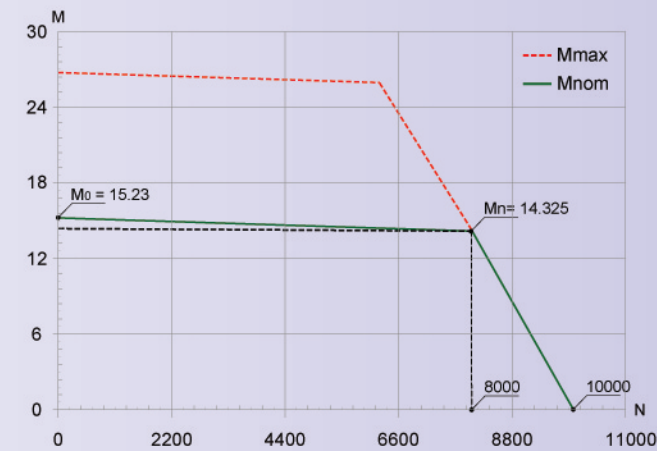
High Speed Synchronous Motor



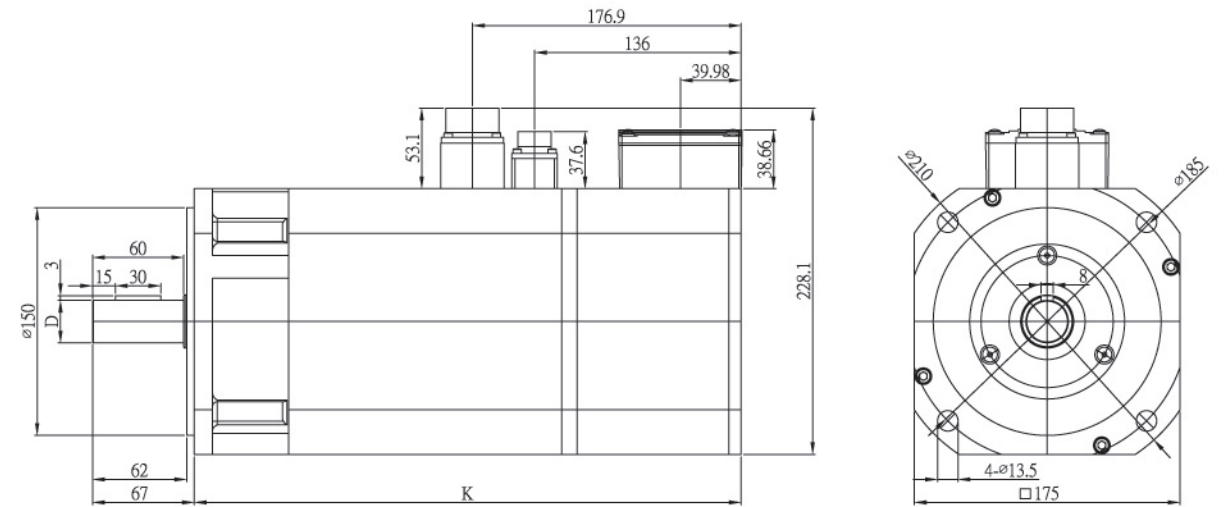
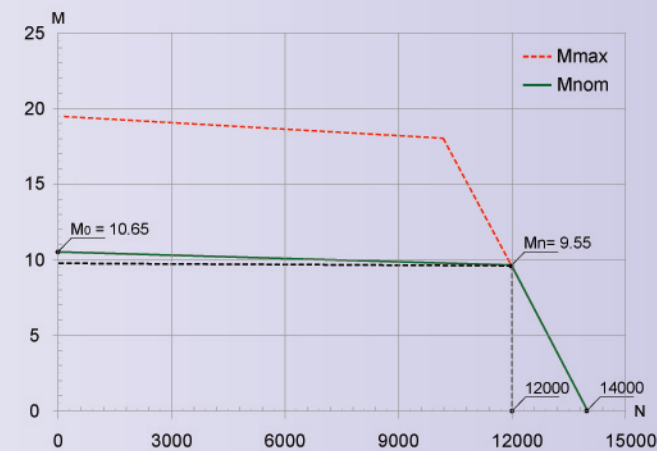
SS09 - 19 - 4 - R0F - 6000



SS09 - 14 - 4 - R0F - 8000



SS09 - 10 - 4 - R0F - 12000



技術資料 Technical data 代號 Code 單位 Unit SS09-19-4 SS09-14-4 SS09-10-4

額定轉速	nominal speed	$N_n$	rpm	6000	8000	12000
額定功率	nominal power	$P_n$	kW	12	12	12
額定轉矩	nominal torque	$M_n$	Nm	19.1	14.33	9.55
額定電壓	nominal voltage	$V_n$	V	350	350	350
額定電流	nominal current	$I_n$	Amp	23.8	23.1	23.8
最高轉速	max. speed	$N_{max}$	rpm	8000	10000	14000
零速轉矩	zero speed torque	$M_0$	Nm	20.43	15.23	10.65
電壓常數	voltage constant	$K_E$	V/krpm	56.66	42.50	28.33
轉矩常數	torque constant	$K_T$	Nm/Amp	0.80	0.62	0.40
線圈電阻	terminal motor resistance	$R_{2ph}$	ohm	0.19	0.16	0.11
線圈電感	terminal motor inductance	$L_{2ph}$	mH	3.56	2.76	1.89
轉動慣量	rotor inertia	J	kg·m <sup>2</sup>	111.29E-04	95.92E-04	72.85E-04
強制風扇	force fan	-	Vac	3x220 or 3x380		

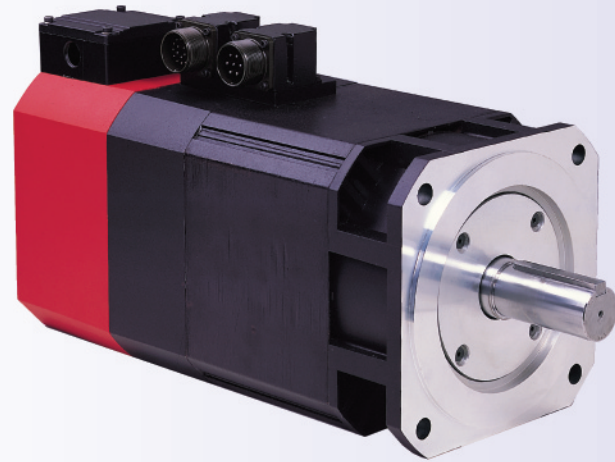
技術資料 Technical data 代號 Code 單位 Unit SS09-19-4 SS09-14-4 SS09-10-4

回授元件	feedback device	-	-	Resolver	Resolver	Resolver
環境溫度	ambient temperature	-	°C	0 ~ 40	0 ~ 40	0 ~ 40
絕緣等級	insulative class	-	-	H	H	H
環境溼度	humidity	-	%	< 90	< 90	< 90

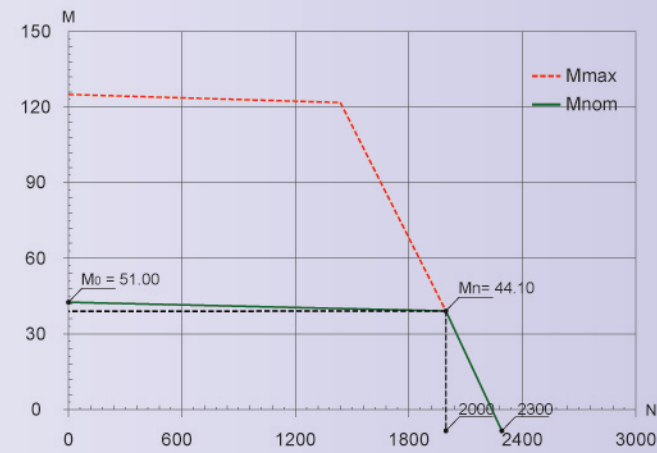
馬達尺寸圖 Dimension 代號 Code 單位 Unit SS09-19-4 SS09-14-4 SS09-10-4

馬達長度	motor length	K	mm	380	360	330
出力軸尺寸	shaft	D	mm	28 <sup>+0</sup> <sub>-0.013</sub> (h6)	28 <sup>+0</sup> <sub>-0.013</sub> (h6)	28 <sup>+0</sup> <sub>-0.013</sub> (h6)

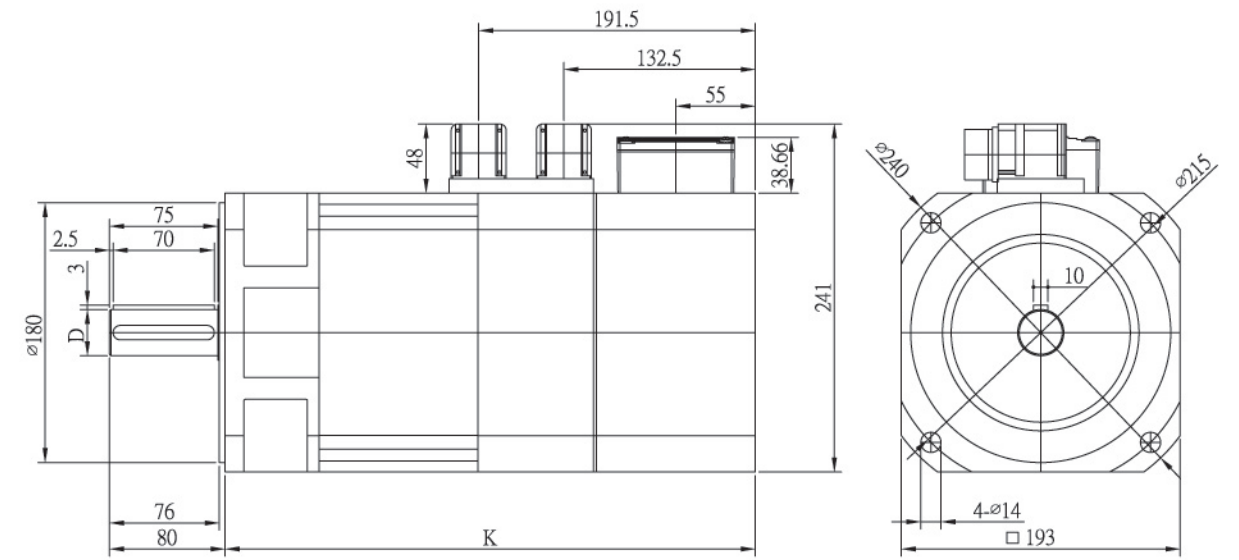
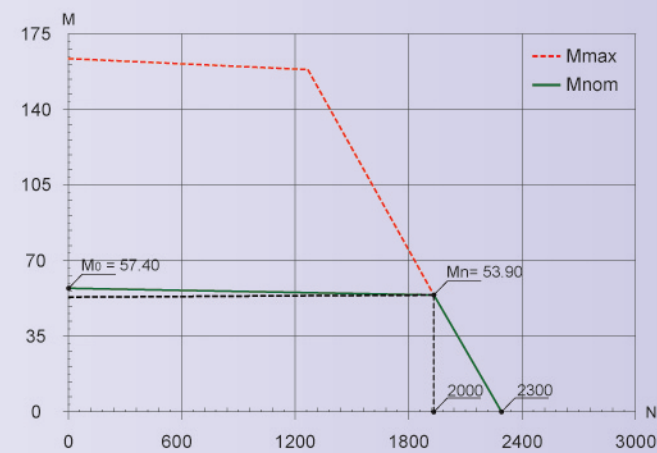
伺服馬達類型 | SS10



SS10 - 44

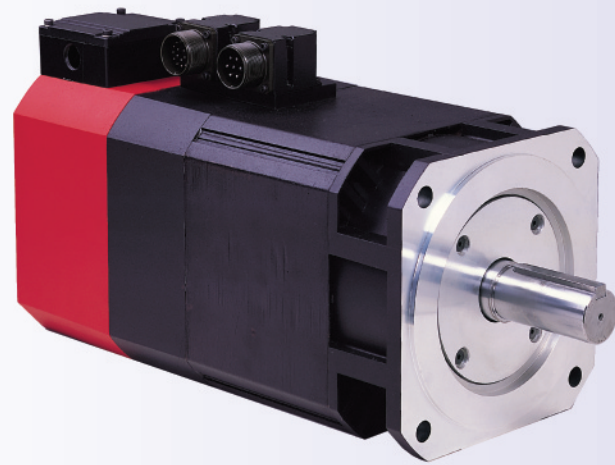


SS10 - 54

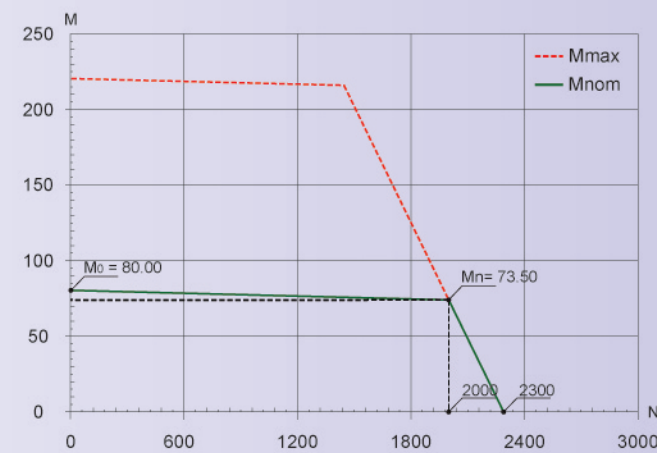


技術資料 Technical data	代號 Code	單位 Unit	SS10-44-8	SS10-54-8
額定轉速 nominal speed	$N_n$	rpm	2000	2000
額定功率 nominal power	$P_n$	kW	9	11
額定轉矩 nominal torque	$M_n$	Nm	44.1	53.9
額定電壓 nominal voltage	$V_n$	V	350	350
額定電流 nominal current	$I_n$	Amp	19.1	23
最高轉速 max. speed	$N_{max}$	rpm	2300	2300
零速轉矩 zero speed torque	$M_0$	Nm	51	57.4
電壓常數 voltage constant	$K_E$	V/krpm	170	170
轉矩常數 torque constant	$K_T$	Nm/Amp	2.31	2.34
線圈電阻 terminal motor resistance	$R_{2ph}$	ohm	0.67	0.43
線圈電感 terminal motor inductance	$L_{2ph}$	mH	7.45	5.00
轉動慣量 rotor inertia	J	kg·m <sup>2</sup>	163.7E-04	202.89E-04
強制風扇 force fan	-	Vac	3 x 220 or 3 x 380	
技術資料 Technical data	代號 Code	單位 Unit	SS10-44-8	SS10-54-8
回授元件 feedback device	-	-	Resolver	Resolver
環境溫度 ambient temperature	-	°C	0 ~ 40	0 ~ 40
絕緣等級 insulative class	-	-	H	H
環境溼度 humidity	-	%	< 90	< 90
馬達尺寸圖 Dimension	代號 Code	單位 Unit	SS10-44-8	SS10-54-8
馬達長度 motor length	K	mm	367	397
出力軸尺寸 shaft	D	mm	32 <sup>+0</sup> <sub>-0.016</sub> (h6)	32 <sup>+0</sup> <sub>-0.016</sub> (h6)

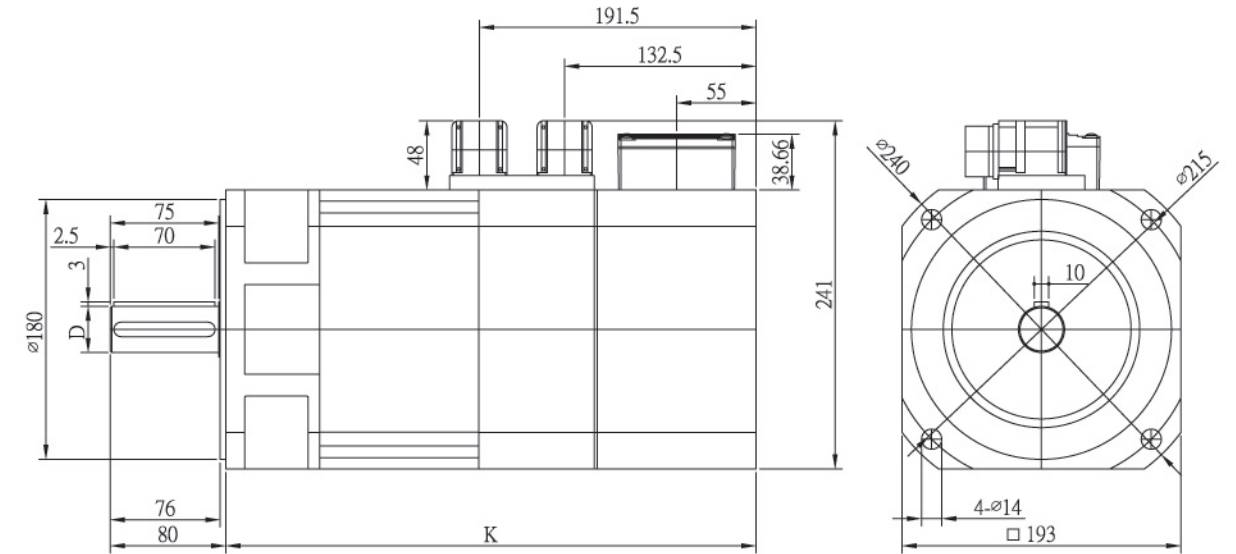
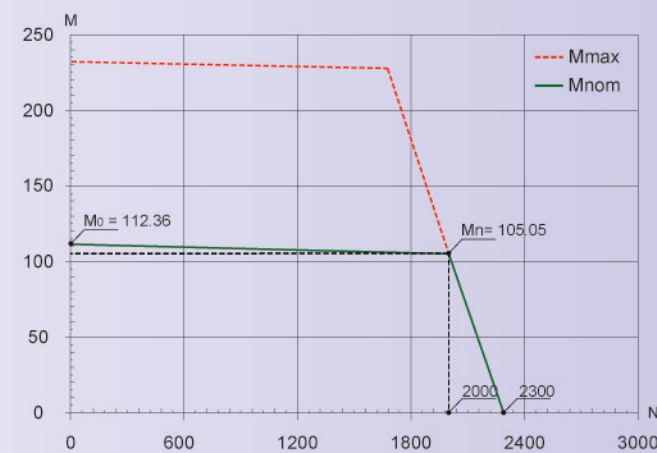
伺服馬達類型 | SS10



SS10 - 74



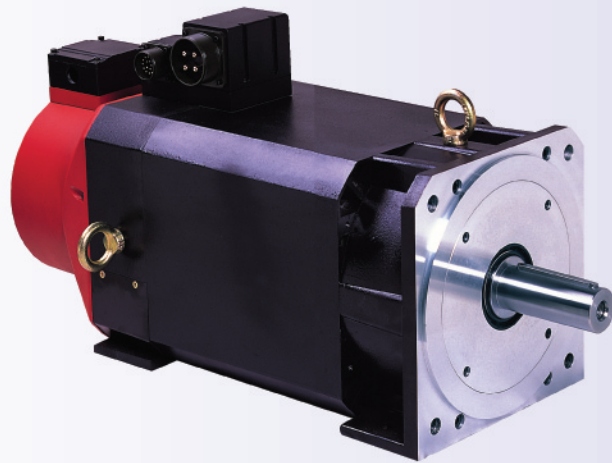
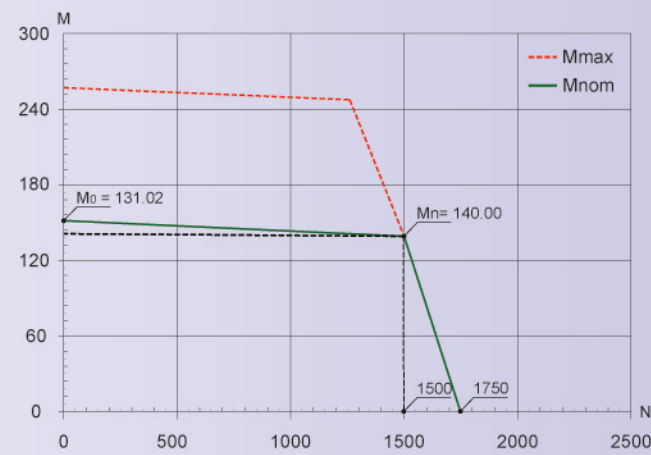
SS10 - 105



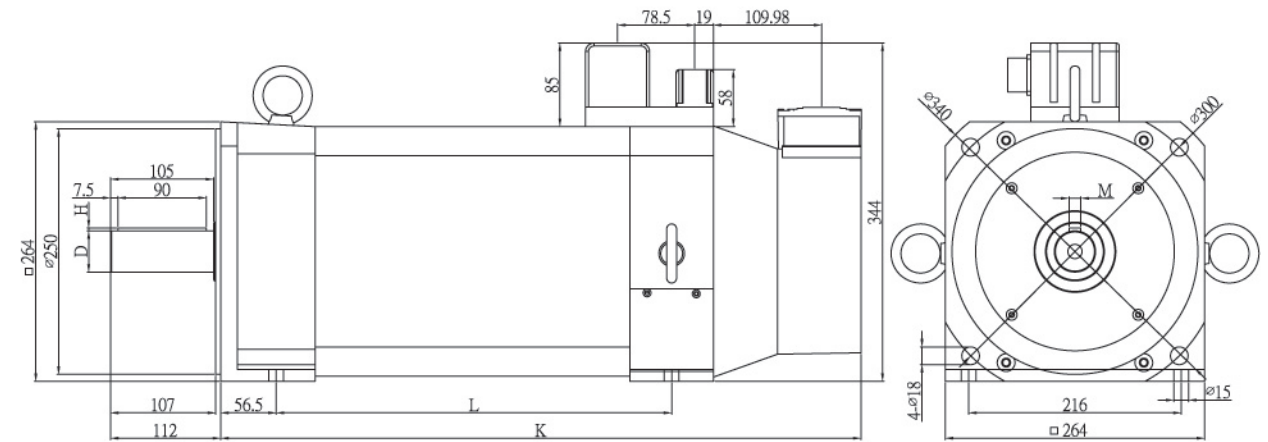
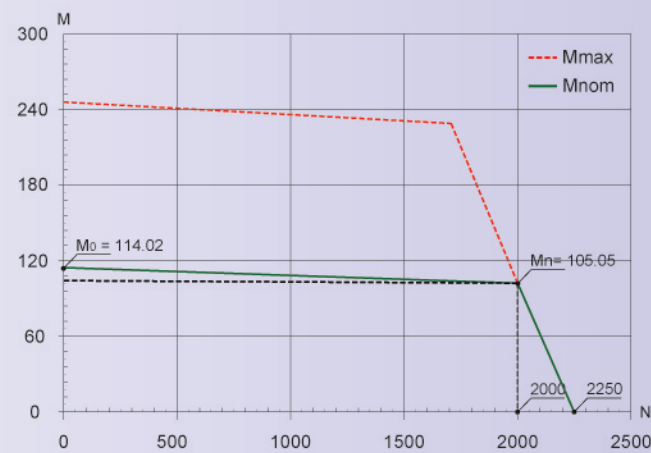
技術資料 Technical data	代號 Code	單位 Unit	SS10-74-8	SS10-105-8
額定轉速 nominal speed	$N_n$	rpm	2000	2000
額定功率 nominal power	$P_n$	kW	15	22
額定轉矩 nominal torque	$M_n$	Nm	73.5	105.05
額定電壓 nominal voltage	$V_n$	V	350	350
額定電流 nominal current	$I_n$	Amp	31	44.7
最高轉速 max. speed	$N_{max}$	rpm	2300	2300
零速轉矩 zero speed torque	$M_0$	Nm	80	112.36
電壓常數 voltage constant	$K_E$	V/krpm	170	170
轉矩常數 torque constant	$K_T$	Nm/Amp	2.33	2.35
線圈電阻 terminal motor resistance	$R_{2ph}$	ohm	0.29	0.18
線圈電感 terminal motor inductance	$L_{2ph}$	mH	11.81	2.14
轉動慣量 rotor inertia	J	kg·m <sup>2</sup>	300.69E-04	365.83E-04
強制風扇 force fan	-	Vac	3 x 220 or 3 x 380	
技術資料 Technical data	代號 Code	單位 Unit	SS10-74-8	SS10-105-8
回授元件 feedback device	-	-	Resolver	Resolver
環境溫度 ambient temperature	-	°C	0 ~ 40	0 ~ 40
絕緣等級 insulative class	-	-	H	H
環境溼度 humidity	-	%	< 90	< 90
馬達尺寸圖 Dimension	代號 Code	單位 Unit	SS10-74-8	SS10-105-8
馬達長度 motor length	K	mm	457	487
出力軸尺寸 shaft	D	mm	42 <sup>+0</sup> <sub>-0.016</sub> (h6)	42 <sup>+0</sup> <sub>-0.016</sub> (h6)

伺服馬達類型 | SS13

SS13 - 140

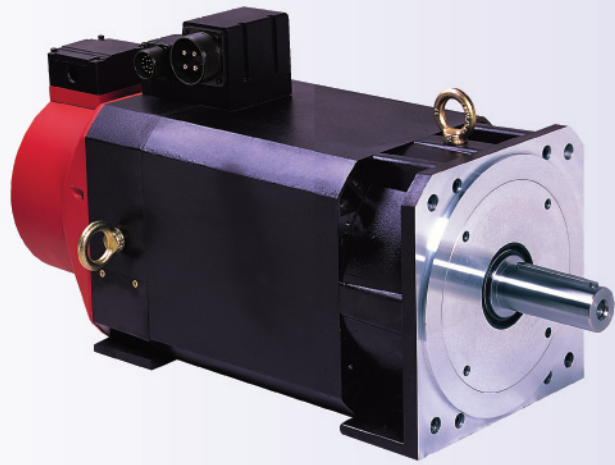


SS13 - 105

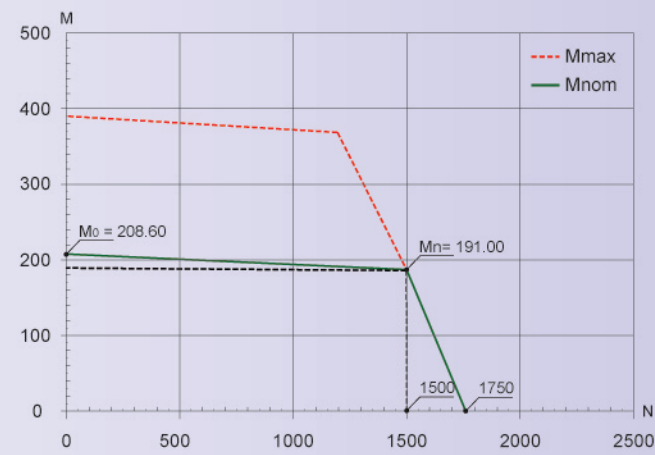


技術資料 Technical data	代號 Code	單位 Unit	SS13-140-4	SS13-105-4
額定轉速 nominal speed	$N_n$	rpm	1500	2000
額定功率 nominal power	$P_n$	kW	22	22
額定轉矩 nominal torque	$M_n$	Nm	140	105
額定電壓 nominal voltage	$V_n$	V	350	350
額定電流 nominal current	$I_n$	Amp	38.5	39.3
最高轉速 max. speed	$N_{max}$	rpm	1750	2250
零速轉矩 zero speed torque	$M_0$	Nm	131.02	114.02
電壓常數 voltage constant	$K_E$	V/krpm	226.66	170
轉矩常數 torque constant	$K_T$	Nm/Amp	3.64	2.67
線圈電阻 terminal motor resistance	$R_{2ph}$	ohm	0.39	0.33
線圈電感 terminal motor inductance	$L_{2ph}$	mH	7.75	6.22
轉動慣量 rotor inertia	$J$	kg·m <sup>2</sup>	1090E-04	830E-04
強制風扇 force fan	-	Vac	3 x 220 or 3 x 380	
技術資料 Technical data	代號 Code	單位 Unit	SS13-140-4	SS13-105-4
回授元件 feedback device	-	-	Resolver	Resolver
環境溫度 ambient temperature	-	°C	0 ~ 40	0 ~ 40
絕緣等級 insulative class	-	-	H	H
環境溼度 humidity	-	%	< 90	< 90
馬達尺寸圖 Dimension	代號 Code	單位 Unit	SS13-140-4	SS13-105-4
馬達長度 motor length	K	mm	651	561
出力軸尺寸 shaft	D	mm	42 <sup>+0</sup> <sub>-0.016</sub> (h6)	42 <sup>+0</sup> <sub>-0.016</sub> (h6)
軸鍵寬/高度 shaft keys width/high	M/H	mm	12/3	12/3
腳架孔距 PCD	L	mm	402	312

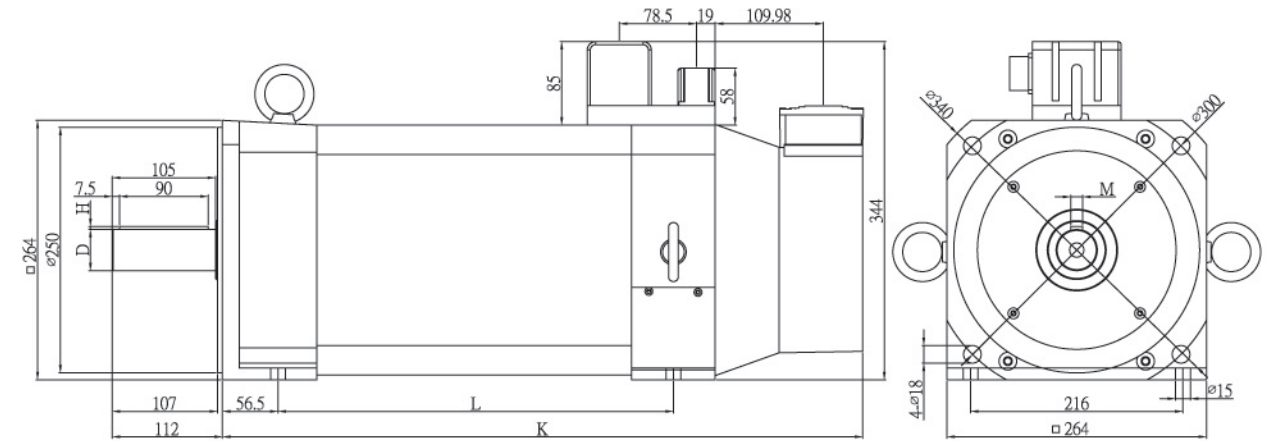
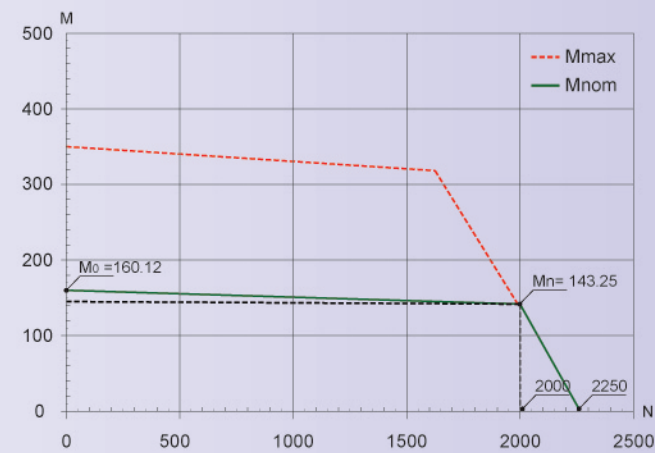
伺服馬達類型 | SS13



SS13 - 191



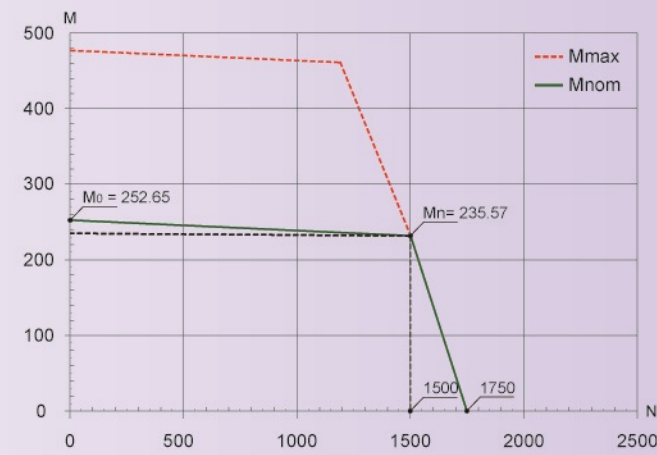
SS13 - 143



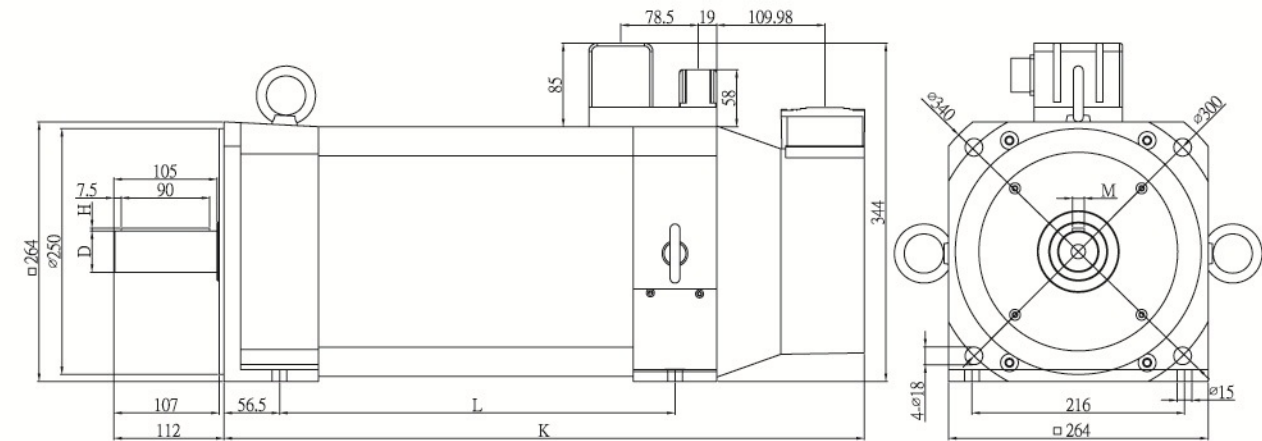
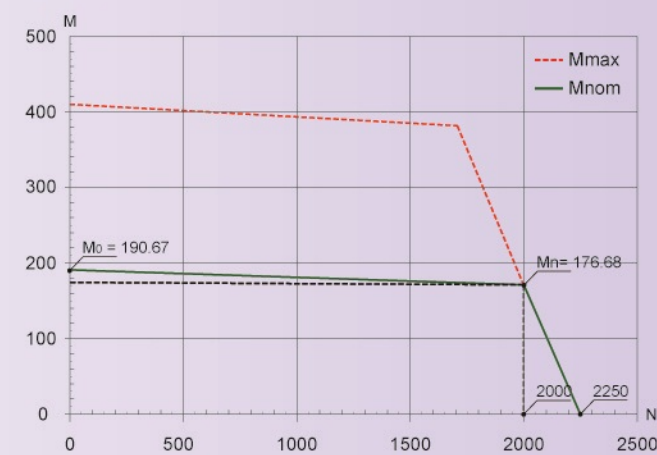
技術資料 Technical data	代號 Code	單位 Unit	SS13-191-4	SS13-143-4
額定轉速 nominal speed	$N_n$	rpm	1500	2000
額定功率 nominal power	$P_n$	kW	30	30
額定轉矩 nominal torque	$M_n$	Nm	191	143.25
額定電壓 nominal voltage	$V_n$	V	350	350
額定電流 nominal current	$I_n$	Amp	50.6	50.7
最高轉速 max. speed	$N_{max}$	rpm	1750	2250
零速轉矩 zero speed torque	$M_0$	Nm	208.6	160.12
電壓常數 voltage constant	$K_E$	V/krpm	226.66	226.66
轉矩常數 torque constant	$K_T$	Nm/Amp	3.77	2.83
線圈電阻 terminal motor resistance	$R_{2ph}$	ohm	0.25	0.27
線圈電感 terminal motor inductance	$L_{2ph}$	mH	5.32	4.71
轉動慣量 rotor inertia	$J$	kg·m <sup>2</sup>	1570E-04	1070E-04
強制風扇 force fan	-	Vac	3 x 220 or 3 x 380	
技術資料 Technical data	代號 Code	單位 Unit	SS13-191-4	SS13-143-4
回授元件 feedback device	-	-	Resolver	Resolver
環境溫度 ambient temperature	-	°C	0 ~ 40	0 ~ 40
絕緣等級 insulative class	-	-	H	H
環境溼度 humidity	-	%	< 90	< 90
馬達尺寸圖 Dimension	代號 Code	單位 Unit	SS13-191-4	SS13-143-4
馬達長度 motor length	K	mm	731	651
出力軸尺寸 shaft	D	mm	55 <sup>+0</sup> <sub>-0.019</sub> (h6)	55 <sup>+0</sup> <sub>-0.019</sub> (h6)
軸鍵寬/高度 shaft keys width/high	M/H	mm	16/4	16/4
腳架孔距 PCD	L	mm	482	402

伺服馬達類型 | SS13

SS13 - 236

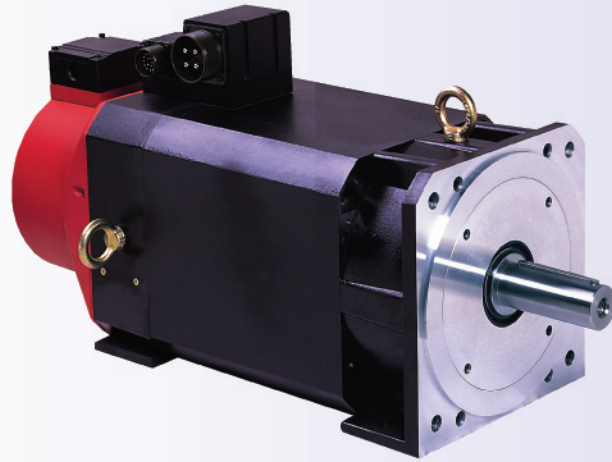


SS13 - 177

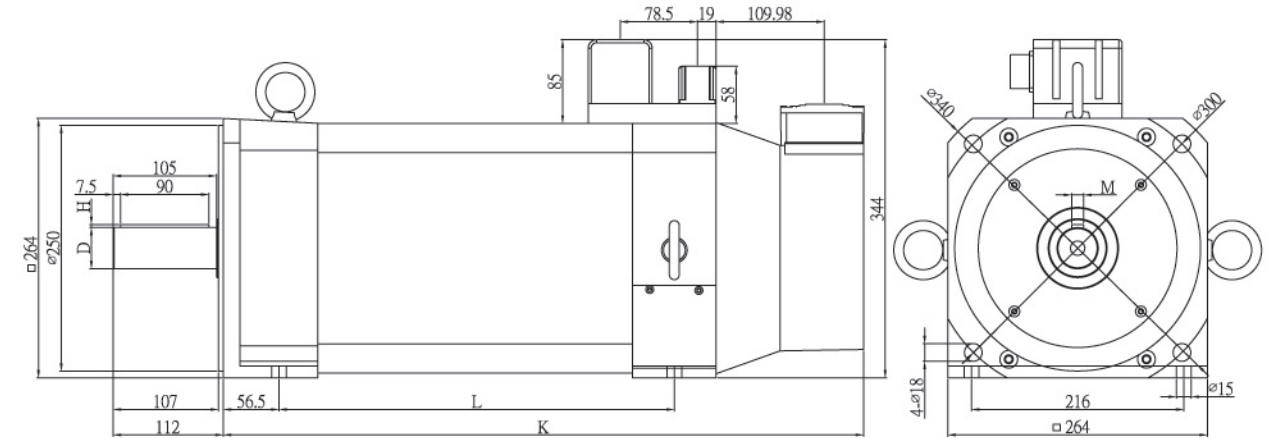
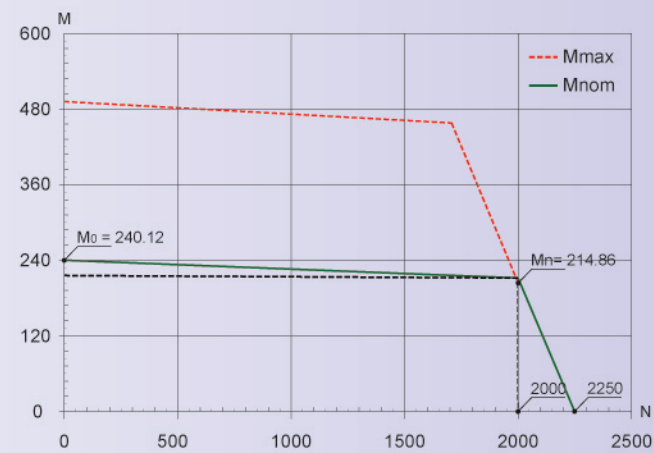


技術資料 Technical data	代號 Code	單位 Unit	SS13-236-4	SS13-177-4
額定轉速 nominal speed	$N_n$	rpm	1500	2000
額定功率 nominal power	$P_n$	kW	37	37
額定轉矩 nominal torque	$M_n$	Nm	235.57	176.68
額定電壓 nominal voltage	$V_n$	V	350	350
額定電流 nominal current	$I_n$	Amp	62.5	62.8
最高轉速 max. speed	$N_{max}$	rpm	1750	2250
零速轉矩 zero speed torque	$M_0$	Nm	252.65	190.67
電壓常數 voltage constant	$K_E$	V/krpm	170	226.66
轉矩常數 torque constant	$K_T$	Nm/Amp	3.76	2.81
線圈電阻 terminal motor resistance	$R_{2ph}$	ohm	0.22	0.17
線圈電感 terminal motor inductance	$L_{2ph}$	mH	4.68	3.67
轉動慣量 rotor inertia	$J$	kg·m <sup>2</sup>	1750E-04	1290E-04
強制風扇 force fan	-	Vac	3 x 220 or 3 x 380	
技術資料 Technical data	代號 Code	單位 Unit	SS13-236-4	SS13-177-4
回授元件 feedback device	-	-	Resolver	Resolver
環境溫度 ambient temperature	-	°C	0 ~ 40	0 ~ 40
絕緣等級 insulative class	-	-	H	H
環境溼度 humidity	-	%	< 90	< 90
馬達尺寸圖 Dimension	代號 Code	單位 Unit	SS13-236-4	SS13-177-4
馬達長度 motor length	K	mm	731	651
出力軸尺寸 shaft	D	mm	55 <sup>+0</sup> <sub>-0.019</sub> (h6)	55 <sup>+0</sup> <sub>-0.019</sub> (h6)
軸鍵寬/高度 shaft keys width/high	M/H	mm	16/4	16/4
腳架孔距 PCD	L	mm	482	402

伺服馬達類型 | SS13



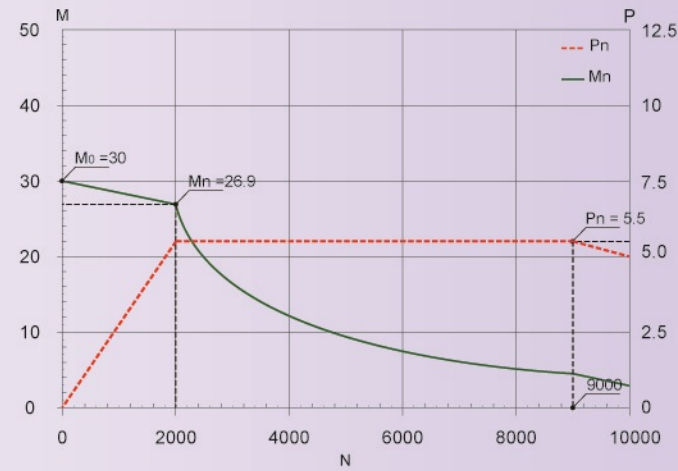
SS13 - 215



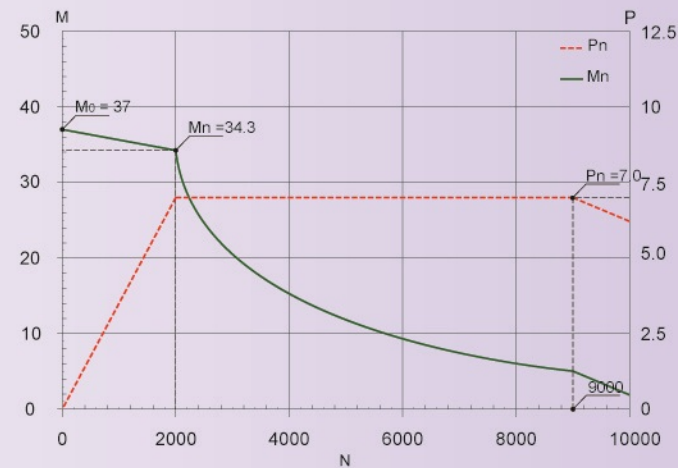
技術資料 Technical data	代號 Code	單位 Unit	SS13-215-4
額定轉速 nominal speed	$N_n$	rpm	2000
額定功率 nominal power	$P_n$	kW	45
額定轉矩 nominal torque	$M_n$	Nm	214.86
額定電壓 nominal voltage	$V_n$	V	350
額定電流 nominal current	$I_n$	Amp	76.4
最高轉速 max. speed	$N_{max}$	rpm	2250
零速轉矩 zero speed torque	$M_0$	Nm	240.12
電壓常數 voltage constant	$K_E$	V/krpm	170
轉矩常數 torque constant	$K_T$	Nm/Amp	2.81
線圈電阻 terminal motor resistance	$R_{2ph}$	ohm	0.14
線圈電感 terminal motor inductance	$L_{2ph}$	mH	3.19
轉動慣量 rotor inertia	J	kg·m <sup>2</sup>	1460E-04
強制風扇 force fan	-	Vac	3x220 or 3x380
技術資料 Technical data	代號 Code	單位 Unit	SS13-215-4
回授元件 feedback device	-	-	Resolver
環境溫度 ambient temperature	-	°C	0 ~ 40
絕緣等級 insulative class	-	-	H
環境溼度 humidity	-	%	< 90
馬達尺寸圖 Dimension	代號 Code	單位 Unit	SS13-215-4
馬達長度 motor length	K	mm	731
出力軸尺寸 shaft	D	mm	55 <sup>+0</sup> <sub>-0.019</sub> (h6)
軸鍵寬/高度 shaft keys width/high	M/H	mm	16/4
腳架孔距 PCD	L	mm	482

伺服馬達類型 | SM10

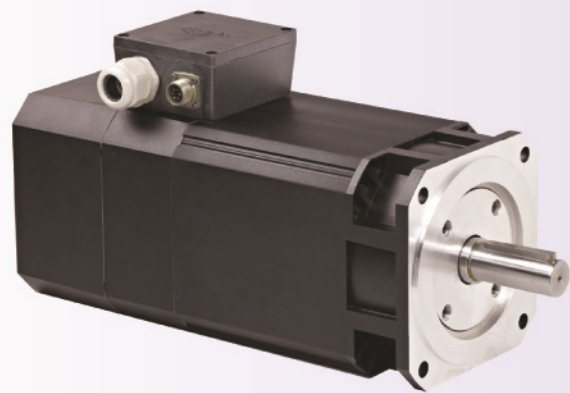
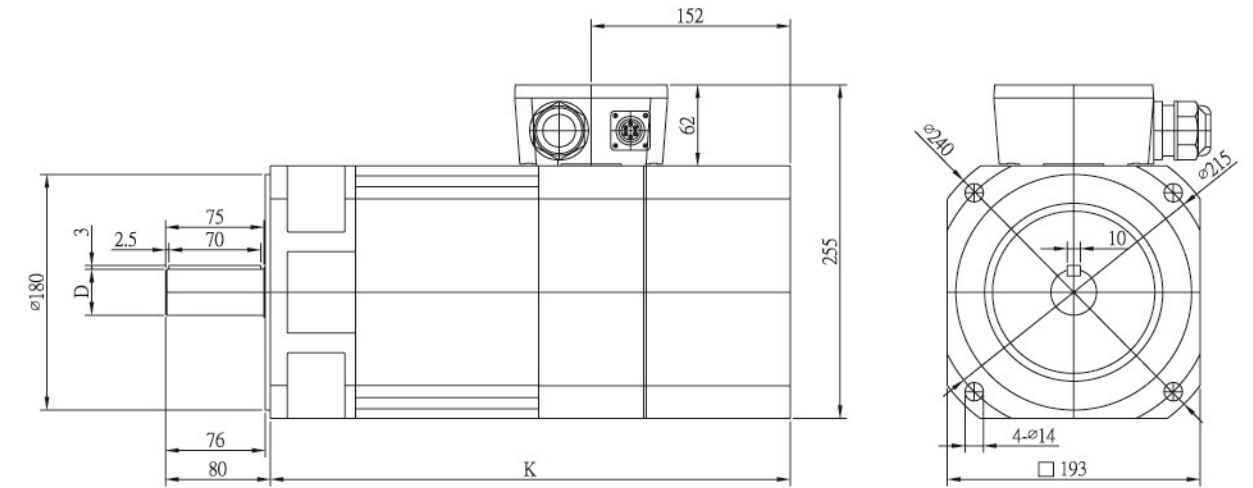
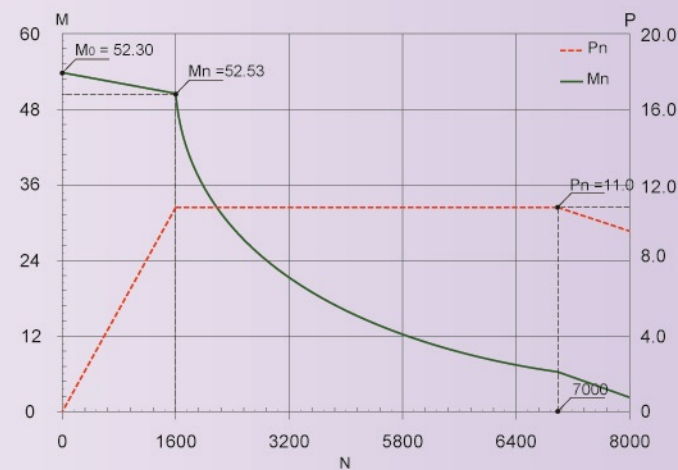
SM10 - 27



SM10 - 34

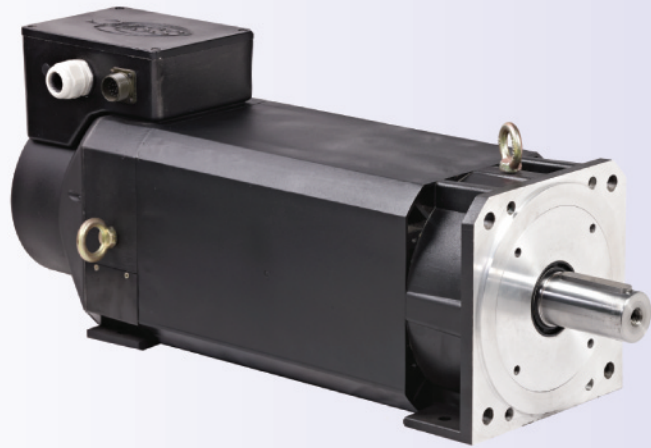


SM10 - 53

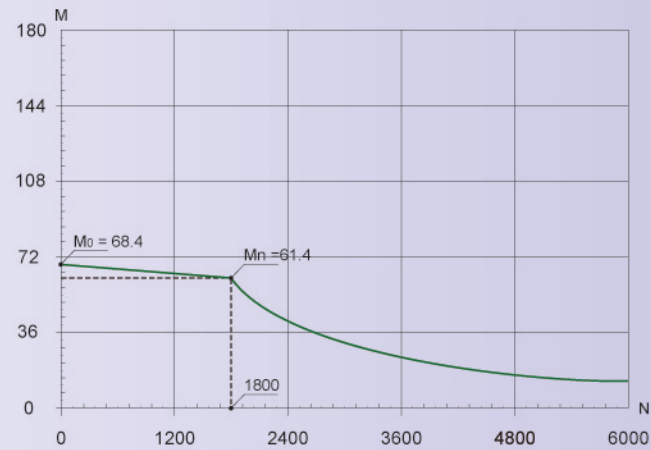


技術資料 Technical data	代號 Code	單位 Unit	SM10-27-4	SM10-34-4	SM10-53-4
額定轉速 nominal speed	$N_n$	rpm	2000	2000	2000
額定功率 nominal power	$P_n$	kW	5.5	7	11
額定轉矩 nominal torque	$M_n$	Nm	26.9	34.3	52.53
額定電壓 nominal voltage	$V_n$	V	350	350	350
額定電流 nominal current	$I_n$	Amp	13.2	16.5	22.6
最高轉速 max. speed	$N_{max}$	rpm	9000	9000	7000
零速轉矩 zero speed torque	$M_0$	Nm	30	37	52.3
轉矩常數 torque constant	$K_T$	Nm/Amp	2.04	2.08	2.32
線圈電阻 winding resistance	$R_{2ph}$	ohm	1.04	0.69	0.52
線圈電感 winding inductance	$L_{2ph}$	mH	9.85	8.63	7.83
轉動慣量 rotor inertia	J	kg·m <sup>2</sup>	178.69E-04	235.00E-04	349.26E-04
強制風扇 force fan	-	Vac	3 x 220 or 3 x 380		
技術資料 Technical data	代號 Code	單位 Unit	SM10-27-4	SM10-34-4	SM10-53-4
回授元件 feedback device	-	-	Resolver	Resolver	Resolver
環境溫度 ambient temperature	-	°C	0 ~ 40	0 ~ 40	0 ~ 40
絕緣等級 insulative class	-	-	H	H	H
環境溼度 humidity	-	%	< 90	< 90	< 90
馬達尺寸圖 Dimension	代號 Code	單位 Unit	SM10-27-4	SM10-34-4	SM10-53-4
馬達長度 motor length	K	mm	397	447	537
出力軸尺寸 shaft	D	mm	$32^{+0}_{-0.016}(h6)$	$32^{+0}_{-0.016}(h6)$	$35^{+0}_{-0.016}(h6)$

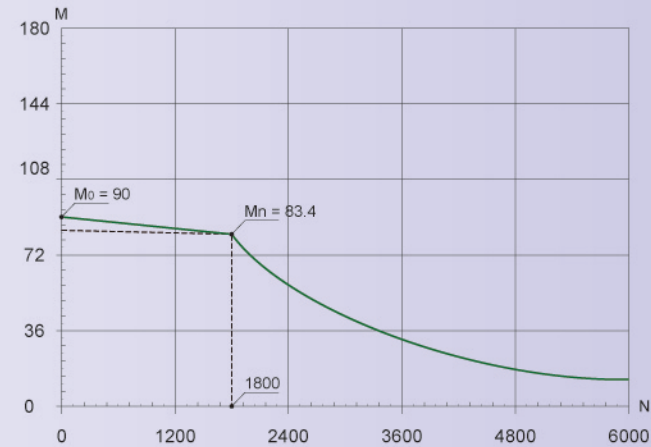
伺服馬達類型 | SA13



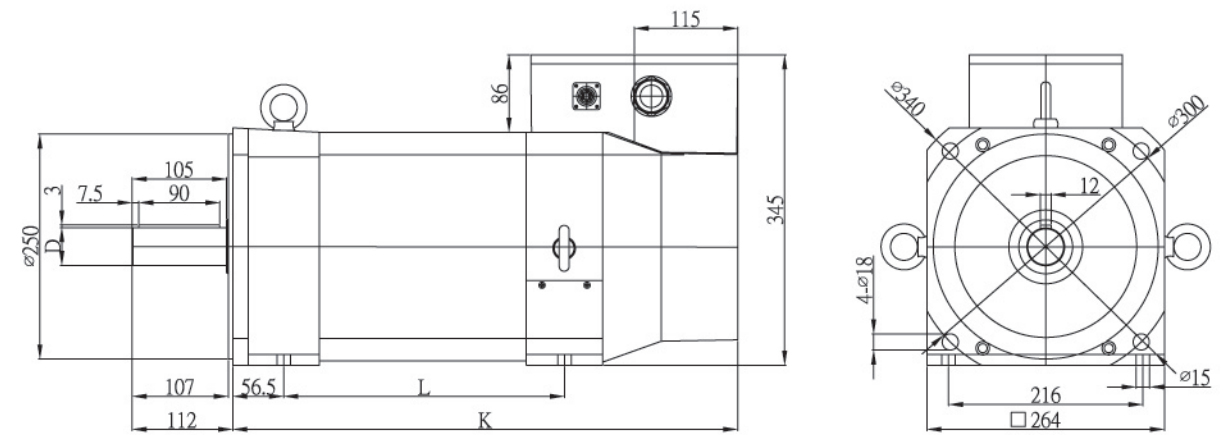
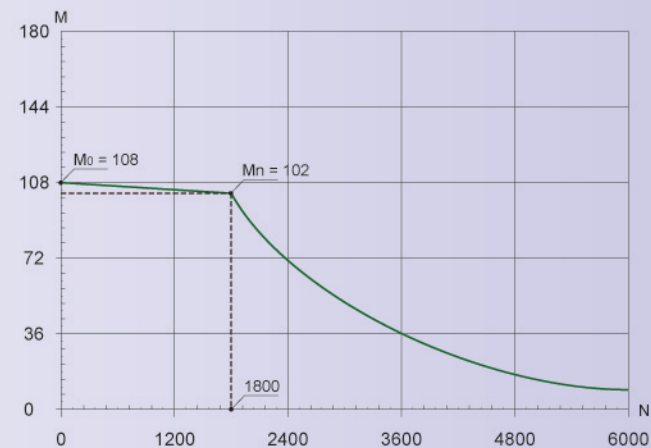
SA13 - 61



SA13 - 83

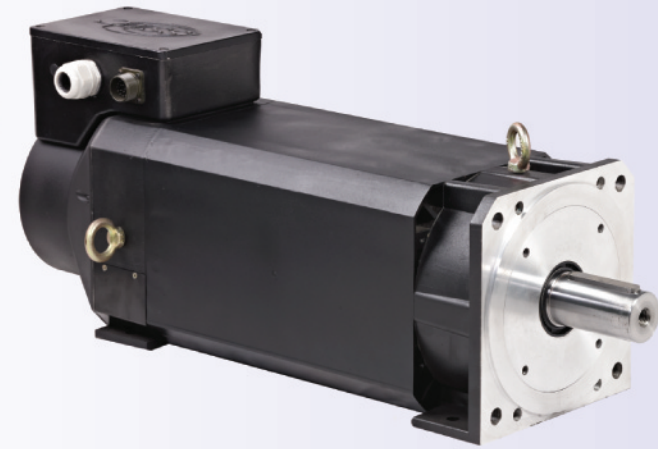


SA13 - 102

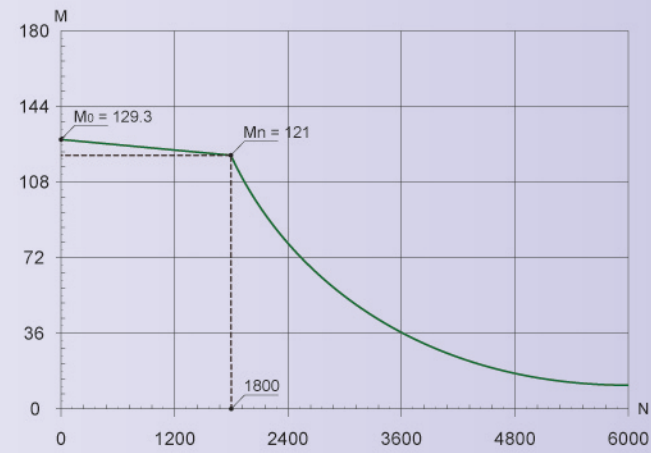


技術資料 Technical data	代號 Code	單位 Unit	SA13-61-4	SA13-83-4	SA13-102-4
額定轉速 nominal speed	$N_n$	rpm	1800	1800	1800
額定功率 nominal power	$P_n$	kW	11	15	18.5
額定轉矩 nominal torque	$M_n$	Nm	61.4	83.4	102
額定電壓 nominal voltage	$V_n$	V	220 / 380	220 / 380	220 / 380
額定電流 nominal current	$I_n$	Amp	38.1 / 22	51.2 / 29.6	63.10 / 36.4
零速轉矩 zero speed torque	$M_0$	Nm	68.4	90	108
轉矩常數 torque constant	$K_T$	Nm/Amp	1.61 / 2.79	1.63 / 2.82	1.62 / 2.8
線圈電阻 terminal motor resistance	$R_{2ph}$	ohm	0.32 / 0.96	0.22 / 0.66	0.16 / 0.49
線圈電感 terminal motor inductance	$L_{2ph}$	mH	5.56 / 16.68	4.06 / 12.17	3.05 / 9.16
轉子時間常數 rotor time constant	$T_r$	s	0.15	0.16	0.16
轉動慣量 rotor inertia	J	kg·m <sup>2</sup>	640E-04	726E-04	807E-04
強制風扇 force fan	-	Vac	3 x 220 or 3 x 380		
技術資料 Technical data	代號 Code	單位 Unit	SA13-61-4	SA13-83-4	SA13-102-4
回授元件 feedback device	-	-	Resolver	Resolver	Resolver
環境溫度 ambient temperature	-	°C	0 ~ 40	0 ~ 40	0 ~ 40
絕緣等級 insulative class	-	-	H	H	H
環境溼度 humidity	-	%	< 90	< 90	< 90
馬達尺寸圖 Dimension	代號 Code	單位 Unit	SA13-61-4	SA13-83-4	SA13-102-4
馬達長度 motor length	K	mm	561	561	561
出力軸尺寸 shaft	D	mm	42 <sup>+0</sup> <sub>-0.016</sub> (h6)	42 <sup>+0</sup> <sub>-0.016</sub> (h6)	42 <sup>+0</sup> <sub>-0.016</sub> (h6)
腳架孔距 PCD	L	mm	312	312	312

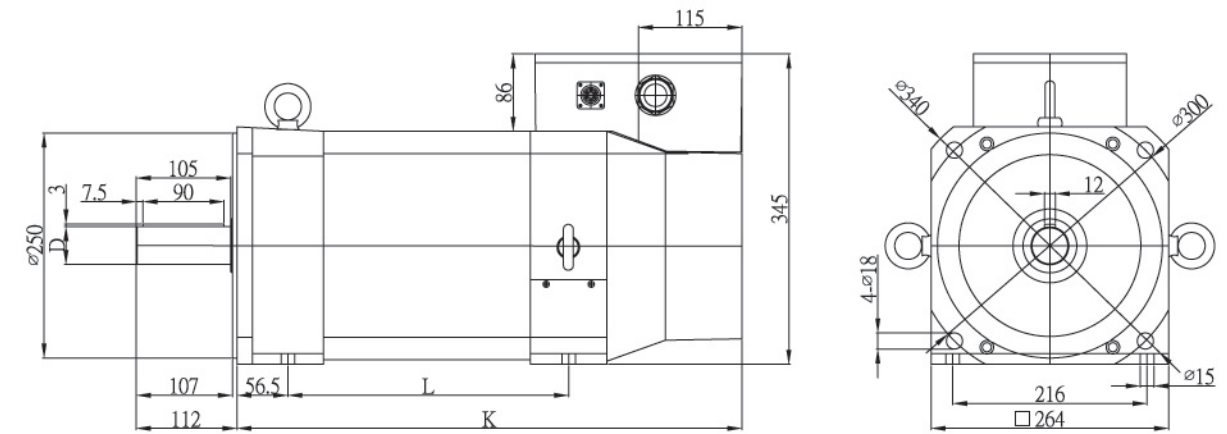
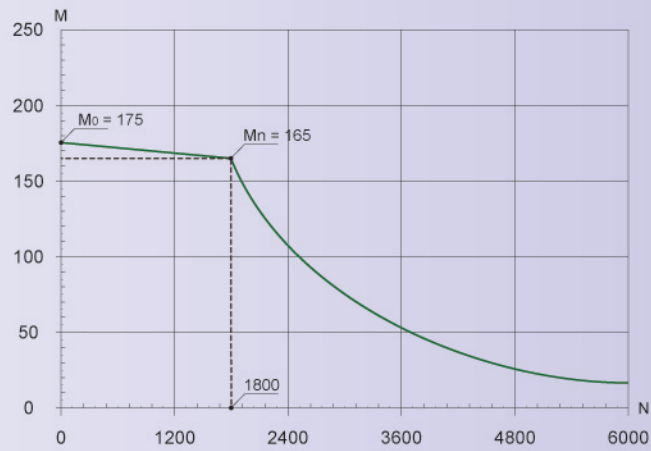
伺服馬達類型 | SA13



SA13 - 121



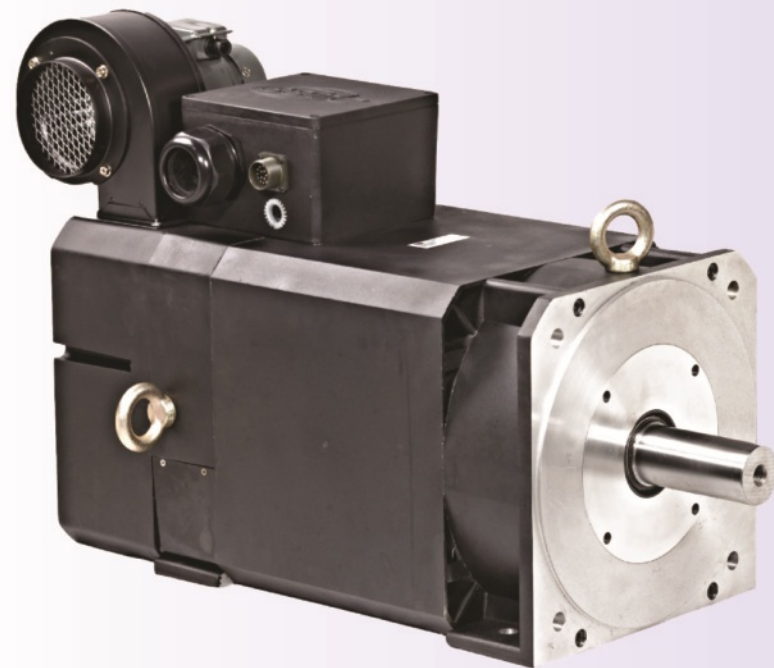
SA13 - 165



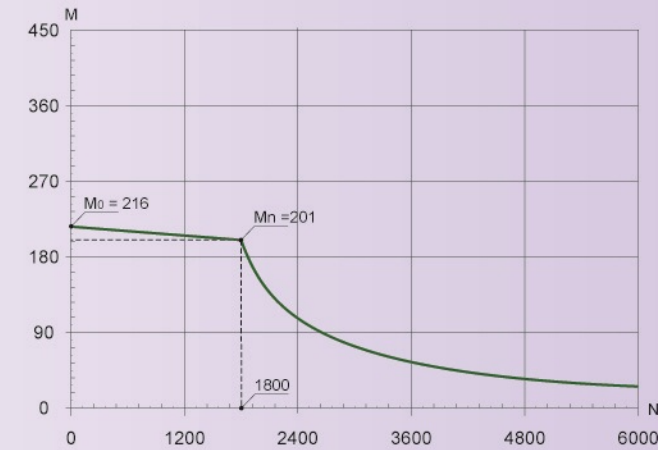
技術資料 Technical data	代號 Code	單位 Unit	SA13-121-4	SA13-165-4
額定轉速 nominal speed	$N_n$	rpm	1800	1800
額定功率 nominal power	$P_n$	kW	22	30
額定轉矩 nominal torque	$M_n$	Nm	121	165
額定電壓 nominal voltage	$V_n$	V	220 / 380	220 / 380
額定電流 nominal current	$I_n$	Amp	74.9 / 43.2	100.5 / 58
零速轉矩 zero speed torque	$M_0$	Nm	129.3	175
轉矩常數 torque constant	$K_T$	Nm/Amp	1.62 / 2.8	1.64 / 2.84
線圈電阻 terminal motor resistance	$R_{2ph}$	ohm	0.13 / 0.38	0.09 / 0.26
線圈電感 terminal motor inductance	$L_{2ph}$	mH	2.49 / 7.46	1.73 / 5.18
轉子時間常數 rotor time constant	$T_r$	s	0.17	0.186
轉動慣量 rotor inertia	J	kg·m <sup>2</sup>	1035E-04	1419E-04
強制風扇 force fan	-	Vac	3 x 220 or 3 x 380	
技術資料 Technical data	代號 Code	單位 Unit	SA13-121-4	SA13-165-4
回授元件 feedback device	-	-	Resolver	Resolver
環境溫度 ambient temperature	-	°C	0 ~ 40	0 ~ 40
絕緣等級 insulative class	-	-	H	H
環境溼度 humidity	-	%	< 90	< 90

馬達尺寸圖 Dimension	代號 Code	單位 Unit	SA13-121-4	SA13-165-4
馬達長度 motor length	K	mm	651	731
出力軸尺寸 shaft	D	mm	42 <sup>+0</sup> <sub>-0.016</sub> (h6)	55 <sup>+0</sup> <sub>-0.019</sub> (h6)
腳架孔距 PCD	L	mm	402	482

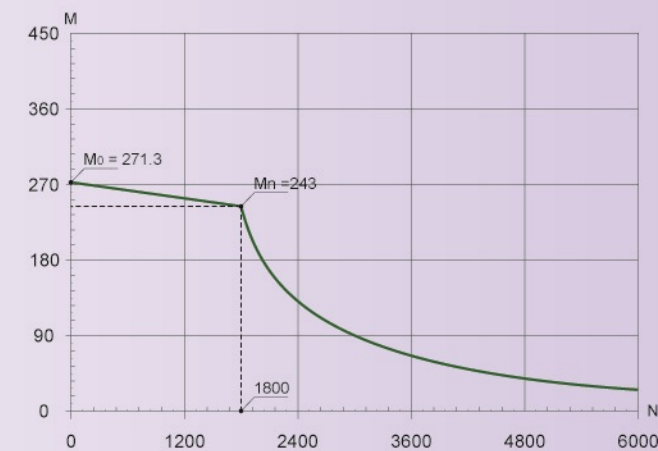
### 伺服馬達類型 | SA18



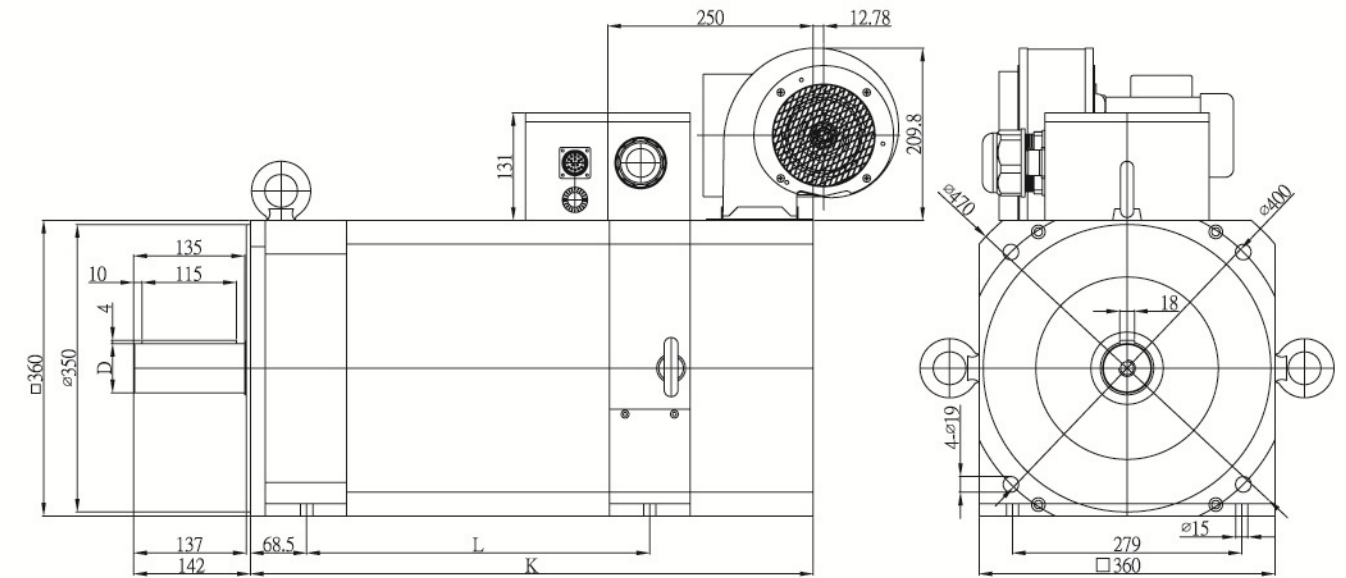
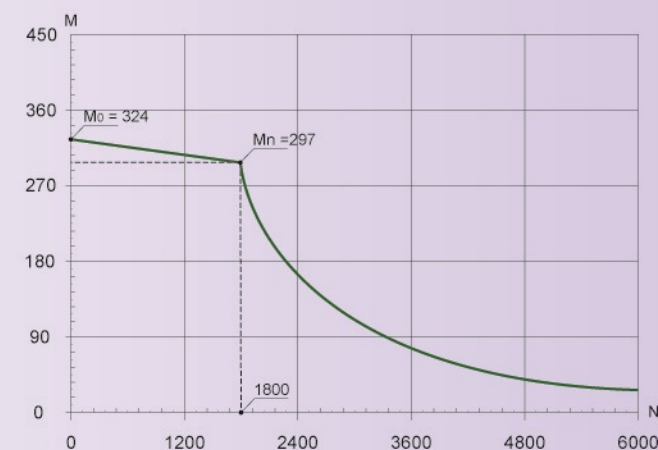
SA18 - 201



SA18 - 243



SA18 - 297



技術資料	Technical data	代號	Code	單位	Unit	SA18-201-4	SA18-243-4	SA18-297-4
額定轉速	nominal speed	$N_n$		rpm		1800	1800	1800
額定功率	nominal power	$P_n$		kW		37	45	55
額定轉矩	nominal torque	$M_n$		Nm		201	243	297
額定電壓	nominal voltage	$V_n$		V		220 / 380	220 / 380	220 / 380
額定電流	nominal current	$I_n$		Amp		120.00 / 69.30	145.00 / 83.70	174.00 / 100.50
零速轉矩	zero speed torque	$M_0$		Nm		216.00	271.30	324.00
轉矩常數	torque constant	$K_T$		Nm/Amp		1.67 / 2.90	1.68 / 2.90	1.71 / 2.96
線圈電阻	winding resistance	$R_{2ph}$		ohm		0.05 / 0.15	0.04 / 0.11	0.03 / 0.08
線圈電感	winding inductance	$L_{2ph}$		mH		1.91 / 5.75	1.55 / 4.66	1.11 / 3.32
轉子時間常數	rotor time constant	$T_r$		s		0.44	0.47	0.51
轉動慣量	rotor inertia	J		kg·m <sup>2</sup>		3792E-04	4236E-04	5387E-04
強制風扇	force fan	-		Vac		3x220 or 3x380		
技術資料	Technical data	代號	Code	單位	Unit	SA18-201-4	SA18-243-4	SA18-297-4
回授元件	feedback device	-		-		Resolver	Resolver	Resolver
環境溫度	ambient temperature	-		°C		0 ~ 40	0 ~ 40	0 ~ 40
絕緣等級	insulative class	-		-		H	H	H
環境溼度	humidity	-		%		< 90	< 90	< 90
馬達尺寸圖	Dimension	代號	Code	單位	Unit	SA18-201-4	SA18-243-4	SA18-297-4
馬達長度	motor length	K		mm		615	615	685
出力軸尺寸	shaft	D		mm		60 <sup>+0</sup> <sub>-0.016</sub> (h6)	60 <sup>+0</sup> <sub>-0.016</sub> (h6)	60 <sup>+0</sup> <sub>-0.016</sub> (h6)
腳架孔距	PCD	L		mm		312	312	312

# Termination technique

Connector and Cables



# Termination technique

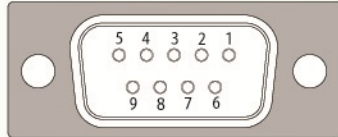
接頭



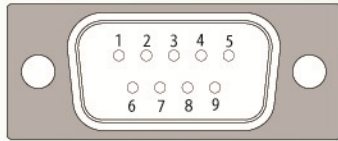
# Termination technique

## Encoder Cables

Sub-D Female



Sub-D Male



EC - CV09 - 002 - SDF15

回授信號線 Encoder Cable

馬達端接頭類型 Connector Type of Motor

線長 Cable Length 單位: m

驅動器端接頭類型 Connector Type of Drive

### 技術資料 Technical data :

EC-xxx-xxx-	SDM09	SDF09	SDM15	SDM15
Encoder Cable Type	Sub-D	Sub-D	Sub-D	Sub-D
回授元件 Encoder	R	P	S/M	W
腳位定義 Pin Definition	03 = Sin+ 04 = Sin- 05 = Cos+ 06 = Cos- 07 = Vref+ 08 = Vref- Others = NC	01 = 5V 02 = GND 03 = R0N 04 = R1N 05 = R2N 07 = R0I 08 = R1I 09 = R2I 06 = NC	03 = S1I 04 = S1N 05 = S2I 06 = S2N 08 = GND 09 = RS485- 10 = RS485+ 15 = 7-12V Others = NC	01 = S0I 02 = S0N 03 = S1I 04 = S1N 05 = S2I 06 = S2N 07 = 5V 08 = GND Others = NC
符號定義 Signal Definition	R = Resolver P = Incremental Encoder, Pulse S/M = Single / Multi -turn, SinCos Encoder with Hiperface W = Incremental Encoder, SinCos SDM/F = Sub-D-Male/Female			

## CV Type Connector

### 凸型接頭

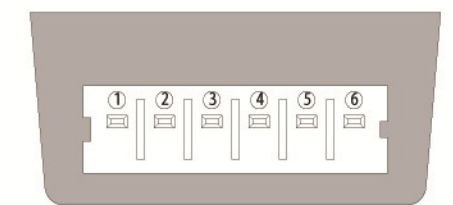


## Encoder Cable



CV09

## Motor Power Cable



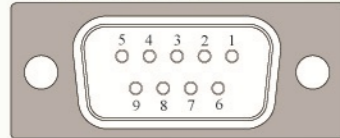
CV06

EC-	CV09	CV09	CV09	CV09	MC-CV06
Encoder Cable Type	CV	CV	CV	CV	
回授元件 Encoder	R	S/M	P	W	
腳位定義 Pin Definition	03 = Sin+ 04 = Sin- 05 = Cos+ 06 = Cos- 08 = Vref+ 09 = Vref- Others = NC	01 = 7-12V 03 = S1I 04 = S1N 05 = S2I 06 = S2N 08 = RS485- 09 = RS485+ 07 = GND Others = NC	01 = 5V 03 = R1I 04 = R1N 05 = R2I 06 = R2N 08 = R0I 09 = R0N 07 = GND Others = NC	01 = 5V 03 = S1I 04 = S1N 05 = S2I 06 = S2N 08 = S0I 09 = S0N 07 = GND Others = NC	01 = GND 02 = W 03 = V 04 = U 05 = Brake+ 06 = Brake-
符號定義 Signal Definition	R = Resolver S/M = Single / Multi-turn, SinCos Encoder with Hiperface P = Incremental Encoder, Pulse W = Incremental Encoder, SinCos M = male F = female				

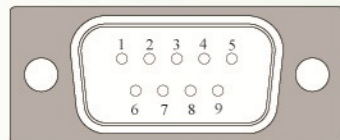
# Termination technique

## Encoder Cables

Sub-D Female



Sub-D Male



EC - MS3102 - 002 - SDF15

回授信號線 Encoder Cable

馬達端接頭類型 Connector Type for Motor

線長 Cable Length 單位: m

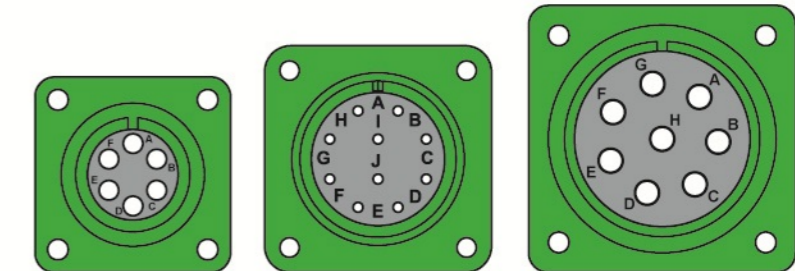
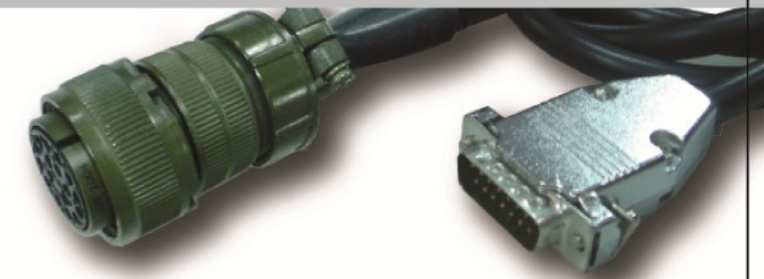
驅動器端接頭類型 Connector Type for Drive

### 技術資料 Technical data :

EC-xxx-xxx-	SDM09	SDF09	SDM15	SDM15
Encoder Cable Type	Sub-D	Sub-D	Sub-D	Sub-D
回授元件 Encoder	R	P	S/M	W
腳位定義 Pin Definition	03 = Sin+ 04 = Sin- 05 = Cos+ 06 = Cos- 07 = Vref+ 08 = Vref- Others = NC	01 = 5V 02 = GND 03 = R0N 04 = R1N 05 = R2N 07 = R0I 08 = R1I 09 = R2I 06 = NC	03 = S1I 04 = S1N 05 = S2I 06 = S2N 08 = GND 09 = RS485- 10 = RS485+ 15 = 7-12V Others = NC	01 = S0I 02 = S0N 03 = S1I 04 = S1N 05 = S2I 06 = S2N 07 = 5V 08 = GND Others = NC
符號定義 Signal Definition	R = Resolver P = Incremental Encoder, Pulse S/M = Single / Multi -turn, SinCos Encoder with Hiperface W = Incremental Encoder, SinCos SDM/F = Sub-D-Male/Female			

## MS Type Connector

### 軍規接頭



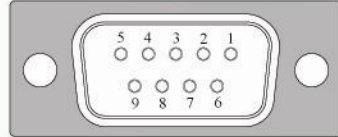
MS3102A 14S-6P MS3102A 18S-1P MS3102A 22-23P

EC-	MS3102A			MC- MS3102A	
Encoder Cable Type	14S-6P	20-29P	20-29P	20-29P	22-23P
回授元件 Encoder	R	S/M	P	W	
腳位定義 Pin Definition	A = Sin+ B = Sin- C = Cos+ D = Cos- E = Vref+ F = Vref- Others = NC	A = 7-12V C = S1I D = S1N E = S2I F = S2N J = GND N = RS485- P = RS485+ Others = NC	A = 5V C = R1I D = R1N E = R2I F = R2N G = R0I H = R0N J = GND L = EMI Others = NC	A = 5V C = S1I D = S1N E = S2I F = S2N G = S0I H = S0N J = GND Others = NC	A = U B = V C = W D = GND E = PTM1 F = PTM2 G = Brake+ H = Brake-
符號定義 Signal Definition	R = Resolver S/M = Single / Multi-turn, SinCos Encoder with Hiperface P = Incremental Encoder, Pulse W = Incremental Encoder, SinCos M = male F = female				

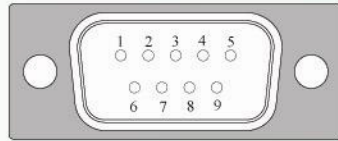
# Termination technique

## Encoder Cables

Sub-D Female



Sub-D Male



EC - SFMB17 - 002 - SDF15

回授信號線 Encoder Cable

馬達端接頭類型 Connector Type of Motor

線長 Cable Length 單位: m

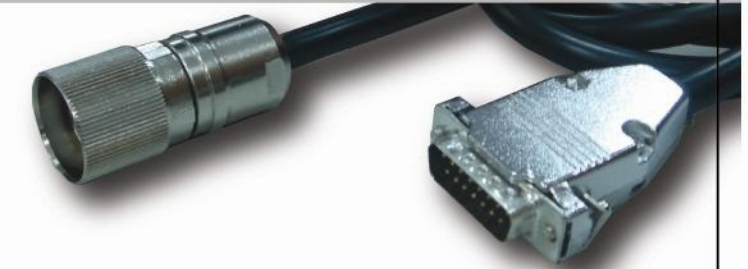
驅動器端接頭類型 Connector Type of Drive

### 技術資料 Technical data :

EC-xxx-xxx-	SDM09	SDF09	SDM15	SDM15
Encoder Cable Type	Sub-D	Sub-D	Sub-D	Sub-D
回授元件 Encoder	R	P	S/M	W
腳位定義 Pin Definition	03 = Sin+ 04 = Sin- 05 = Cos+ 06 = Cos- 07 = Vref+ 08 = Vref- Others = NC	01 = 5V 02 = GND 03 = R0N 04 = R1N 05 = R2N 07 = R0I 08 = R1I 09 = R2I 06 = NC	03 = S1I 04 = S1N 05 = S2I 06 = S2N 08 = GND 09 = RS485- 10 = RS485+ 15 = 7-12V Others = NC	01 = S0I 02 = S0N 03 = S1I 04 = S1N 05 = S2I 06 = S2N 07 = 5V 08 = GND Others = NC
符號定義 Signal Definition	R = Resolver P = Incremental Encoder, Pulse S/M = Single / Multi -turn, SinCos Encoder with Hiperface W = Incremental Encoder, SinCos SDM/F = Sub-D-Male/Female			

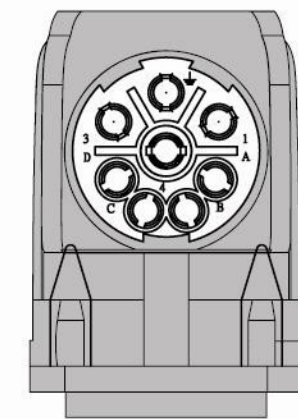
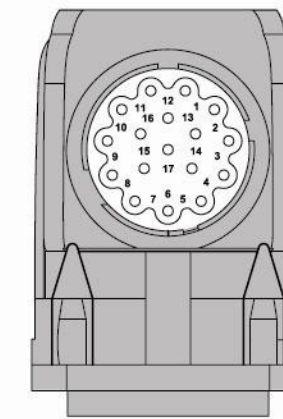
## SFMB Type Connector

### 歐規接頭



SFMB17

SFMB08



EC-	SFMB17				MC- SFMB08
Encoder Cable Type	SFMB	SFMB	SFMB	SFMB	
回授元件 Encoder	R	S/M	P	W	
腳位定義 Pin Definition	12 = Sin+ 13 = Sin- 14 = Cos+ 15 = Cos- 16 = Vref+ 17 = Vref- Others = NC	01 = 7-12V 03 = S1I 04 = S1N 05 = S2I 06 = S2N 10 = GND 14 = RS485- 15 = RS485+ Others = NC	01 = 5V 03 = R1I 04 = R1N 05 = R2I 06 = R2N 07 = R0I 08 = R0N 10 = GND Others = NC	01 = 5V 03 = S1I 04 = S1N 05 = S2I 06 = S2N 07 = S0I 08 = S0N 10 = GND Others = NC	01 = U ⊥ = GND 03 = W 04 = V A = PTM1 B = PTM2 C = Brake+ D = Brake-
符號定義 Signal Definition	R = Resolver S/M = Single / Multi-turn, SinCos Encoder with Hiperface P = Incremental Encoder, Pulse W = Incremental Encoder, SinCos M = male F = female				

## 回授信號線 Encoder



技術資料 Technical data

類型 Type	定義 Definition	舉例 Example	備註 Notes
SDF	Sub-D	SDF09	接頭類型+ 腳位數 Cable type + Pin number
MS	軍規	MS3102	
CV	凸型	CV09	接頭類型+ 腳位數 Cable type + Pin number
BOX	線盒		
SFMB	歐規	SFMB17	
NC	無	無	
EC - SFMB17 - 002 - SDF15			

回授信號線 Encoder Cable

馬達端接頭類型 Connector Type for Motor

線長 Cable Length 單位: m

驅動器端接頭類型 Connector Type for Drive

## 馬達電源線 Motor Power Cable



技術資料 Technical data

類型 Type	定義 Definition	舉例 Example	備註 Notes
MS	軍規	MS3102	
CV	凸型	CV06	接頭類型+ 腳位數 Cable type + Pin number
BOX	線盒		
SFMB	歐規	SFMB08	
NC	無None	無None	
MC - SFMB08 - 002 - NC			

馬達電源線 Motor Power Cable

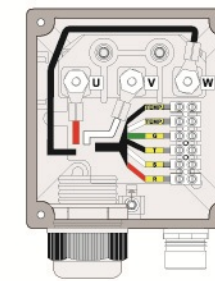
馬達端接頭類型 Connector Type for Motor

線長 Length 單位: m

## Cable Box 線盒



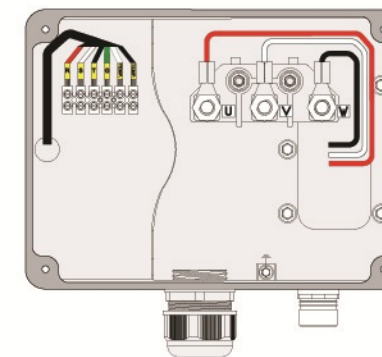
### SM10



U V W = 馬達電源輸入端  
Motor power input  
R S T = 風扇電源輸入端  
Fan power input  
G = 接地端 Ground  
Temp = 溫度線 Temperature

適用機型:  
Applicable models :  
SM10 - 55  
SM10 - 70

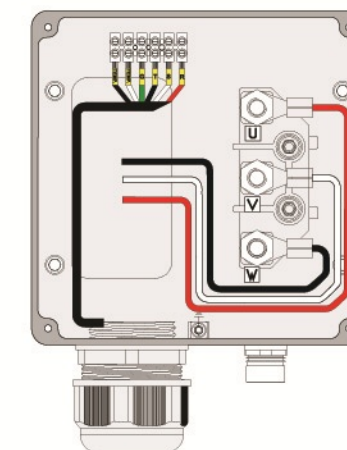
### SA13



U V W = 馬達電源輸入端  
Motor power input  
R S T = 風扇電源輸入端  
Fan power input  
G = 接地端 Ground  
Temp = 溫度線 Temperature

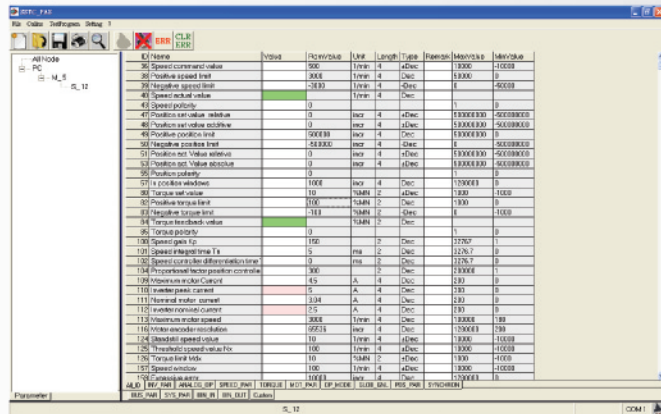
適用機型:  
Applicable models :  
SA13 - 60  
SA13 - 80  
SA13 - 100  
SA13 - 120  
SA13 - 170

### SA18



U V W = 馬達電源輸入端  
Motor power input  
R S T = 風扇電源輸入端  
Fan power input  
G = 接地端 Ground  
Temp = 溫度線 Temperature

適用機型:  
Applicable models :  
SA18 - 200  
SA18 - 240  
SA18 - 300

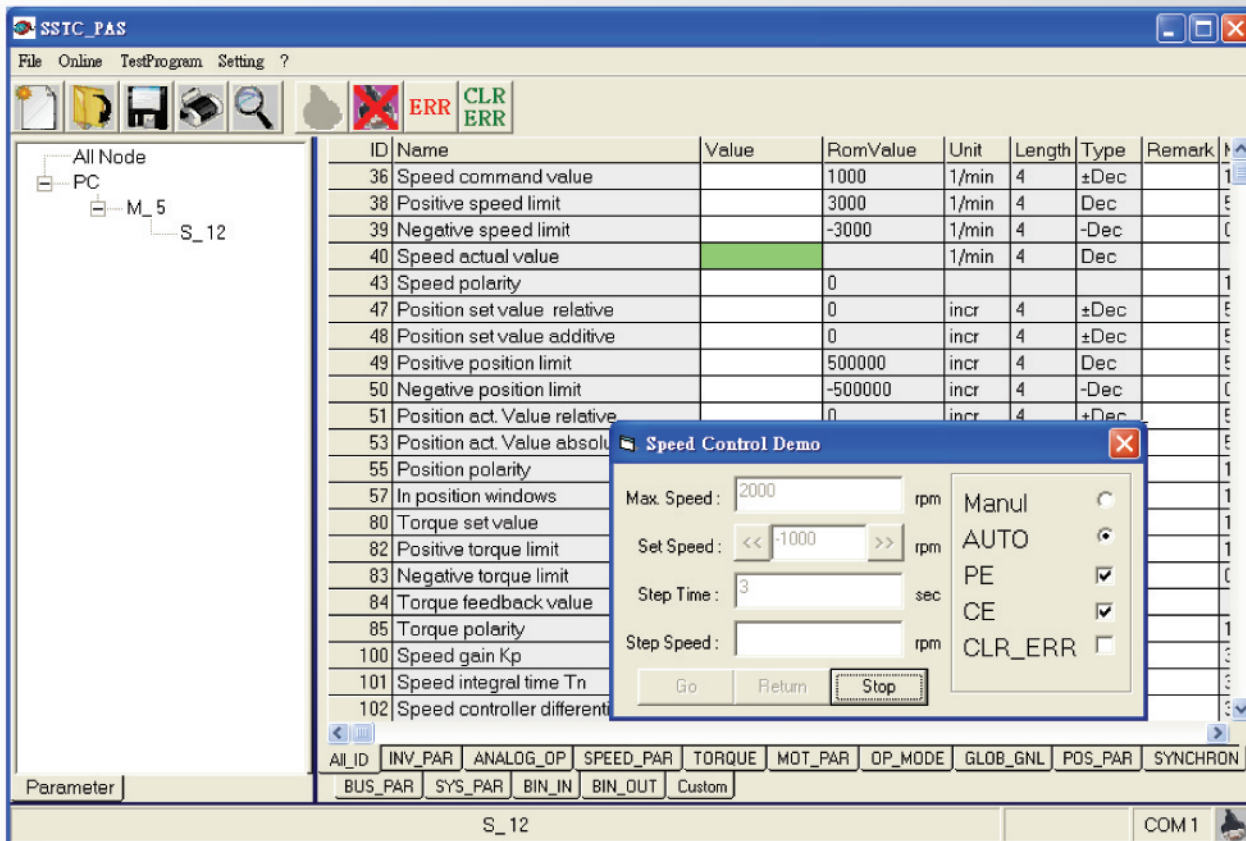


### 參數資料

- 支援全功能的線上操作
- 全部機器的物件檔案透過取樣資料的方式 (儲存、多重複製、記錄)
- 使用每台機器上所有的參數
- 提供完整的馬達資料庫
- 圖形控制與監測

### Parameter data

- Full-featured online operation is supported
- All parameters can be stored, copied multiple times, and can be stored on all driven
- Parameters for each drive can be used
- A complete motor database is provided
- Graphical control and monitoring



簡稱	Abbreviation	說明	Description
	R0N		Non inverted pulse generator track 0
	R0I		Inverted pulse generator track 0
	R1N		Non inverted pulse generator track 1
	R1I		Inverted pulse generator track 1
	R2N		Non inverted pulse generator track 2
	R2I		Inverted pulse generator track 2
	+5V		Power Supply 5V
	+12V		Power Supply 12V
	Sin+		Resolver sine
	Sin-		Inverted Resolver sine
	Cos+		Resolver cosine
	Cos-		Inverted Resolver cosine
	Vref+		Resolver excitation signal
	Vref-		Resolver excitation signal inverted
	S1N		Sine wave encoder sine signal
	S1I		Sine wave encoder reference sine signal
	S2N		Sine wave encoder cosine signal
	S2I		Sine wave encoder reference cosine signal
	S0N		Sine wave encoder zero signal
	S0I		Sine wave encoder reference zero signal
	RS485+		S/M encoder, data channel +
	RS485-		S/M encoder, data channel -
	PCD		Pitch Circle Dimension