SOLPOWER

SOLPOWER MACHINE
ELECTRONIC CORP.

Direct-Drive Power Bearing Module

(SPBMS Series)

www.solpowermotor.com

SPBMS Series

經營理念

品質

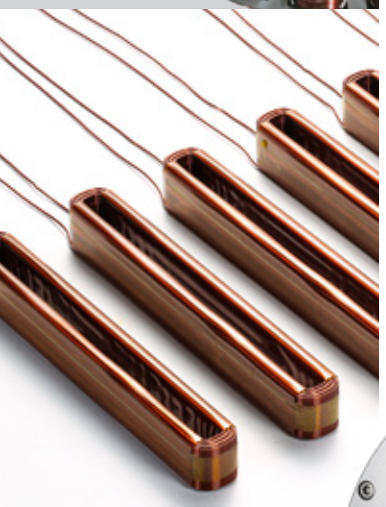
提供優良的高階伺服馬達、高精密檢測設備及嚴謹的 SOP 管控生管流程，致力高效率、高品質及低售服率為訴求，是晟昌機電不斷進步的動力。

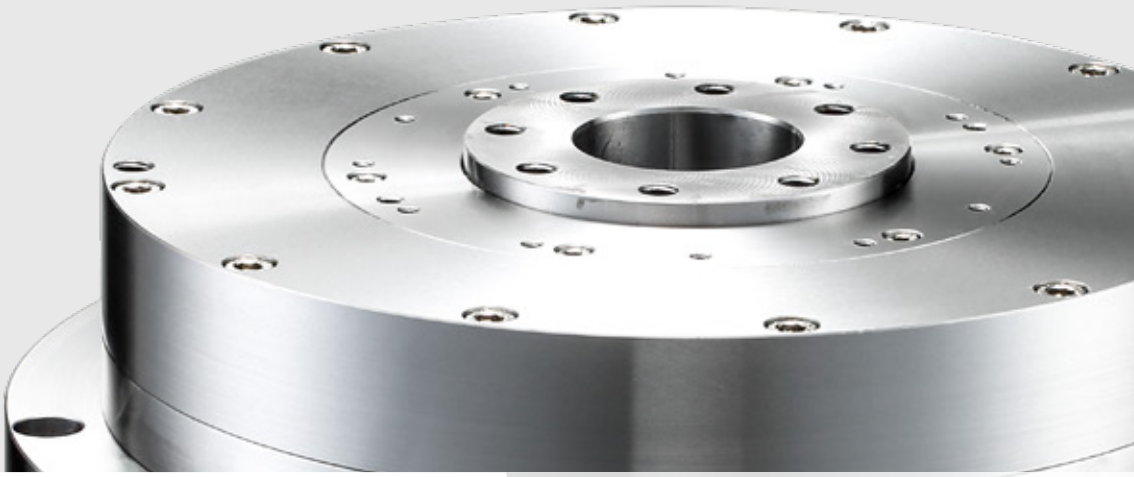
服務

提供完善的服務網路，滿足客戶的標準化及客制化馬達需求，以誠信作為服務基礎，積極開拓國際版圖。

創新

以紮實的技術核心，垂直整合研發及技術製程，因應市場的變動，提供卓越的產品提升產業附加價值，與客戶共創雙贏。





MANAGEMENT PHILOSOPHY

Quality

In order to provide high-performance servo motors, high-precision measurement equipment and strict S.O.P. documents are needed to make sure that we have total control the quality of each manufacturing process. We're committed to constantly improving the manufacturing technics and R&D resources of servo motors, and working hard to provide the most reliable servo motor products.

Service

Based on the concept of business credibility, we provide complete service network and satisfy customer’s standard and customized servo motor requirements to expand global market.

Innovation

We continuously supply our customers with high quality servo motors based on our own R&D innovative technologies and vertically integrating the manufacturing processes of the motor. We enhance the added value of the industry and create a win-win situation with our customers.

公司簡介

晟昌機電股份有限公司成立於 1995 年，成立之初，鑒於台灣工具機出口市值在世界排名第四、第五，卻沒有自己的主軸馬達控制器，關鑑性零件需仰賴進口，整體而言相當可惜。創辦之初即整合國內外優質的控制器與驅動器，研發各式產業機械以及工具機專用伺服馬達，產品涵蓋感應伺服馬達、同步伺服馬達、線性馬達、直驅式第四軸工作台，直驅式四 / 五軸工作台，內藏式主軸。由於產品特性與品質媲美歐、美、日本，在國內廣為工具機及控制器大廠所使用，並同時外銷全世界共三十餘國家 (中、德、日、義、美、瑞士、韓國、波蘭、印度...等) ，備受客戶的讚賞。

晟昌機電創辦至今，藉由不斷提升產品精度與穩定性，滿足各類市場及客戶需求，積極研發符合趨勢的新產品，開拓國際市場，多年來始終堅持 " 品質、服務、創新 " 的經營理念，以創新的研發技術與穩定的生產品質，持續投入新產品研發，與合作夥伴共同努力、共同成長，為電機與 CNC 機械行業創造出更璀璨的未來。

COMPANY PROFILE

SOLPOWER Machine Electronic Corp. was founded in 1995. In consideration of world ranking of Taiwan machine tool export, the fourth to the fifth place, it was a pity that Taiwan machine tool companies have no their own spindle motor controllers. All the key components, including the CNC controllers, need to be imported from Japan or Germany.

SOLPOWER is continuously working hard on integrating high-quality CNC controllers/servo drives. We self-design and manufacture our own servo motors, including induction motors, synchronous permanent magnet motors, linear motors, direct-drive 4th and 4/5th rotary tables, and build-in spindle motors, for general industrial machinery and CNC machine tools.

Owing to the outstanding product characteristics and quality, which is compared favorably with spindle motors made in Europe, America, and Japan to gain very good feedback from customers. Our motors export to thirty nations including China, Germany, Japan, Italy, U.S.A, Switzerland, Korea, Poland, and India in the world.

SOLPOWER has continuously improved product accuracy and stability since its establishment, to meet the needs of various markets and customers. Over the years, SOLPOWER has always insisted on the business philosophy, "Quality, Service, and Innovation". We keep investing a lot of R&D resources, equipment and manufacturing technics in new product research and development, working together with our customers, in order to create a glorious future for the CNC machine tool industry.

SPBMS Series

產品特性與優勢

NEW GENERATION

Power Bearing Module
動力軸承模組

SPBMS
250 / 320 / 500 / 650

Standard Speed
標準轉速

High Speed
高轉速

產品特性與優勢

高扭力密度

- 電機直接驅動負載，無減速機，無背隙，低噪音，結構緊湊。
- 高倍過負載能力 (4x)，高速 (相較於傳統齒輪傳動形式)，伺服響應快。
- 標配絕對式編碼器 (22-bits 以上)，可進行高精度分割與同動加工。
- 電機中心孔貫穿，便於接線，配管。
- 內建高精度三片式徑軸向軸承 (轉盤軸承)，可承受重載，重切削。
- 大型加工專用機，重載切削機床。

可客製化

- 可依據客戶提供的編碼器進行機構封裝。
- 可依據客戶需求製作固定座轉接板或轉盤。

高性價比

- 零件模組化，在地化開發。

Product features and advantages

Compact

- Direct connection to the load, Gearless, Backlashless, Low Noise.
- High over-load capacity(4x), High speed, High servo-response.
- Absolute encoders, High resolution(over 22-bits), High Precision.
- Hollow-Shaft structure, easy wiring and piping.
- High rigidity, integrated radial and axial bearings, suitable for heavy-duty cutting applications.
- Heavy-duty Machines.

Customize

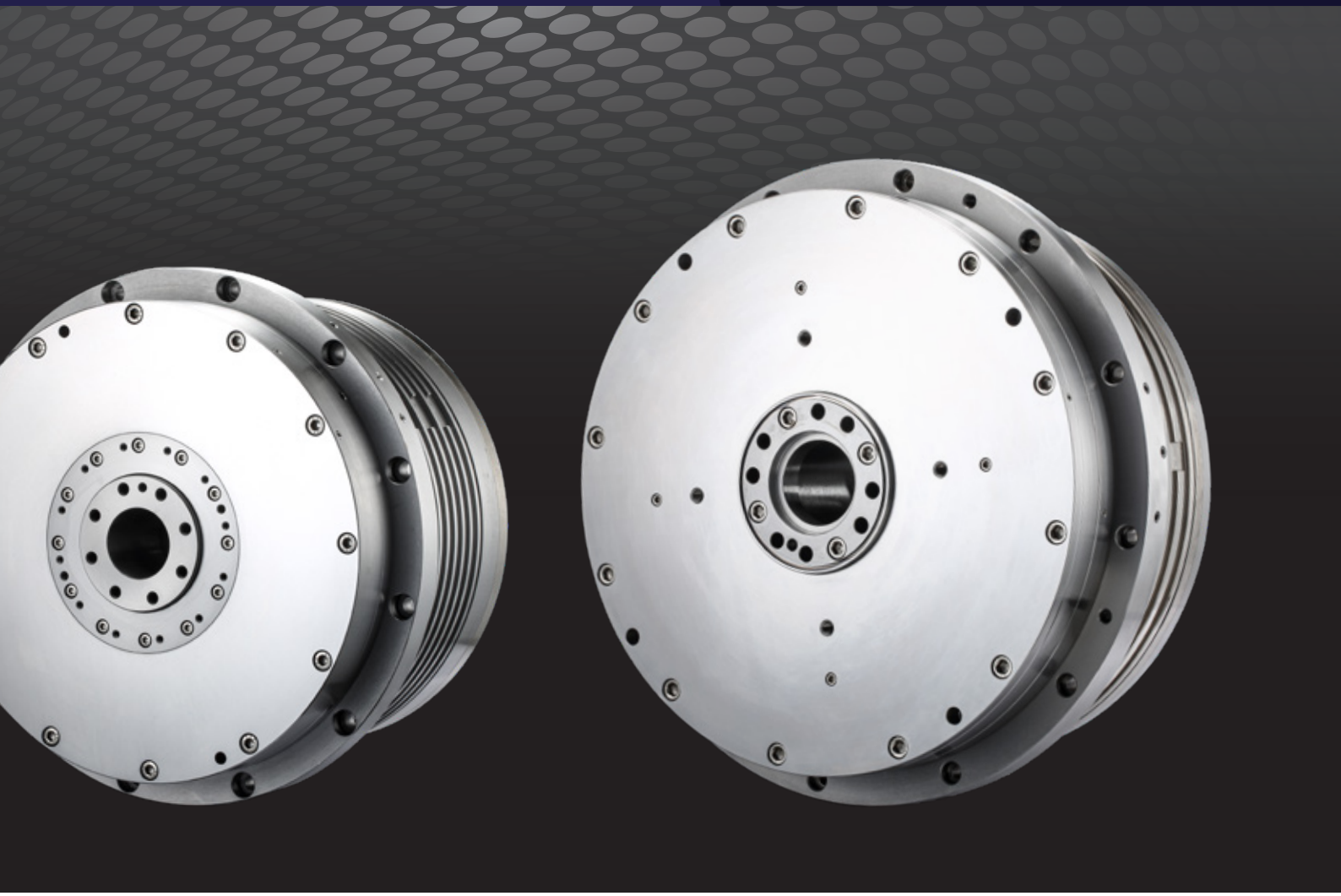
- Customer-Supply-Encoder available.
- Customize plate for mechanical fitting if needed.

Cost-effective

- Structure part modulized, local tooling.

經典的工藝 • 精銳的演出

Power Bearing Module



用途範例

- CNC 立式加工中心
- CNC 鑽攻中心
- 各式專用機 / 研磨機 / 磨刀機

Applications

- CNC Vertical Machine Center
- CNC Tapping Center Applications
- CNC Gear Tool Grinding Machines

SPBMS Series

產品編碼原則
Model Designations

內容敘述 Description	型號編碼定義 Data position of the order No.														
包裝階	P	SPBMS	320	-	3	S	H		-	9	R	C	1	-	1
動力軸承模組 Power Bearing Module					內定碼 interal number										
適用的轉盤直徑 Compatible End Plate Diameter	250		250												
	320		320												
	500		500												
	650		650												
固定碼 Fixed Number															
額定扭力規格 Rated Torque	定子積厚 50mm 的額定扭力				1										
	定子積厚 100mm 的額定扭力				2										
	定子積厚 70mm 的額定扭力				3										
	定子積厚 150mm 的額定扭力				4										
轉速 Rotating Speed	標準轉速 Standard Speed					S									
	高轉速 High Speed					A									
軸貫穿孔選項 Shaft Extension	標準中空軸 (預設) Standard Hollow Shaft(default)						H								
	客製化中空軸 Hollow Shaft, Customized Through-Hole Size						C								
	含旋轉接頭 with Rotary Joint						T								
	含旋轉接頭與夾頭 with Rotary Joint and Chuck						U								
	其它 Others						V ⋮								
冷卻形式與煞車選項 The Cooling and The Clamp	油 (水) 冷 / 有煞車 (預設) Liquid-Cooling/with Pneumatic Clamp (default)							空白							
	油 (水) 冷 / 無煞車 Liquid-Cooling/without Clamp							N							
	自冷 / 無煞車 Self-Cooling/without Clamp							M							
	自冷 / 有煞車 Self-Cooling/with Pneumatic Clamp							L							
固定碼 Fixed Number															
絕對式 [a] 編碼器選項 Abs. Encoder Types	NIKON Protocol MC43									2					
	RENISHAW SIEMENS									6					
	RENISHAW MITSUBISHI									7					
	RENISHAW FANUC									8					
	RENISHAW BiSSS-C									9					
	HEIDENHAIN ECA EnDat2.2									D					
	RENISHAW PANASONIC									E					
	客供海德漢 ECA4000 編碼器									X					
	客供 RENISHAW BiSSC 編碼器									Y					
	其它									⋮					
電機出線方式 Connector Direction	後方出線 (預設) from NDE(default)										R				
	其它														
中繼線選項 Cable Types	標準中 繼線 Standard Type											C			
	尼龍管中繼線 Cable with Nylon Protective Tube											N			
	尼龍管防爆線 Cable with Nylon Protective Tube + Stainless Steel Braiding											S			
	兩段式尼龍管線 Two-stage Cable with Nylon Protective Tube											T			
	兩段式尼龍管防爆線 Two-stage Cable with Nylon Protective Tube + Stainless Steel Braiding											M			
中繼線線長 Cable Length	5m												1		
	7m												2		
	其他長度 Other Length												3 ⋮		
固定碼 Fixed Number															
版本碼 Design Revision															1~Z

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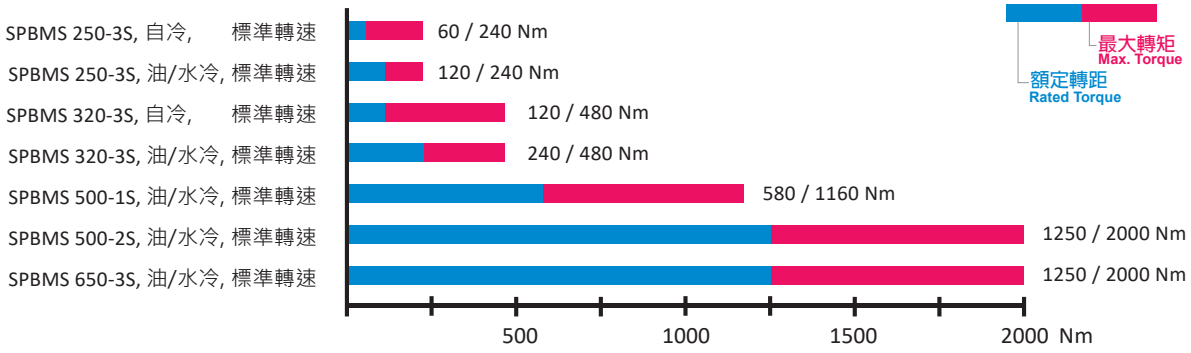
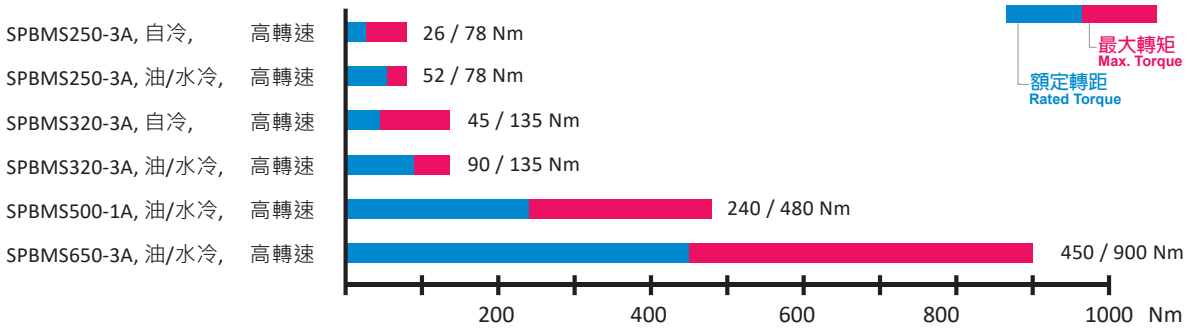
SPBMS 全系列轉矩分布圖 – 標準轉速 / SPBMS Torque Distribution_Standard Speed



SPBMS 全系列轉矩分布圖 – 高轉速 / SPBMS Torque Distribution_High Speed



備註：

a) 編碼器的種類與控制器的廠牌相關，請洽晟昌工程人員。

REMARK：

a) Encoder types are relative to the CNC controller, please contact SOLPOWER for further details.

SPBMS Series

SPBMS250
Model Designations

SOLPOWER Power Bearing Module Model SPBMS Series				SPBMS250-3SH ｜動力模組 250 標準轉速				
Model				-3SH 水冷有煞車	-3SHN 水冷無煞車	-3SHM 自冷無煞車	-3SHL 自冷有煞車	
項目 Item			單位 Unit	數值 Value				備註 Remarks
機械參數 Mechanical Specification	驅動方式 Driving system	--	--	電機直接驅動 Direct-Drive				
	出軸徑 Shaft Diamater	SD	mm	Φ90h7				旋轉件安裝基準
	軸貫穿孔徑 Through hole diamater	TD	mm	Φ46G7				
	整機重量 Total weight (including Torque Motor)	W	kg	63	55	55	63	
	轉動慣量 Inertia	J	kg·m^2	0.1				
	容許負載轉動慣量 Allowable load inertia	Ja	kg·m^2	0.3				
	馬達鬆煞車壓力 Un-Clamping Pressure	Puc	kg/cm^2	5	--	--	5	氣壓活塞式 Pneumatic
	馬達煞車鎖緊壓力 Clamping Pressure	Pc	kg/cm^2	5	--	--	5	
	馬達煞車鎖緊扭力 Clamping Torque	Tc	Nm	400	--	--	400	
	容許負載重量 Capacity of workpiece mass	臥式	kg	200 (Φ250x500L, S45C)				示意圖 (1)
		立式	kg	150				示意圖 (2)
	煞車時的容許負載 Allowable load when clamped	F	N	15000				示意圖 (3)
		FxL 徑向	Nm	400				示意圖 (4)
		FxL 軸向	Nm	600				示意圖 (5)
	出軸端的徑向偏擺 Shaft runout Radial	Rr	mm	<0.005				示意圖 (6)
	出軸端的軸向偏擺 Shaft runout Axial	Ra	mm	<0.005				示意圖 (7)
	保護等級 IP protection level	--	--	IP67				
電機參數 Electrical Specification	冷卻方式 Cooling method	--	--	油 / 水冷卻 Liqud-Cooling		自然冷卻 Self-Cooling		
	驅動器輸入電壓 Driver input voltage	V_D	Vrms	220	380	220	380	
	轉子極數 Poles	P	--	44		44		
	額定功率 Rated power	Pr	W	1256		628		
	額定扭力 / 最大扭力 Rated Torque / Max. Torque	Tr / Tm	Nm	120 / 240	120 / 270	60 / 240	60 / 270	
	額定電流 / 最大電流 Rated Current / Max. Current	Ir / Im	Arms	11 / 24	11 / 30	4.4 / 24	4.4 / 30	
	額定轉速 / 最大轉速 Rated Speed / Max. Speed	Vr / Vm	rpm	100 / 200	100 / 300	100 / 200	100 / 300	
	電機線間反電動勢 Back E.M.F.	Ke	Vrms@100rpm	90		90		terminal to terminal
	扭力常數 Torque constant	K_T	Nm/Arms	13.6		13.6		
	定位精度 a) Absolute accuracy	P	arc-sec	±10		±10		
	重複精度 Repeatability	Ps	arc-sec	4		4		
	反向誤差 Backlash	U	arc-sec	4		4		

註 a) DD 轉台的定位精度最高可達 ±5 角秒，主要取決於編碼器的品牌與本質解析度，關於此類進階的技術應用需求，請洽晟昌工程人員。

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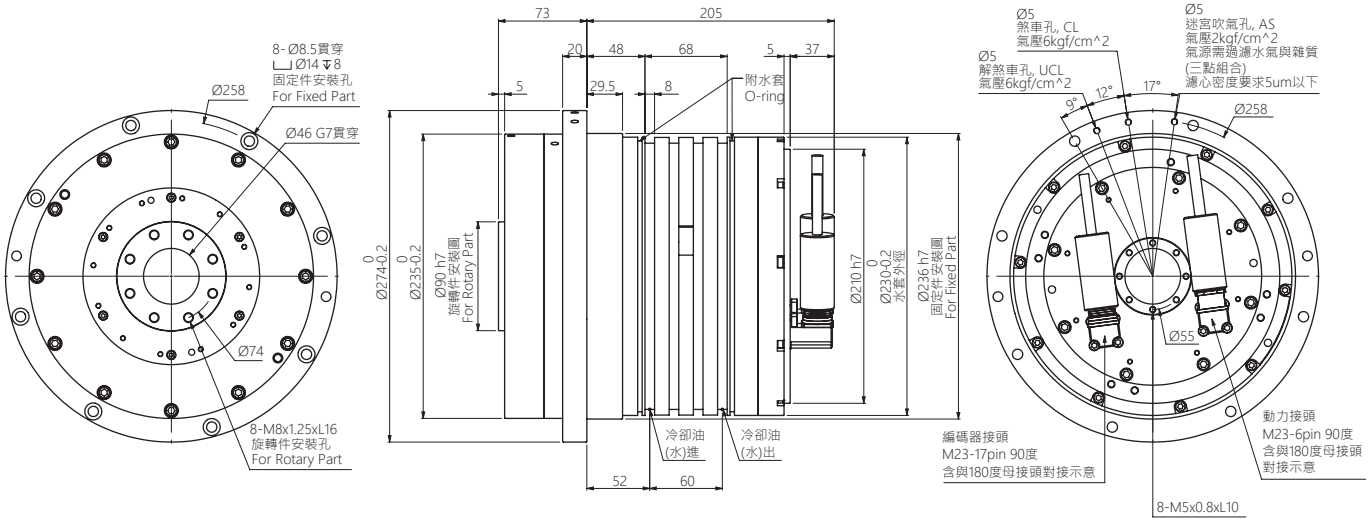
SPBMS250-3SH



SPBMS250-3SHN

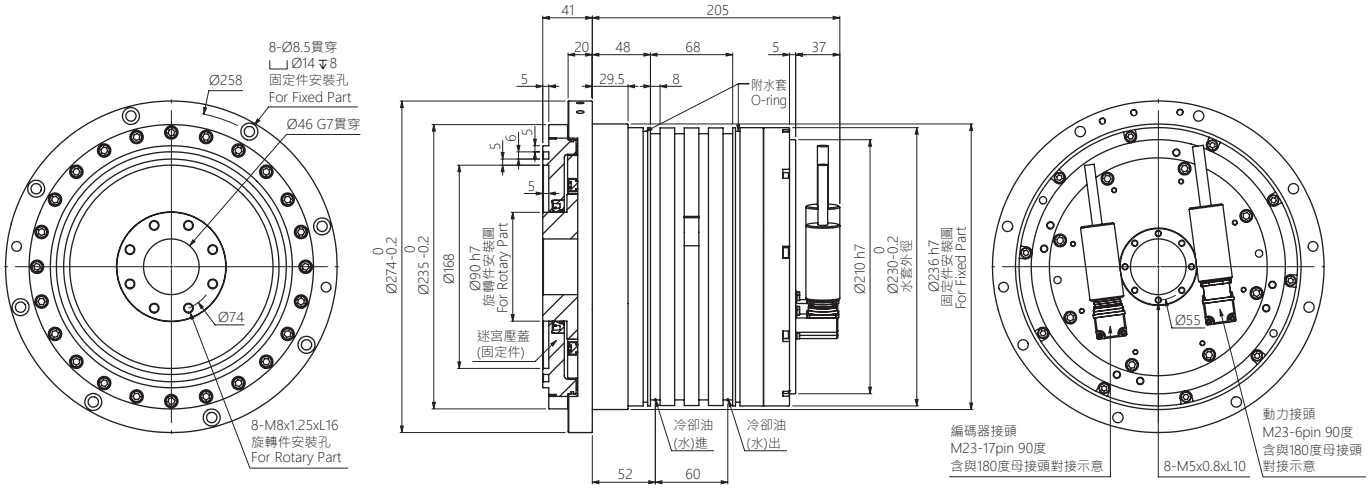
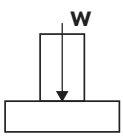
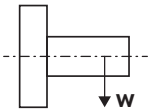
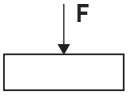
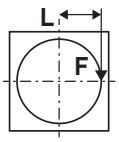
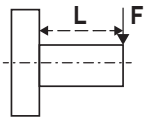
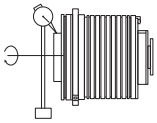
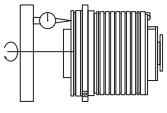
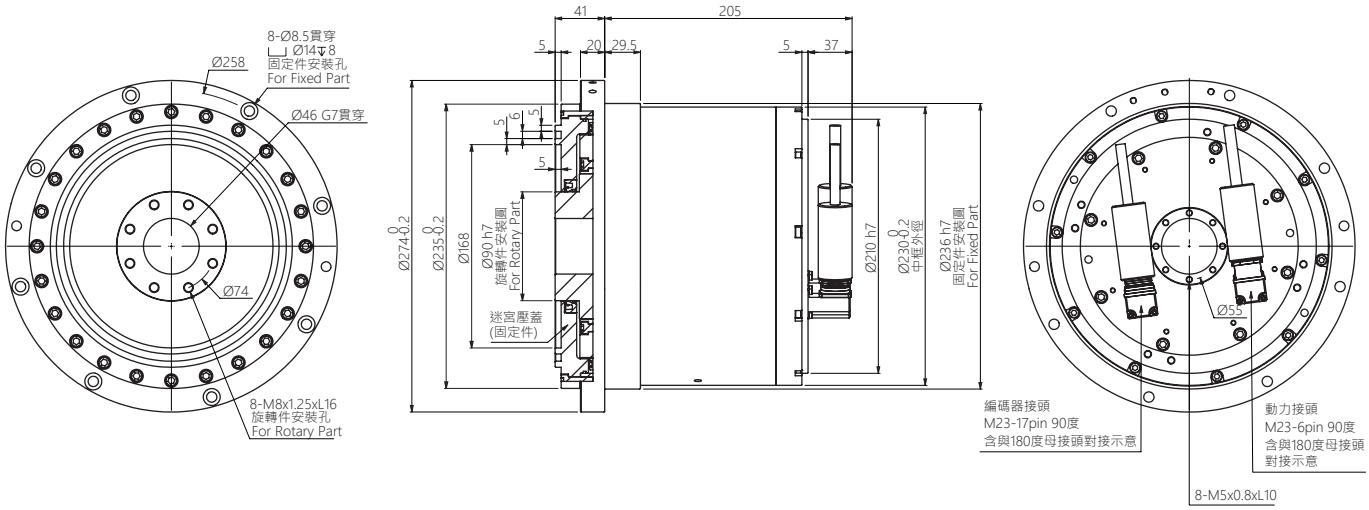


示意圖 (1)	示意圖 (2)	示意圖 (3)	示意圖 (4)	示意圖 (5)	示意圖 (6)	示意圖 (7)
						

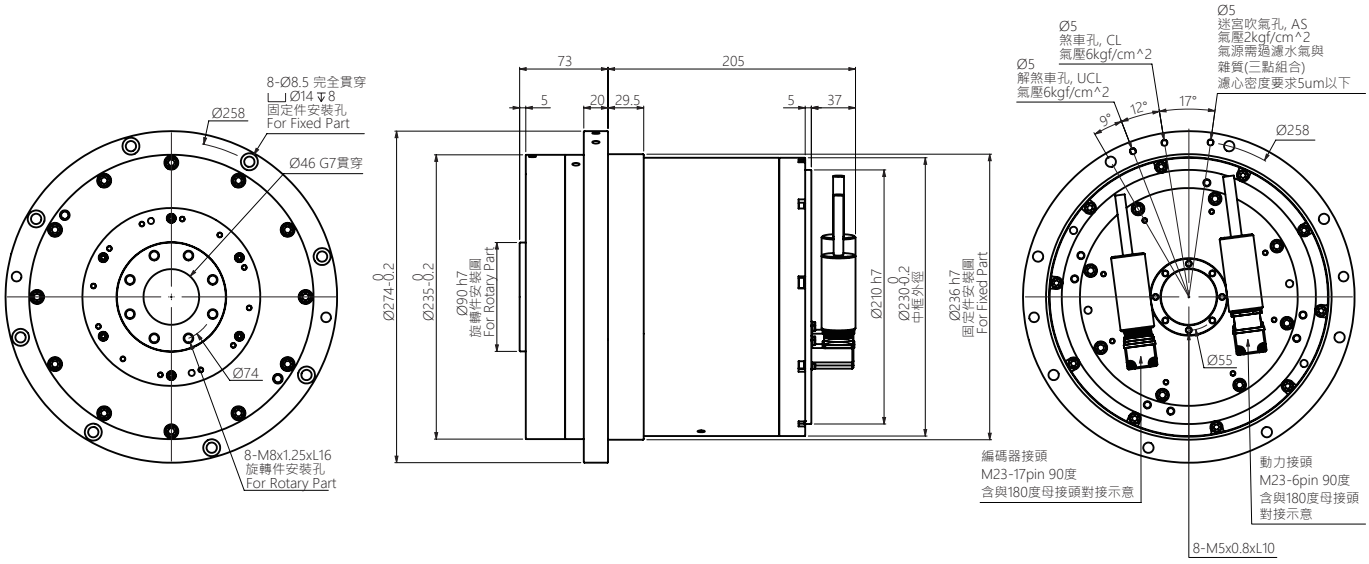
SPBMS Series

SPBMS250
Model Designations

SPBMS250-3SHM



SPBMS250-3SHL



SOLPOWER Power Bearing Module Model SPBMS Series			SPBMS250-3AH ｜動力模組 250 高轉速				
Model			-3AH 水冷有煞車	-3AHN 水冷無煞車	-3AHM 自冷無煞車	-3AHL 自冷有煞車	
項目 Item		單位 Unit	數值 Value				備註 Remarks
機械參數 Mechanical Specification	驅動方式 Driving system	--	--	電機直接驅動 Direct-Drive			
	出軸徑 Shaft Diamater	SD	mm	Φ90h7			旋轉件安裝基準
	軸貫穿孔徑 Through hole diamater	TD	mm	Φ46G7			
	整機重量 Total weight (including Torque Motor)	W	kg	66	58	58	66
	轉動慣量 Inertia	J	kg·m^2	0.1			
	容許負載轉動慣量 Allowable load inertia	Ja	kg·m^2	0.3			
	馬達鬆煞車壓力 Un-Clamping Pressure	Puc	kg/cm^2	5	--	--	5
	馬達煞車鎖緊壓力 Clamping Pressure	Pc	kg/cm^2	5	--	--	5
	馬達煞車鎖緊扭力 Clamping Torque	Tc	Nm	400	--	--	400
	容許負載重量 Capacity of workpiece mass	臥式	kg	80 (Φ250x200L, S45C)			示意圖 (1)
		立式	kg	60			示意圖 (2)
	煞車時的容許負載 Allowable load when clamped	F	N	10000			示意圖 (3)
		FxL 徑向	Nm	400			示意圖 (4)
		FxL 軸向	Nm	600			示意圖 (5)
	出軸端的徑向偏擺 Shaft runout Radial	Rr	mm	<0.005			示意圖 (6)
	出軸端的軸向偏擺 Shaft runout Axial	Ra	mm	<0.005			示意圖 (7)
	保護等級 IP protection level	--	--	IP67			
電機參數 Electrical Specification	冷卻方式 Cooling method	--	--	油 / 水冷卻 Liqud-Cooling		自然冷卻 Self-Cooling	
	驅動器輸入電壓 Driver input voltage	V_D	Vrms	220	380	220	380
	轉子極數 Poles	P	--	16		16	
	額定功率 Rated power	Pr	W	5500		2750	
	額定扭力 / 最大扭力 Rated Torque / Max. Torque	Tr / Tm	Nm	52 / 78	52 / 78	26 / 78	26 / 78
	額定電流 / 最大電流 Rated Current / Max. Current	Ir / Im	Arms	26 / 40	26 / 40	13 / 40	13 / 40
	額定轉速 / 最大轉速 Rated Speed / Max. Speed	Vr / Vm	rpm	1000 / 1500	1000 / 2000	1000 / 1500	1000 / 2000
	電機線間反電動勢 Back E.M.F.	Ke	Vrms@100rpm	14		14	terminal to terminal
	扭力常數 Torque constant	K_T	Nm/Arms	2		2	
	定位精度 a) Absolute accuracy	P	arc-sec	±10		±10	
	重複精度 Repeatability	Ps	arc-sec	4		4	
	反向誤差 Backlash	U	arc-sec	4		4	

註 a) DD 轉台的定位精度最高可達 ±5 角秒，主要取決於編碼器的品牌與本質解析度，關於此類進階的技術應用需求，請洽晟昌工程人員。

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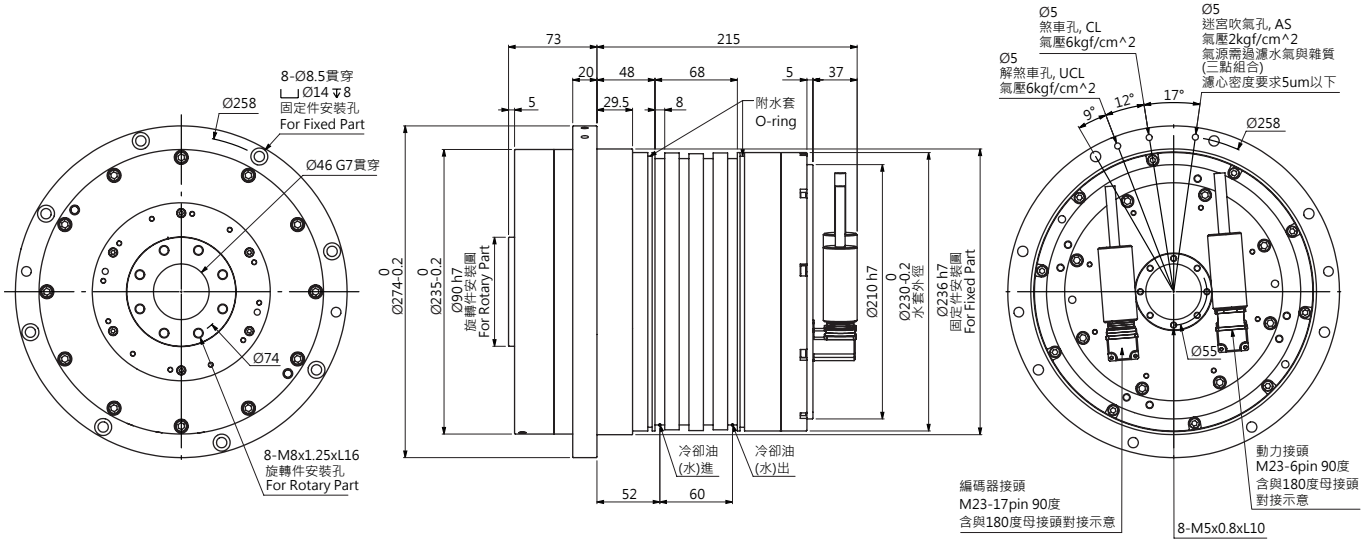
SPBMS Series

SPBMS250
Model Designations

SPBMS250-3AH



SPBMS250-3AHN

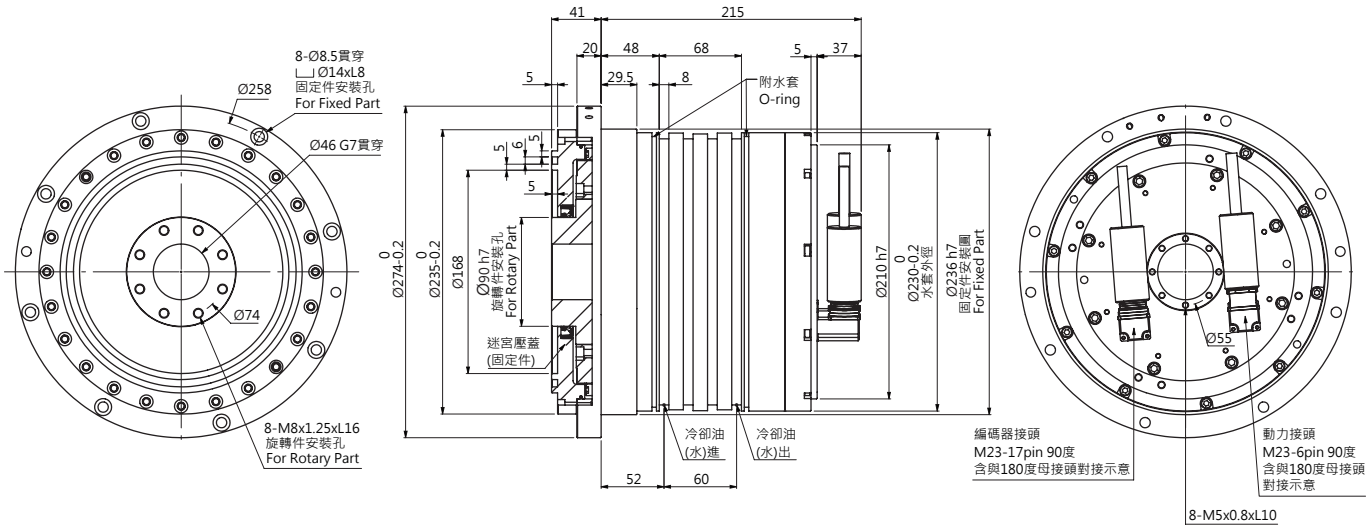
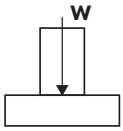
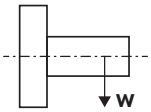
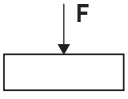
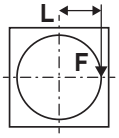
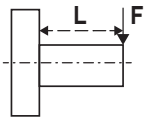
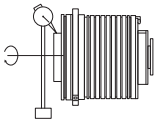
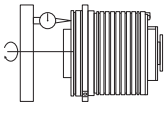


示意圖 (1)	示意圖 (2)	示意圖 (3)	示意圖 (4)	示意圖 (5)	示意圖 (6)	示意圖 (7)
						

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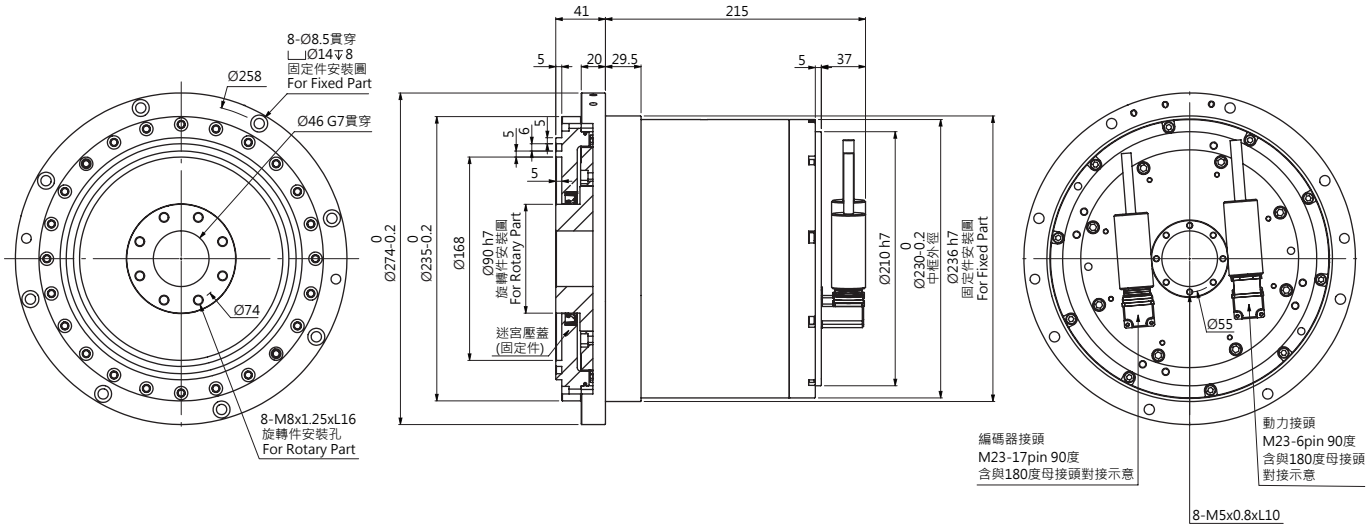

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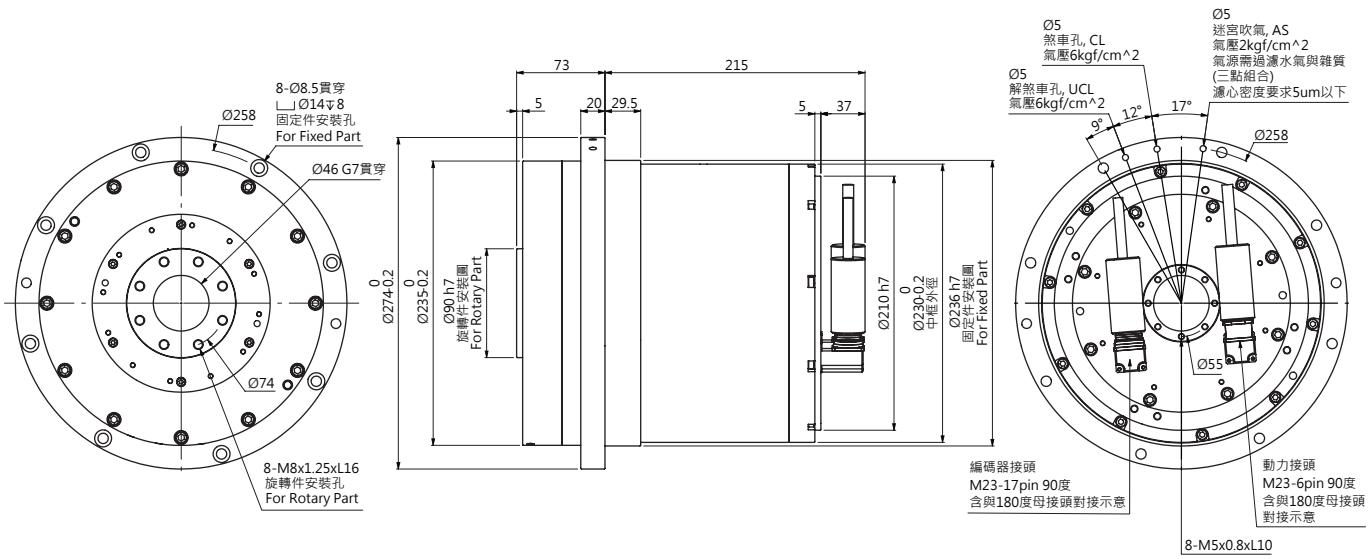

SPBMS320
Model Designations

SOLPOWER Power Bearing Module Model SPBMS Series				SPBMS320-3SH ｜動力模組 320 標準轉速				
Model				-3SH 水冷有煞車	-3SHN 水冷無煞車	-3SHM 自冷無煞車	-3SHL 自冷有煞車	
項目 Item			單位 Unit	數值 Value				備註 Remarks
機械參數 Mechanical Specification	驅動方式 Driving system	--	--	電機直接驅動 Direct-Drive				
	出軸徑 Shaft Diamater	SD	mm	Φ90h7	Φ130h7	Φ130h7	Φ90h7	旋轉件安裝基準
	軸貫穿孔徑 Through hole diamater	TD	mm	Φ46G7				
	整機重量 Total weight (including Torque Motor)	W	kg	110	94	94	110	
	轉動慣量 Inertia	J	kg·m^2	0.2				
	容許負載轉動慣量 Allowable load inertia	Ja	kg·m^2	0.6				
	馬達鬆煞車壓力 Un-Clamping Pressure	Puc	kg/cm^2	5	--	--	5	氣壓活塞式 Pneumatic
	馬達煞車鎖緊壓力 Clamping Pressure	Pc	kg/cm^2	5	--	--	5	
	馬達煞車鎖緊扭力 Clamping Torque	Tc	Nm	600	--	--	600	
	容許負載重量 Capacity of workpiece mass	臥式	kg	300 (Φ320x480L, S45C)				示意圖 (1)
		立式	kg	225				示意圖 (2)
	煞車時的容許負載 Allowable load when clamped	F	N	20000				示意圖 (3)
		FxL 徑向	Nm	600				示意圖 (4)
		FxL 軸向	Nm	900				示意圖 (5)
	出軸端的徑向偏擺 Shaft runout Radial	Rr	mm	<0.005				示意圖 (6)
	出軸端的軸向偏擺 Shaft runout Axial	Ra	mm	<0.005				示意圖 (7)
	保護等級 IP protection level	--	--	IP67				
電機參數 Electrical Specification	冷卻方式 Cooling method	--	--	油 / 水冷卻 Liqud-Cooling		自然冷卻 Self-Cooling		
	驅動器輸入電壓 Driver input voltage	V_D	Vrms	220	380	220	380	
	轉子極數 Poles	P	--	44		44		
	額定功率 Rated power	Pr	W	2512		1256		
	額定扭力 / 最大扭力 Rated Torque / Max. Torque	Tr / Tm	Nm	240 / 480	240 / 480	120 / 480	120 / 480	
	額定電流 / 最大電流 Rated Current / Max. Current	Ir / Im	Arms	22 / 48	22 / 48	8.6 / 48	8.6 / 48	
	額定轉速 / 最大轉速 Rated Speed / Max. Speed	Vr / Vm	rpm	100 / 150	100 / 200	100 / 150	100 / 200	
	電機線間反電動勢 Back E.M.F.	Ke	Vrms@100rpm	94		94		terminal to terminal
	扭力常數 Torque constant	K_T	Nm/Arms	14		14		
	定位精度 a) Absolute accuracy	P	arc-sec	±10		±10		
	重複精度 Repeatability	Ps	arc-sec	4		4		
	反向誤差 Backlash	U	arc-sec	4		4		

註 a) DD 轉台的定位精度最高可達 ±5 角秒，主要取決於編碼器的品牌與本質解析度，關於此類進階的技術應用需求，請洽晟昌工程人員。

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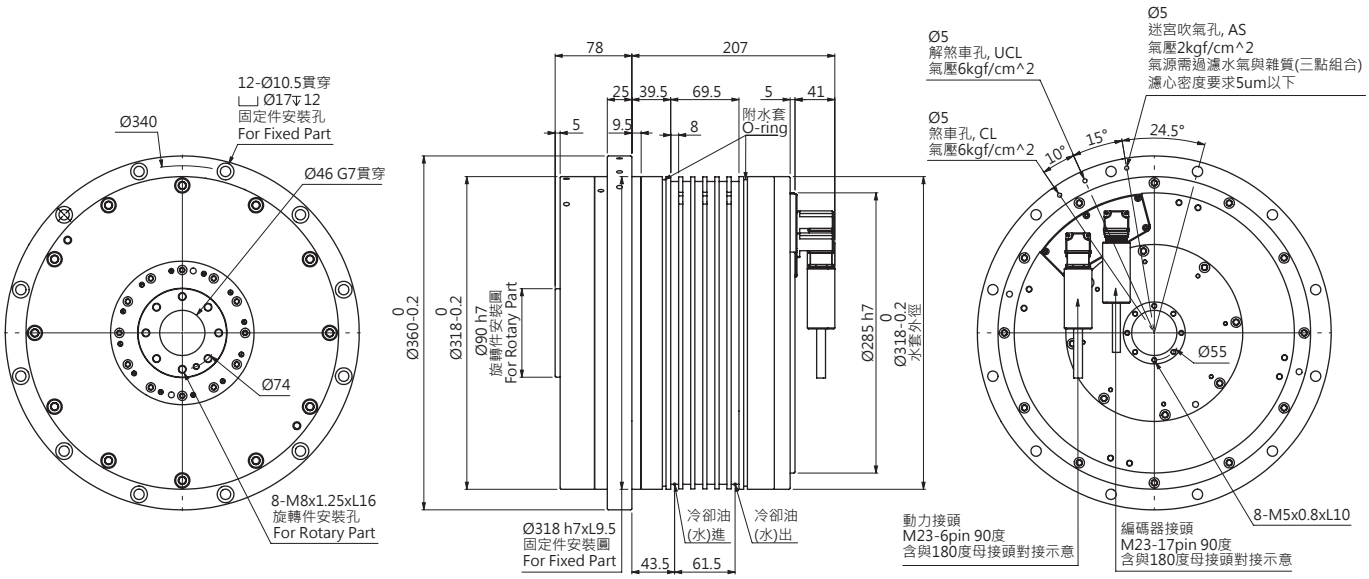
SPBMS320-3SH



SPBMS320-3SHN

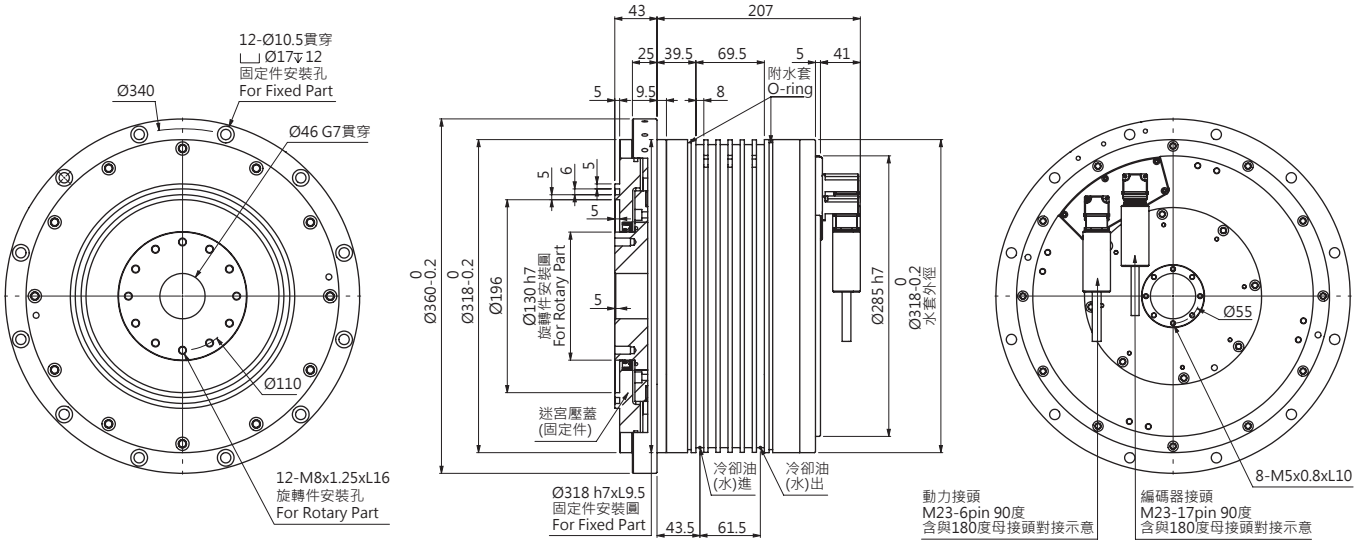
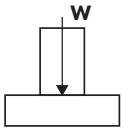
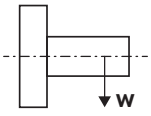
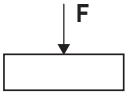
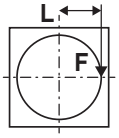
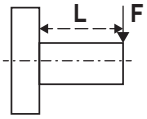
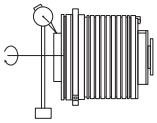
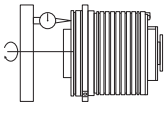
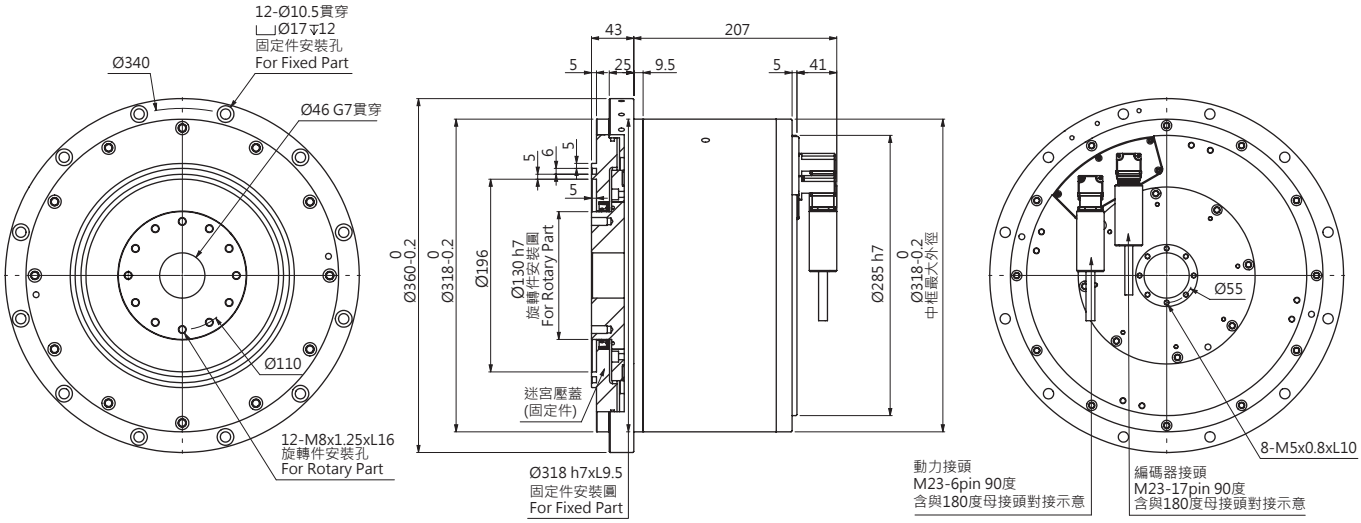


示意圖 (1)	示意圖 (2)	示意圖 (3)	示意圖 (4)	示意圖 (5)	示意圖 (6)	示意圖 (7)
						

SPBMS Series

SPBMS320
Model Designations

SPBMS320-3SHM



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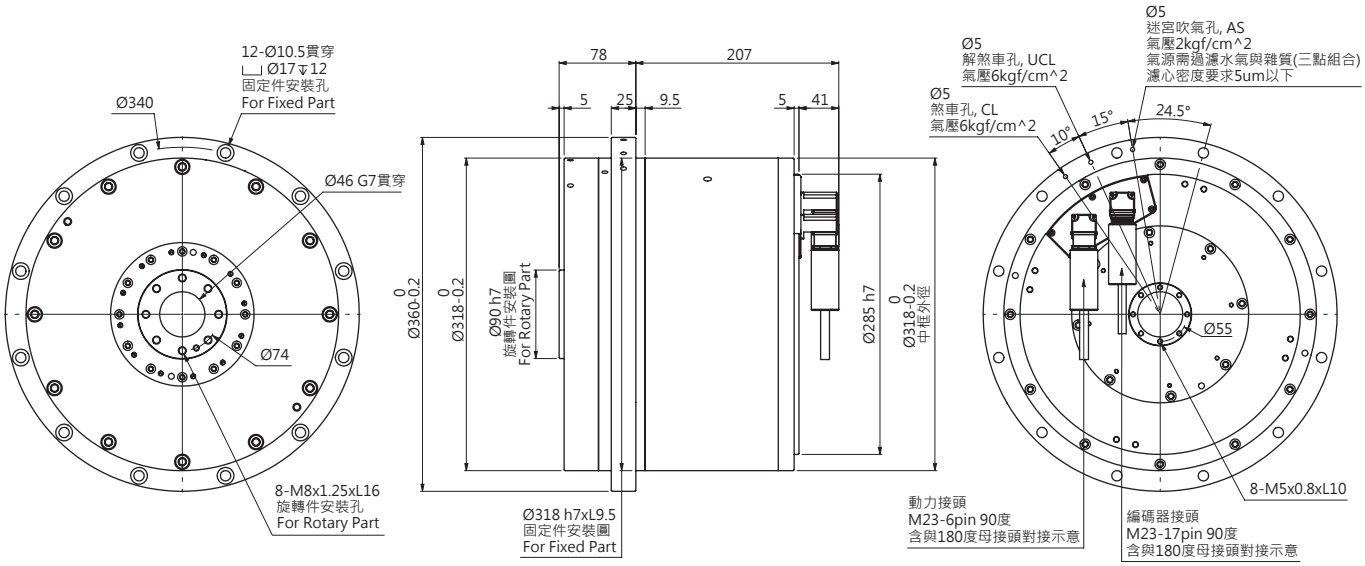

SOLPOWER Power Bearing Module Model SPBMS Series				SPBMS320-3AH ｜動力模組 320 高轉速				
Model				-3AH 水冷有煞車	-3AHN 水冷無煞車	-3AHM 自冷無煞車	-3AHL 自冷有煞車	
項目 Item			單位 Unit	數值 Value				備註 Remarks
機械參數 Mechanical Specification	驅動方式 Driving system	--	--	電機直接驅動 Direct-Drive				
	出軸徑 Shaft Diamater	SD	mm	Φ90h7	Φ130h7	Φ130h7	Φ90h7	旋轉件安裝基準
	軸貫穿孔徑 Through hole diamater	TD	mm	Φ46G7				
	整機重量 Total weight (including Torque Motor)	W	kg	117	111	111	117	
	轉動慣量 Inertia	J	kg·m^2	0.2				
	容許負載轉動慣量 Allowable load inertia	Ja	kg·m^2	0.6				
	馬達鬆煞車壓力 Un-Clamping Pressure	Puc	kg/cm^2	5	--	--	5	氣壓活塞式 Pneumatic
	馬達煞車鎖緊壓力 Clamping Pressure	Pc	kg/cm^2	5	--	--	5	
	馬達煞車鎖緊扭力 Clamping Torque	Tc	Nm	600	--	--	600	
	容許負載重量 Capacity of workpiece mass	臥式	kg	150 (Φ320x240L, S45C)				示意圖 (1)
		立式	kg	100				示意圖 (2)
	煞車時的容許負載 Allowable load when clamped	F	N	15000				示意圖 (3)
		FxL 徑向	Nm	600				示意圖 (4)
		FxL 軸向	Nm	900				示意圖 (5)
	出軸端的徑向偏擺 Shaft runout Radial	Rr	mm	<0.005				示意圖 (6)
	出軸端的軸向偏擺 Shaft runout Axial	Ra	mm	<0.005				示意圖 (7)
	保護等級 IP protection level	--	--	IP67				
電機參數 Electrical Specification	冷卻方式 Cooling method	--	--	油 / 水冷卻 Liqud-Cooling		自然冷卻 Self-Cooling		
	驅動器輸入電壓 Driver input voltage	V_D	Vrms	220	380	220	380	
	轉子極數 Poles	P	--	10		10		
	額定功率 Rated power	Pr	W	4700	9400	2350	4700	
	額定扭力 / 最大扭力 Rated Torque / Max. Torque	Tr / Tm	Nm	90 / 135	90 / 135	45 / 135	45 / 135	
	額定電流 / 最大電流 Rated Current / Max. Current	Ir / Im	Arms	32 / 50	32 / 50	16 / 50	16 / 50	
	額定轉速 / 最大轉速 Rated Speed / Max. Speed	Vr / Vm	rpm	500 / 1000	1000 / 1500	500 / 1000	1000 / 1500	
	電機線間反電動勢 Back E.M.F.	Ke	Vrms@100rpm	18		18		terminal to terminal
	扭力常數 Torque constant	K_T	Nm/Arms	2.8		2.8		
	定位精度 a) Absolute accuracy	P	arc-sec	±10		±10		
	重複精度 Repeatability	Ps	arc-sec	4		4		
	反向誤差 Backlash	U	arc-sec	4		4		

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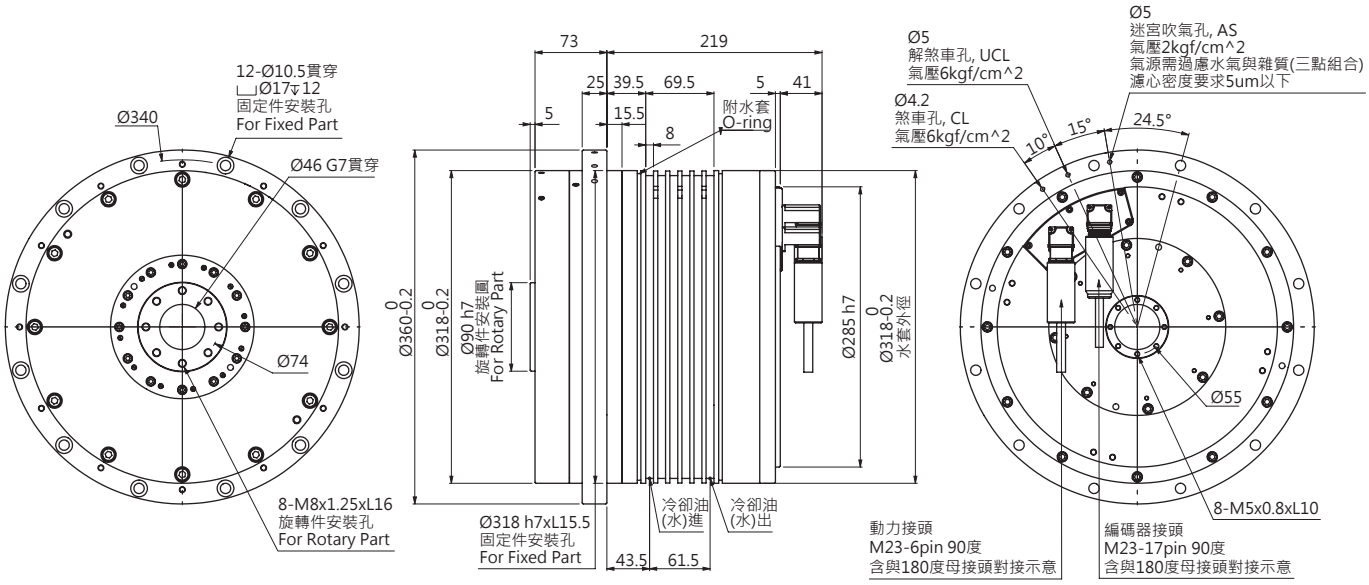
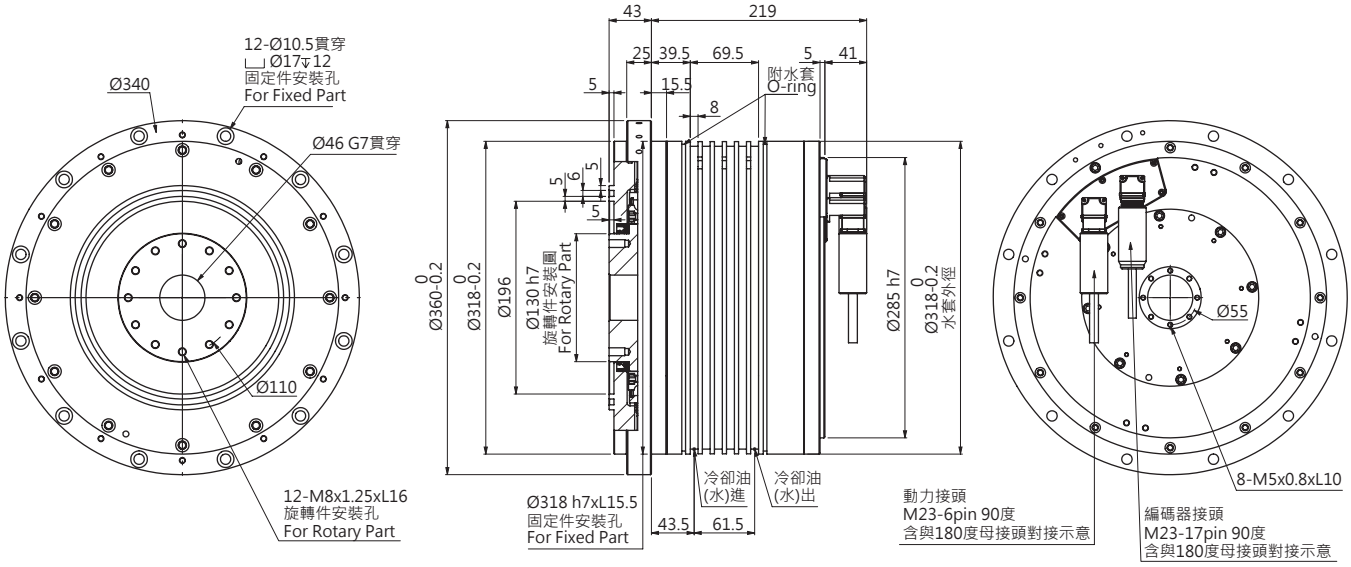
SPBMS Series

SPBMS320
Model Designations

SPBMS320-3AH



SPBMS320-3AHN



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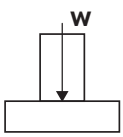
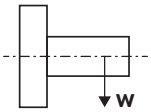
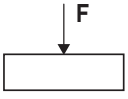
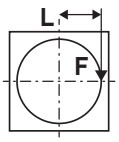
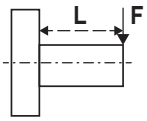
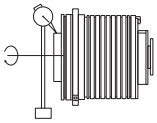
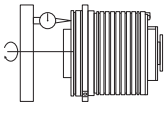
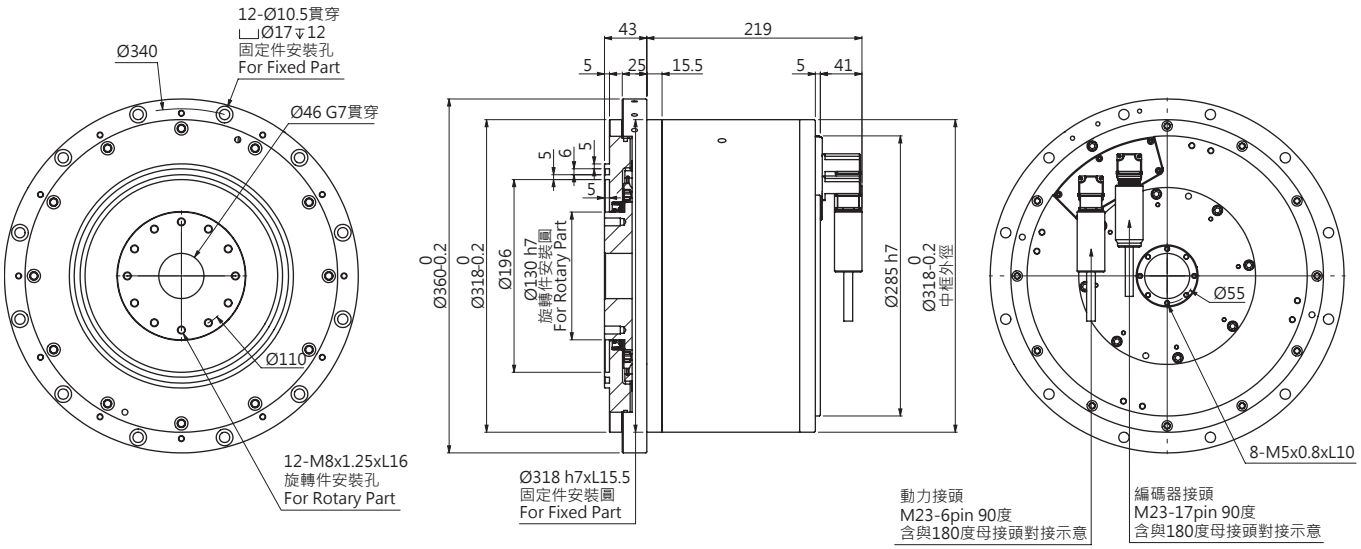
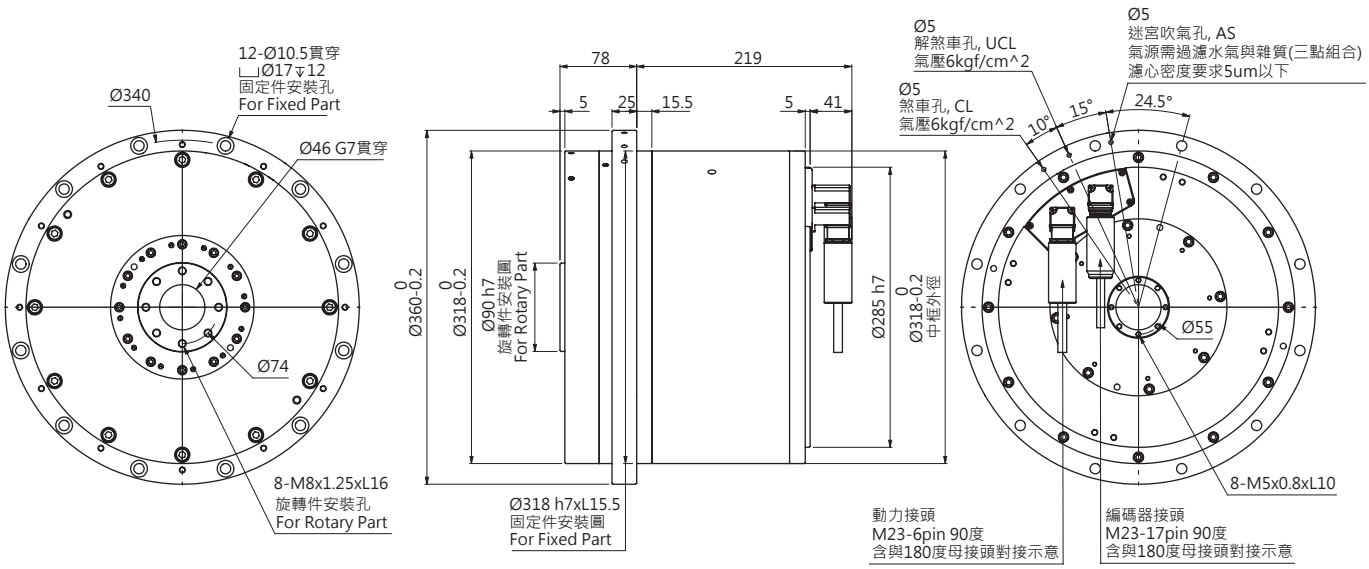
						

SPBMS320-3AHM



SPBMS320-3AHL



SPBMS Series

SPBMS500-1SH
Model Designations

SOLPOWER Power Bearing Module Model SPBMS Series			**SPBMS500-1SH ｜動力模組 500 標準轉速**		
	項目 Item		**單位 Unit**	**數值 Value**	**備註 Remarks**
機械參數 Mechanical Specification	**驅動方式** Driving system	--	--	**電機直接驅動** Direct-Drive	
	出軸徑 Shaft Diamater	SD	mm	Φ150h7	旋轉件安裝基準
	軸貫穿孔徑 Through hole diamater	TD	mm	Φ85G7xL10, Φ70 **貫穿**	
	整機重量 Total weight (including Torque Motor)	W	kg	265	
	馬達鬆煞車壓力 Un-Clamping Pressure	Puc	kg/cm^2	12	油壓活塞式 Hydraulic
	馬達煞車鎖緊壓力 Clamping Pressure	Pc	kg/cm^2	12	
	馬達煞車鎖緊扭力 Clamping Torque	Tc	Nm	1500	
	容許負載重量 Capacity of workpiece mass	**臥式**	kg	500 (Φ500x320L, S45C)	**示意圖 (1)**
		立式	kg	375	**示意圖 (2)**
	煞車時的容許負載 Allowable load when clamped	F	N	30000	**示意圖 (3)**
		FxL **徑向**	Nm	1500	**示意圖 (4)**
		FxL **軸向**	Nm	2000	**示意圖 (5)**
	出軸端的徑向偏擺 Shaft runout Radial	Rr	mm	<0.005	**示意圖 (6)**
	出軸端的軸向偏擺 Shaft runout Axial	Ra	mm	<0.005	**示意圖 (7)**
	保護等級 IP protection level	--	--	IP67	
	冷卻方式 Cooling method	--	--	**油 / 水冷卻** Liqud-Cooling	
電機參數 Electrical Specification	**驅動器輸入電壓** Driver input voltage	V_D	Vrms	220 / 380	
	轉子極數 Poles	P	--	88	
	水冷額定功率 Rated power (Liqud-Cooling)	Prc	W	3035	
	水冷額定扭力 / 最大扭力 Rated Torque (Liqud-Cooling) / Max.Torque	Trc / Tm	Nm	580 / 870 / 580 / 1160	
	水冷額定電流 / 最大電流 Rated Current (Liqud-Cooling) / Max.Current	Irc / Im	Arms	30 / 46 / 30 / 64	
	額定轉速 / 最大轉速 Rated Speed / Max. Speed	Vr / Vm	rpm	50 / 100 / 50 / 150	
	電機線間反電動勢 Back E.M.F.	Ke	Vrms@100rpm	150	terminal to terminal
	扭力常數 Torque constant	K_T	Nm/Arms	25	
	最小設定單位 Least input increment	--	degree	0.001	
	定位精度 a) Absolute accuracy	P	arc-sec	±10	
	重複精度 Repeatability	Ps	arc-sec	4	
	反向誤差 Backlash	U	arc-sec	4	

註 a) DD 轉台的定位精度最高可達 ±5 角秒，主要取決於編碼器的品牌與本質解析度，關於此類進階的技術應用需求，請洽晟昌工程人員。

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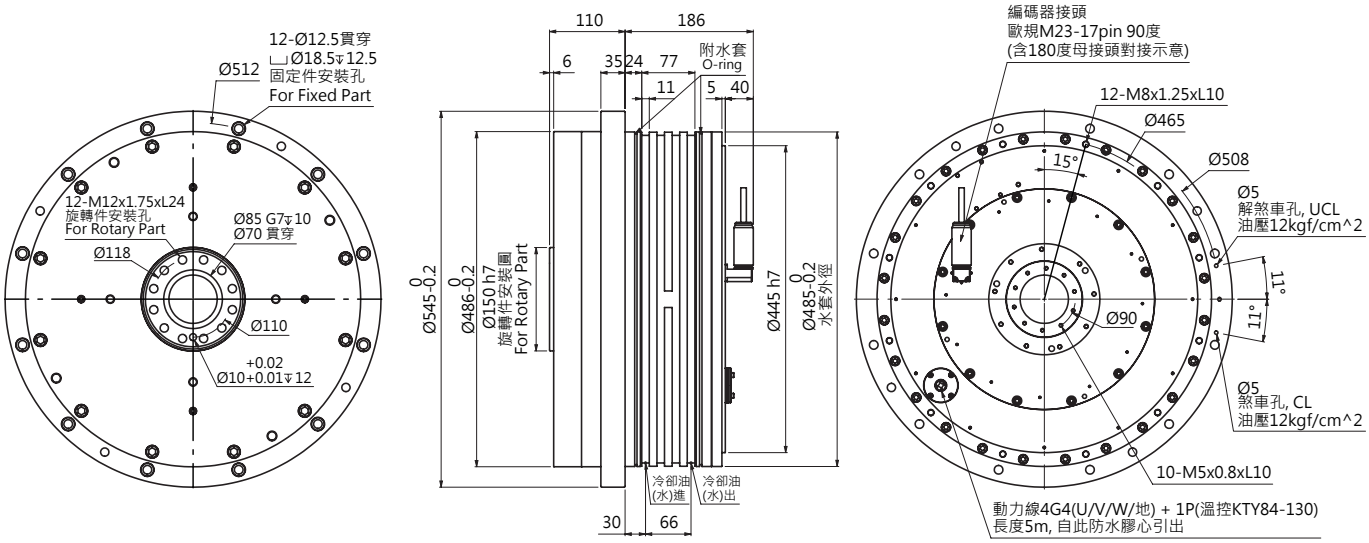

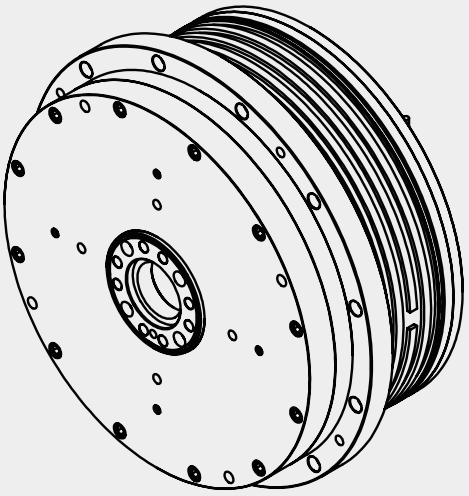

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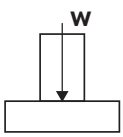	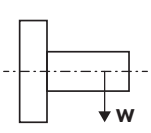	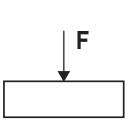	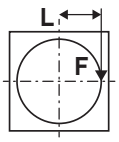	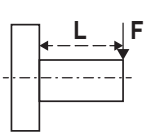	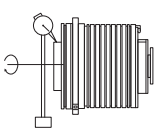	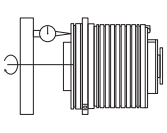

SPBMS Series

SPBMS500-2SH
Model Designations

SOLPOWER Power Bearing Module Model SPBMS Series			**SPBMS500-2SH ｜動力模組 500 標準轉速**	
項目 Item		單位 Unit	數值 Value	備註 Remarks
機械參數 Mechanical Specification				
驅動方式 Driving system	--	--	電機直接驅動 Direct-Drive	
出軸徑 Shaft Diamater	SD	mm	Φ150h7	旋轉件安裝基準
軸貫穿孔徑 Through hole diamater	TD	mm	Φ85G7xL10, Φ70 貫穿	
整機重量 Total weight (including Torque Motor)	W	kg	295	
馬達鬆煞車壓力 Un-Clamping Pressure	Puc	kg/cm^2	12	油壓活塞式 Hydraulic
馬達煞車鎖緊壓力 Clamping Pressure	Pc	kg/cm^2	12	
馬達煞車鎖緊扭力 Clamping Torque	Tc	Nm	1500	
容許負載重量 Capacity of workpiece mass	臥式	kg	500 (Φ500x320L, S45C)	示意圖 (1)
	立式	kg	375	示意圖 (2)
煞車時的容許負載 Allowable load when clamped	F	N	30000	示意圖 (3)
	FxL 徑向	Nm	1500	示意圖 (4)
	FxL 軸向	Nm	2000	示意圖 (5)
出軸端的徑向偏擺 Shaft runout Radial	Rr	mm	<0.005	示意圖 (6)
出軸端的軸向偏擺 Shaft runout Axial	Ra	mm	<0.005	示意圖 (7)
保護等級 IP protection level	--	--	IP67	
冷卻方式 Cooling method	--	--	油 / 水冷卻 Liqud-Cooling	
電機參數 Electrical Specification				
驅動器輸入電壓 Driver input voltage	V_D	Vrms	220 / 380	
轉子極數 Poles	P	--	88	
水冷額定功率 Rated power (Liqud-Cooling)	Prc	W	3270	
水冷額定扭力 / 最大扭力 Rated Torque (Liqud-Cooling) / Max.Torque	Trc / Tm	Nm	1250 / 1400 / 1250 / 2000	
水冷額定電流 / 最大電流 Rated Current (Liqud-Cooling) / Max.Current	Irc / Im	Arms	30 / 34 / 30 / 50	
額定轉速 / 最大轉速 Rated Speed / Max. Speed	Vr / Vm	rpm	25 / 50 / 25 / 90	
電機線間反電動勢 Back E.M.F.	Ke	Vrms@100rpm	300	terminal to terminal
扭力常數 Torque constant	K_T	Nm/Arms	50	
最小設定單位 Least input increment	--	degree	0.001	
定位精度 a) Absolute accuracy	P	arc-sec	±10	
重複精度 Repeatability	Ps	arc-sec	4	
反向誤差 Backlash	U	arc-sec	4	

註 a) DD 轉台的定位精度最高可達 ±5 角秒，主要取決於編碼器的品牌與本質解析度，關於此類進階的技術應用需求，請洽晟昌工程人員。

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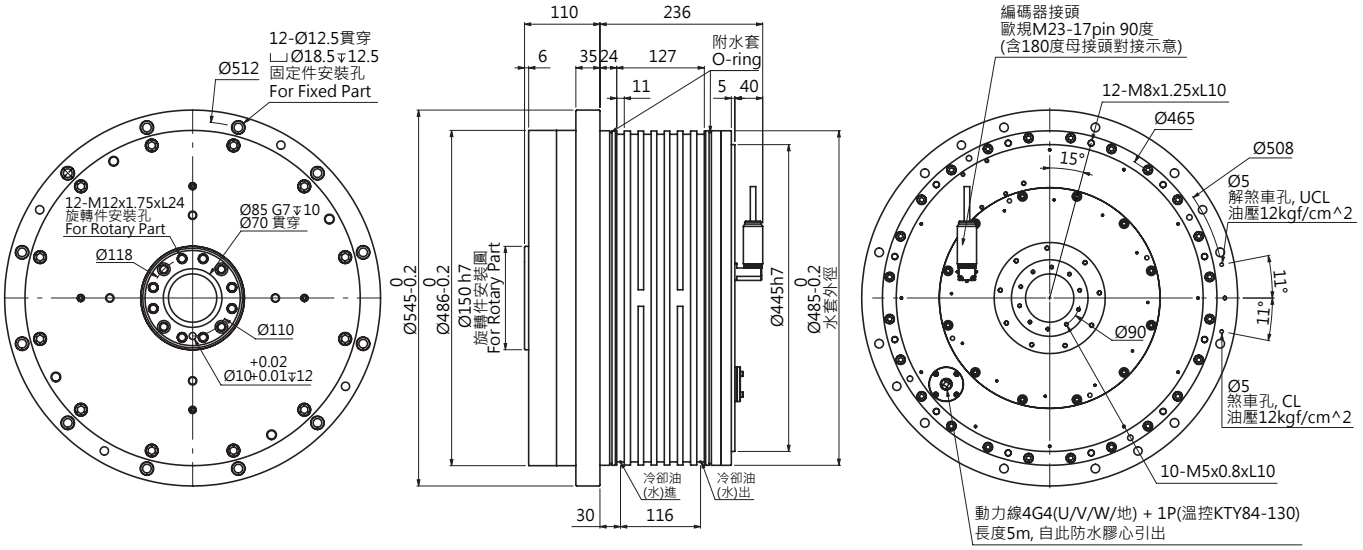

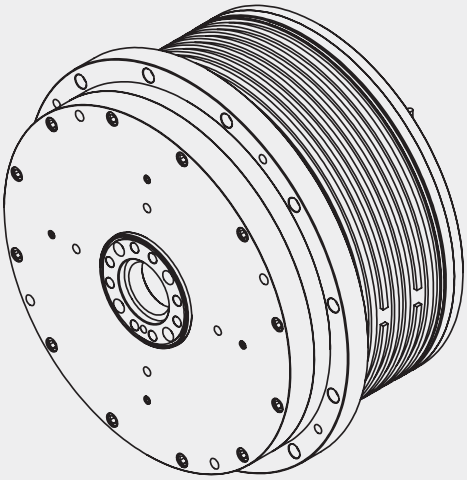

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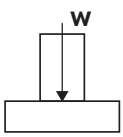	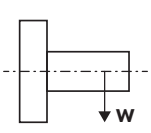	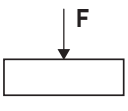	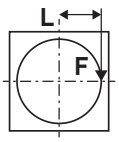	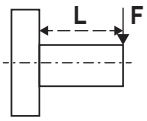	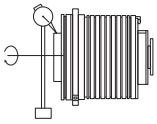	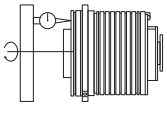

SPBMS Series

SPBMS500-1AH
Model Designations

SOLPOWER Power Bearing Module Model SPBMS Series				**SPBMS500-1AH ｜動力模組 500 高轉速**		
	項目 Item		單位 Unit	數值 Value		備註 Remarks
機械參數 Mechanical Specification	驅動方式 Driving system	--	--	電機直接驅動 Direct-Drive		
	出軸徑 Shaft Diamater	SD	mm	Φ150h7		旋轉件安裝基準
	軸貫穿孔徑 Through hole diamater	TD	mm	Φ85G7xL10, Φ70 貫穿		
	整機重量 Total weight (including Torque Motor)	W	kg	265		
	馬達鬆煞車壓力 Un-Clamping Pressure	Puc	kg/cm^2	12		油壓活塞式 Hydraulic
	馬達煞車鎖緊壓力 Clamping Pressure	Pc	kg/cm^2	12		
	馬達煞車鎖緊扭力 Clamping Torque	Tc	Nm	1500		
	容許負載重量 Capacity of workpiece mass	臥式	kg	300 (Φ500x200L, S45C)		示意圖 (1)
		立式	kg	225		示意圖 (2)
	煞車時的容許負載 Allowable load when clamped	F	N	20000		示意圖 (3)
		FxL 徑向	Nm	1500		示意圖 (4)
		FxL 軸向	Nm	2000		示意圖 (5)
	出軸端的徑向偏擺 Shaft runout Radial	Rr	mm	<0.005		示意圖 (6)
	出軸端的軸向偏擺 Shaft runout Axial	Ra	mm	<0.005		示意圖 (7)
	保護等級 IP protection level	--	--	IP67		
	冷卻方式 Cooling method	--	--	油 / 水冷卻 Liqud-Cooling		
電機參數 Electrical Specification	驅動器輸入電壓 Driver input voltage	V_D	Vrms	220	380	
	轉子極數 Poles	P	--	20		
	水冷額定功率 Rated power (Liqud-Cooling)	Prc	W	15000		
	水冷額定扭力 / 最大扭力 Rated Torque (Liqud-Cooling) / Max.Torque	Trc / Tm	Nm	240 / 480	240 / 480	
	水冷額定電流 / 最大電流 Rated Current (Liquid-Cooling) / Max.Current	Irc / Im	Arms	60 / 150	60 / 150	
	額定轉速 / 最大轉速 Rated Speed / Max. Speed	Vr / Vm	rpm	600 / 600	600 / 1000	
	電機線間反電動勢 Back E.M.F.	Ke	Vrms@100rpm	26.7		terminal to terminal
	扭力常數 Torque constant	K_T	Nm/Arms	4		
	最小設定單位 Least input increment	--	degree	0.001		
	定位精度 a) Absolute accuracy	P	arc-sec	±10		
	重複精度 Repeatability	Ps	arc-sec	4		
	反向誤差 Backlash	U	arc-sec	4		

註 a) DD 轉台的定位精度最高可達 ±5 角秒，主要取決於編碼器的品牌與本質解析度，關於此類進階的技術應用需求，請洽晟昌工程人員。

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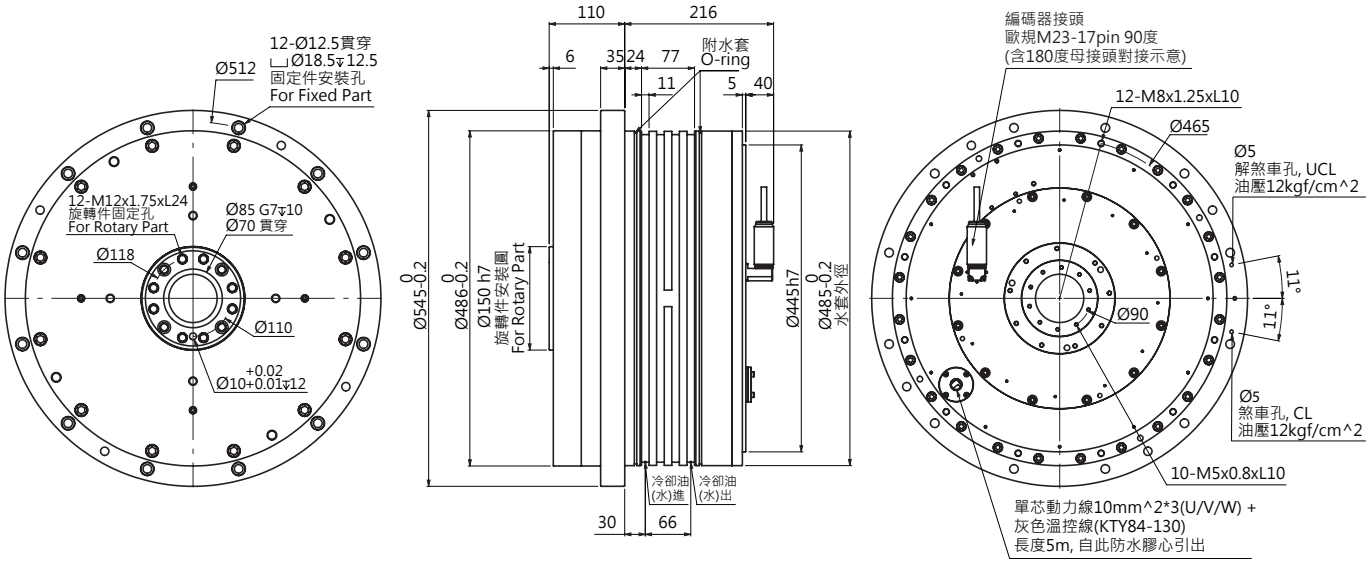

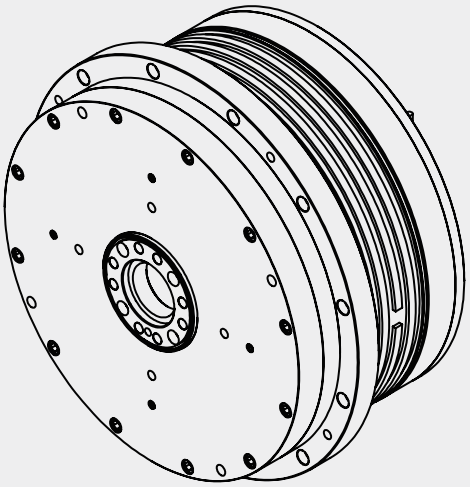

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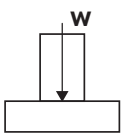	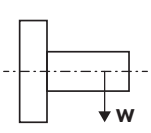	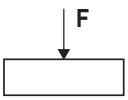	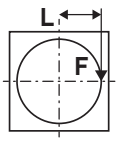	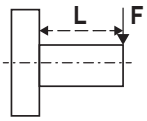	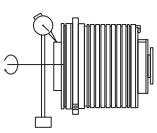	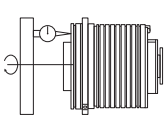

SPBMS Series

SPBMS650-3SH
Model Designations

SOLPOWER Power Bearing Module Model SPBMS Series				SPBMS650-3SH ｜動力模組 650 標準轉速		
	項目 Item		單位 Unit	數值 Value		備註 Remarks
機械參數 Mechanical Specification	驅動方式 Driving system	--	--	電機直接驅動 Direct-Drive		
	出軸徑 Shaft Diamater	SD	mm	Φ210h7		旋轉件安裝基準
	軸貫穿孔徑 Through hole diamater	TD	mm	Φ143G7xL20, Φ110 貫穿		
	整機重量 Total weight (including Torque Motor)	W	kg	450		
	馬達鬆煞車壓力 Un-Clamping Pressure	Puc	kg/cm^2	6		油壓活塞式 Hydraulic
	馬達煞車鎖緊壓力 Clamping Pressure	Pc	kg/cm^2	6		
	馬達煞車鎖緊扭力 Clamping Torque	Tc	Nm	1500		
	容許負載重量 Capacity of workpiece mass	臥式	kg	600 (Φ650x230L, S45C)		示意圖 (1)
		立式	kg	450		示意圖 (2)
	煞車時的容許負載 Allowable load when clamped	F	N	40000		示意圖 (3)
		FxL 徑向	Nm	1500		示意圖 (4)
		FxL 軸向	Nm	2000		示意圖 (5)
	出軸端的徑向偏擺 Shaft runout Radial	Rr	mm	<0.005		示意圖 (6)
	出軸端的軸向偏擺 Shaft runout Axial	Ra	mm	<0.005		示意圖 (7)
	保護等級 IP protection level	--	--	IP67		
	冷卻方式 Cooling method	--	--	油 / 水冷卻 Liqud-Cooling		
電機參數 Electrical Specification	驅動器輸入電壓 Driver input voltage	V_D	Vrms	220	380	
	轉子極數 Poles	P	--	88		
	水冷額定功率 Rated power (Liqud-Cooling)	Prc	W	3270		
	水冷額定扭力 / 最大扭力 Rated Torque (Liqud-Cooling) / Max.Torque	Trc / Tm	Nm	1250 / 1400	1250 / 2000	
	水冷額定電流 / 最大電流 Rated Current (Liqud-Cooling) / Max.Current	Irc / Im	Arms	28 / 33	28 / 45	
	額定轉速 / 最大轉速 Rated Speed / Max. Speed	Vr / Vm	rpm	25 / 50	25 / 90	
	電機線間反電動勢 Back E.M.F.	Ke	Vrms@100rpm	330		terminal to terminal
	扭力常數 Torque constant	K_T	Nm/Arms	55		
	最小設定單位 Least input increment	--	degree	0.001		
	定位精度 a) Absolute accuracy	P	arc-sec	±10		
	重複精度 Repeatability	Ps	arc-sec	4		
	反向誤差 Backlash	U	arc-sec	4		

註 a) DD 轉台的定位精度最高可達 ±5 角秒，主要取決於編碼器的品牌與本質解析度，關於此類進階的技術應用需求，請洽晟昌工程人員。

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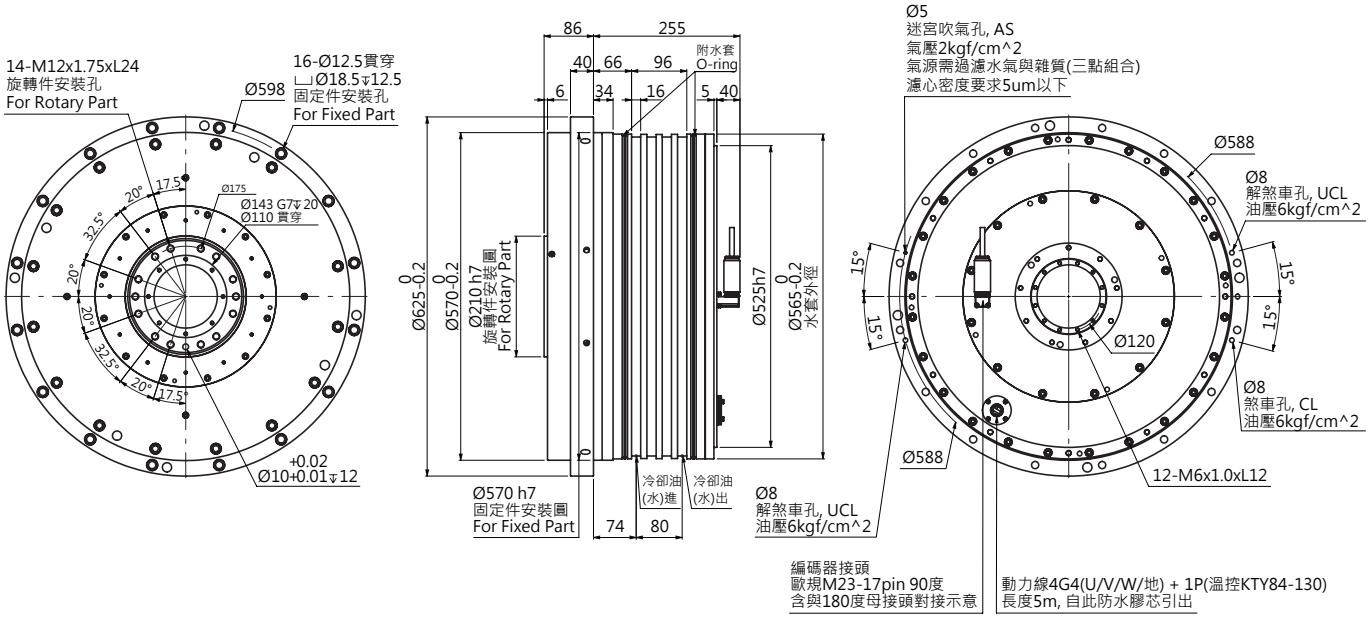

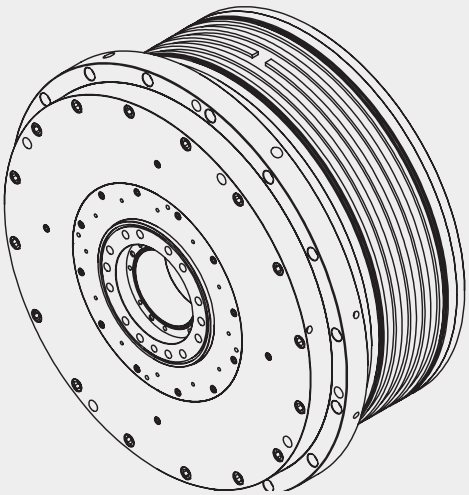

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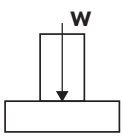	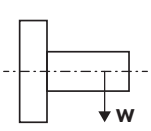	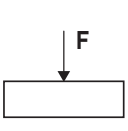	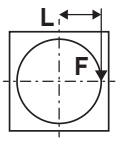	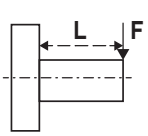	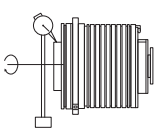	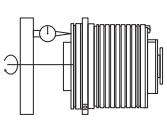

SPBMS Series

SPBMS650-3AH
Model Designations

SOLPOWER Power Bearing Module Model SPBMS Series				**SPBMS650-3AH ｜動力模組 650 高轉速**		
	項目 Item		單位 Unit	數值 Value		備註 Remarks
機械參數 Mechanical Specification	驅動方式 Driving system	--	--	電機直接驅動 Direct-Drive		
	出軸徑 Shaft Diamater	SD	mm	Φ210h7		旋轉件安裝基準
	軸貫穿孔徑 Through hole diamater	TD	mm	Φ143G7xL20, Φ110 貫穿		
	整機重量 Total weight (including Torque Motor)	W	kg	450		
	馬達鬆煞車壓力 Un-Clamping Pressure	Puc	kg/cm^2	6		油壓活塞式 Hydraulic
	馬達煞車鎖緊壓力 Clamping Pressure	Pc	kg/cm^2	6		
	馬達煞車鎖緊扭力 Clamping Torque	Tc	Nm	1500		
	容許負載重量 Capacity of workpiece mass	臥式	kg	400 (Φ650x150L, S45C)		示意圖 (1)
		立式	kg	300		示意圖 (2)
	煞車時的容許負載 Allowable load when clamped	F	N	30000		示意圖 (3)
		FxL 徑向	Nm	1500		示意圖 (4)
		FxL 軸向	Nm	2000		示意圖 (5)
	出軸端的徑向偏擺 Shaft runout Radial	Rr	mm	<0.005		示意圖 (6)
	出軸端的軸向偏擺 Shaft runout Axial	Ra	mm	<0.005		示意圖 (7)
	保護等級 IP protection level	--	--	IP67		
	冷卻方式 Cooling method	--	--	油 / 水冷卻 Liqud-Cooling		
電機參數 Electrical Specification	驅動器輸入電壓 Driver input voltage	V_D	Vrms	220	380	
	轉子極數 Poles	P	--	20		
	水冷額定功率 Rated power (Liqud-Cooling)	Prc	W	19000		
	水冷額定扭力 / 最大扭力 Rated Torque (Liqud-Cooling) / Max.Torque	Trc / Tm	Nm	450 / 900	450 / 900	
	水冷額定電流 / 最大電流 Rated Current (Liquid-Cooling) / Max.Current	Irc / Im	Arms	72 / 180	72 / 180	
	額定轉速 / 最大轉速 Rated Speed / Max. Speed	Vr / Vm	rpm	400 / 400	400 / 600	
	電機線間反電動勢 Back E.M.F.	Ke	Vrms@100rpm	44		terminal to terminal
	扭力常數 Torque constant	K_T	Nm/Arms	6.3		
	最小設定單位 Least input increment	--	degree	0.001		
	定位精度 a) Absolute accuracy	P	arc-sec	±10		
	重複精度 Repeatability	Ps	arc-sec	4		
	反向誤差 Backlash	U	arc-sec	4		

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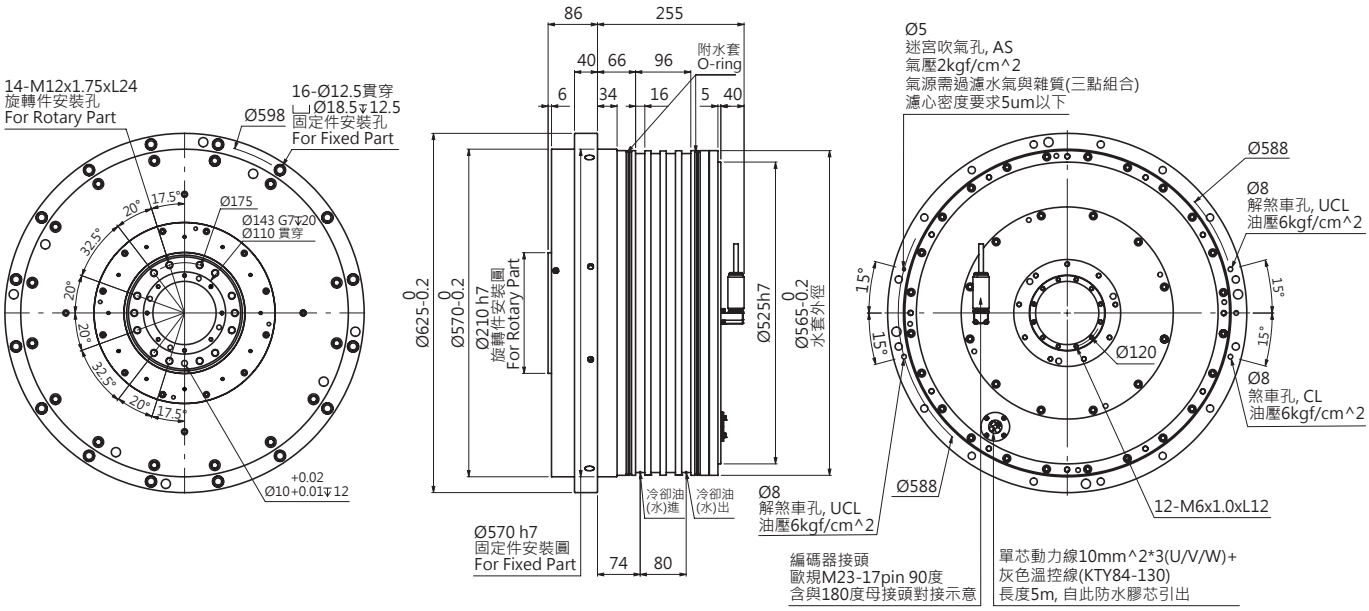

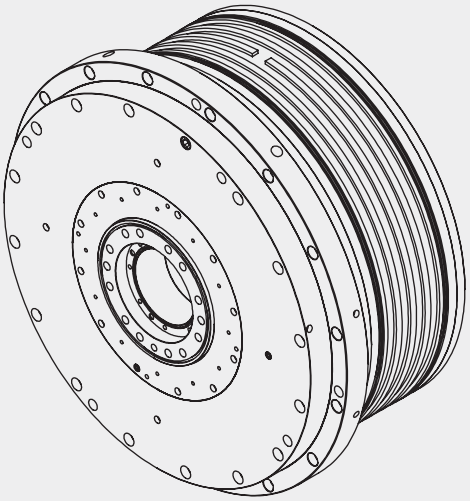

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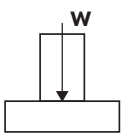	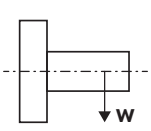	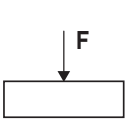	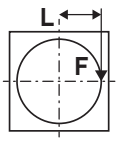	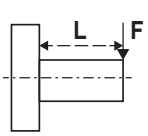	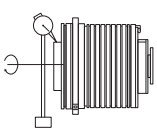	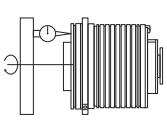

晟昌機電股份有限公司
SOLPOWER MACHINE ELECTRONIC CORP.
No.89, Ln.1005, Sec 1, Hemu Rd., Qingshui Dist.,
Taichung City 43641,Taiwan(R.O.C)
43641 台中市清水區和睦路一段1005巷89號
TEL: +886-4-2620-2888
FAX: +886-4-2620-2777

www.solpowermotor.com
E-mail: sol.power@solpower.com.tw