



*Introduction for
TECO SERVO
9300 Series*

**Industrial Product & System Automation Division
Development & Technical Center
Linus Hsiao**

Introduction for 9300 Series

1.Servo Driver — JSDA

2.Servo Motor — JSMA

3.Accessory — JSS

4.Servo System Application

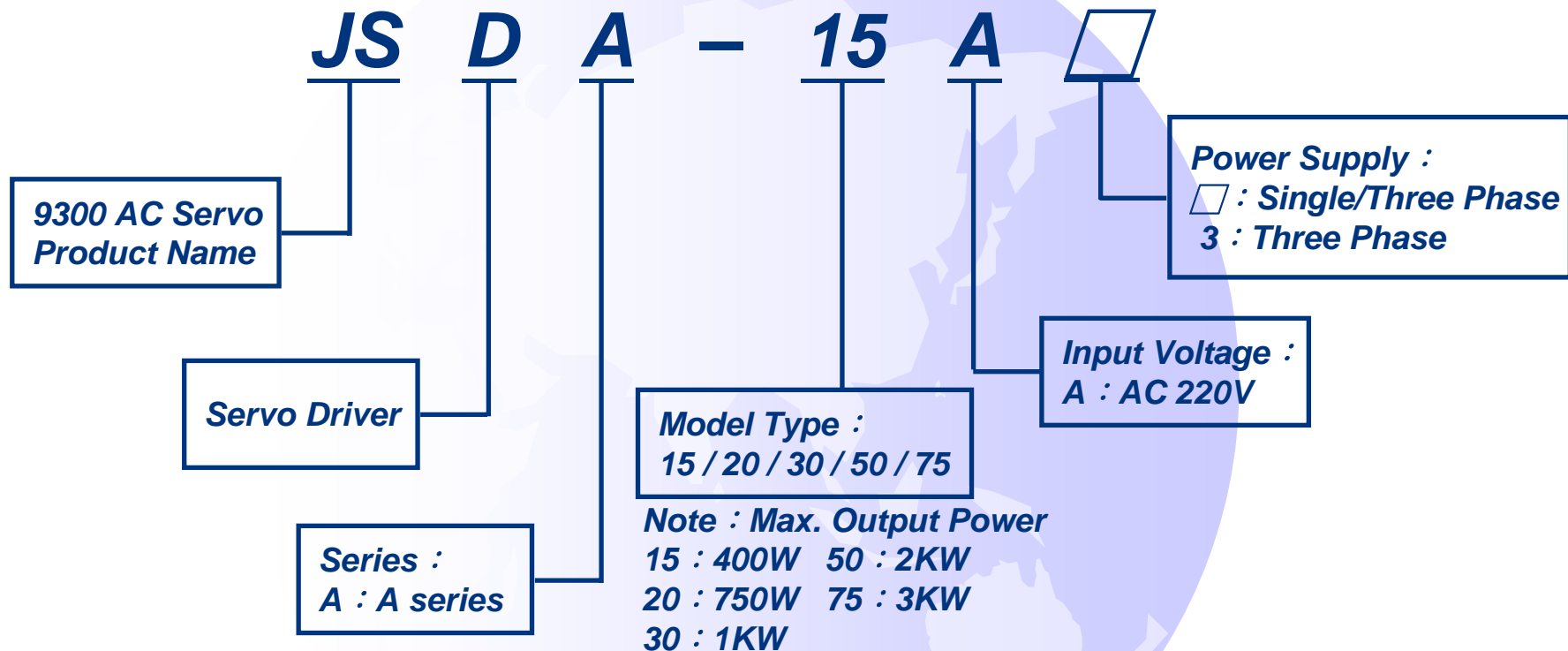
Introduction for 9300 Series



Servo Driver ***JSDA Series***

Servo Driver – JSDA series

Model Name Explanation :



Servo Driver – JSDA series

Externals :

JSDA – 15 / 20 / 30

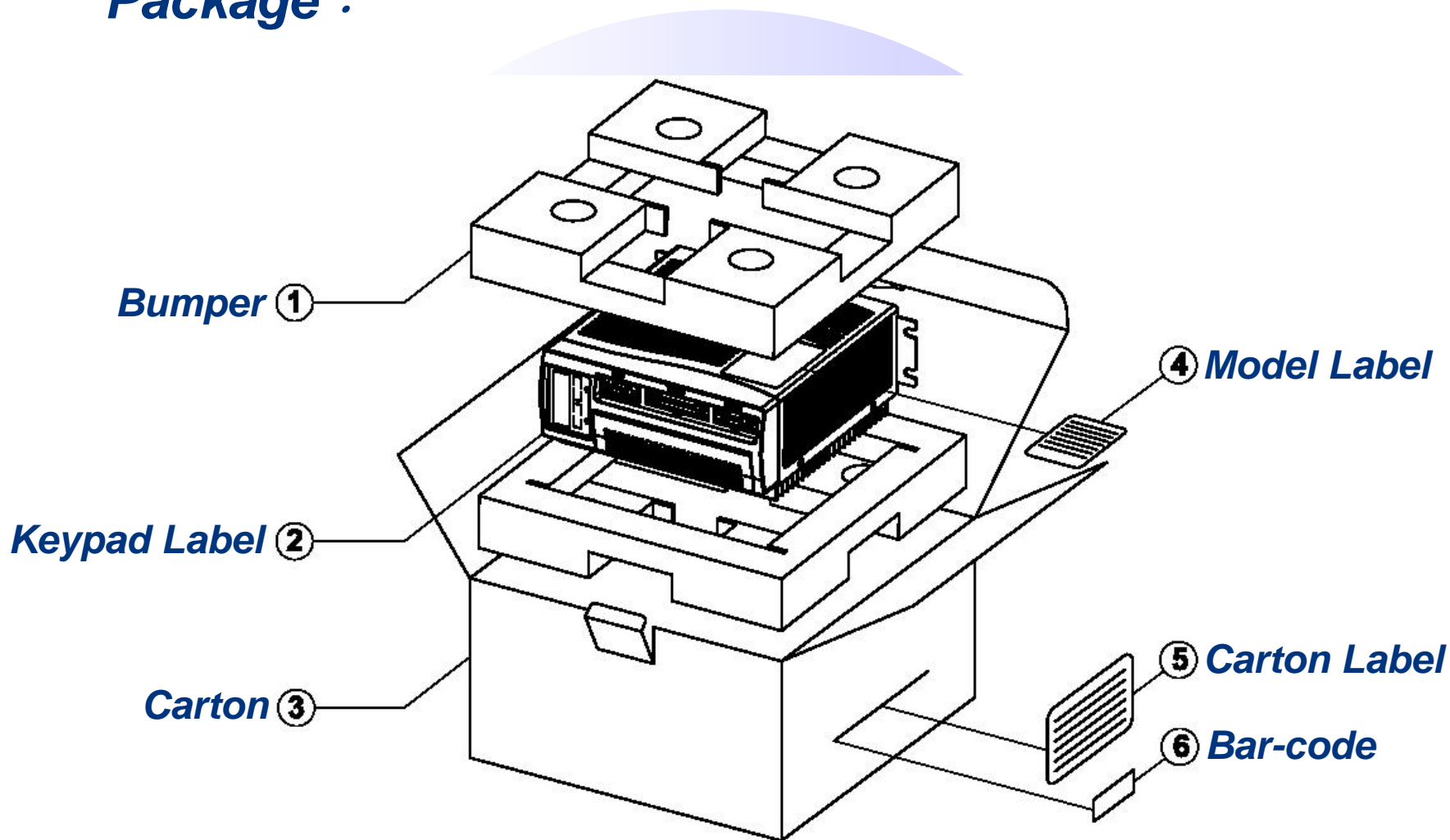


JSDA – 50 / 75



Servo Driver – JSDA series

Package :



Servo Driver – JSDA series

Parts of the Package :


Keypad Label



Model Label

CAUTION
Do not inspect components unless the lamp is off
See manual for proper installation and operation.

Model	JSDA-30A
INPUT VOLTAGE	AC 1/3 phases 50/60Hz 200~230V (+10%, -15%)
Amps	8.81A/5.16A
OUTPUT VOLTAGE	AC 3 phases 0~240V
Amps	5.6A


779779 214341501017200070800

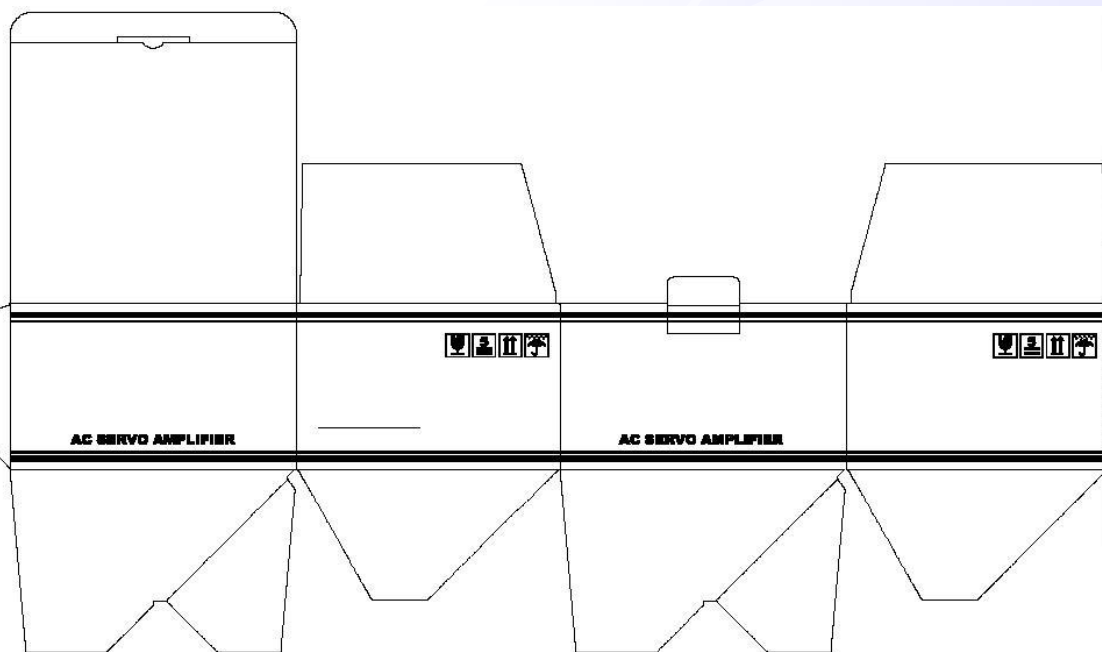
TECO ELECTRIC & MACHINERY CO., LTD. MADE IN TAIWAN

Servo Driver – JSDA series

Parts of the Package :

Carton

Carton Label



AC SERVO AMPLIFIER

MODEL NO : JSDA-30A

PACKING SIZE : 258 x 235 x 148

GWEIGHT : 2.4KG

Q'TY : 1PCS

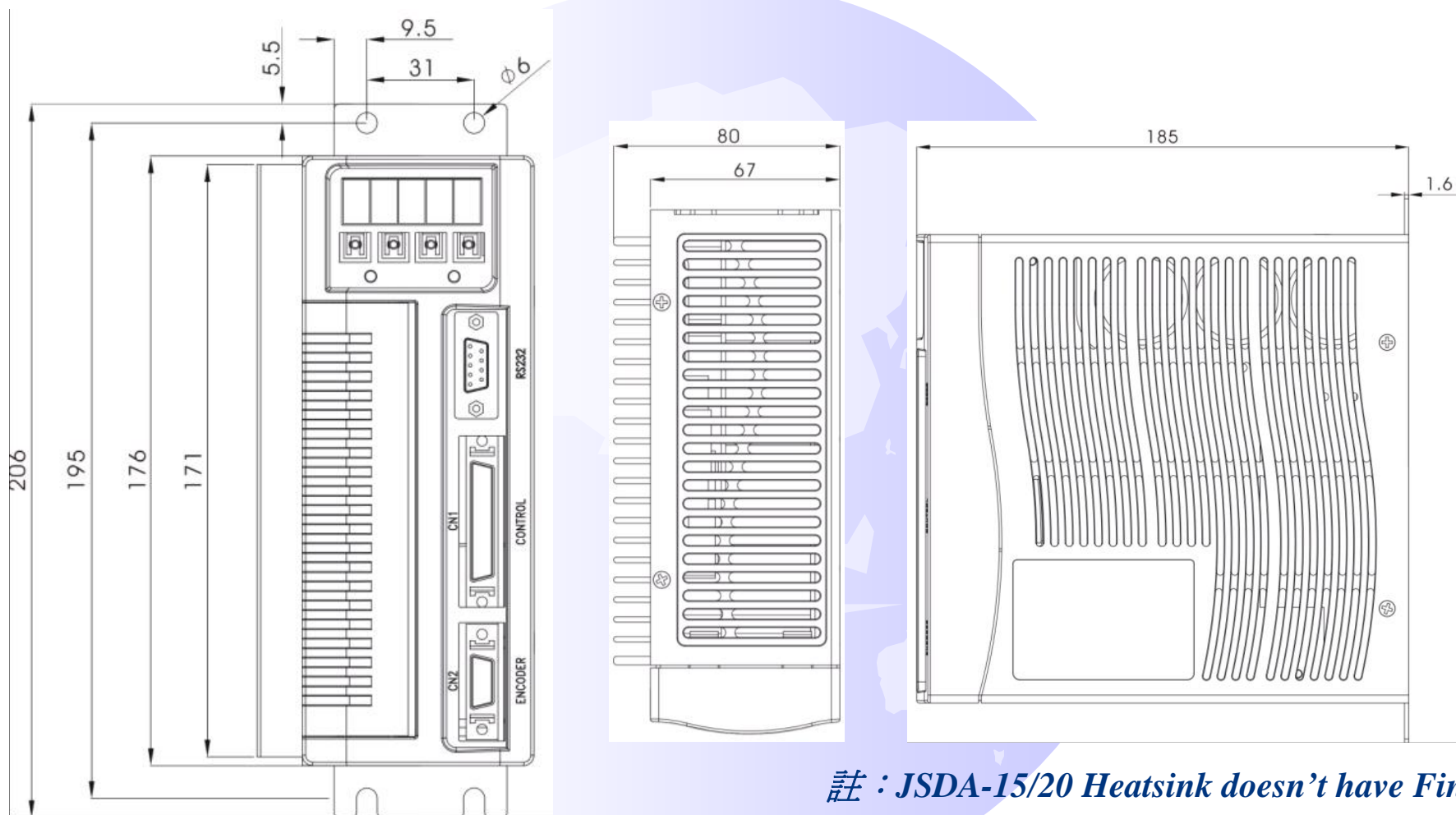
SPEC :

TECO Electric & Machinery Co.,Ltd.

MADE IN TAIWAN

Servo Driver – JSDA series

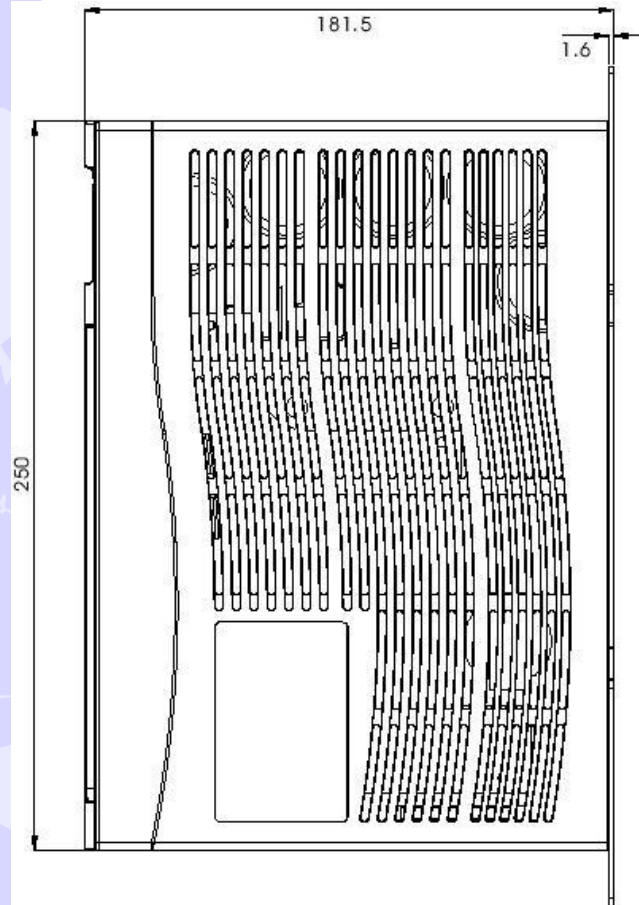
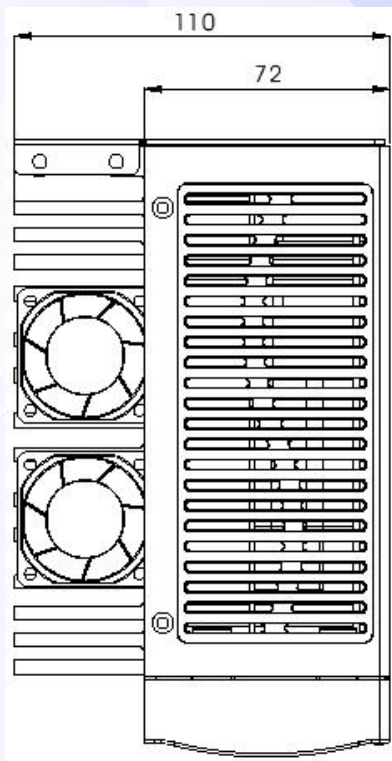
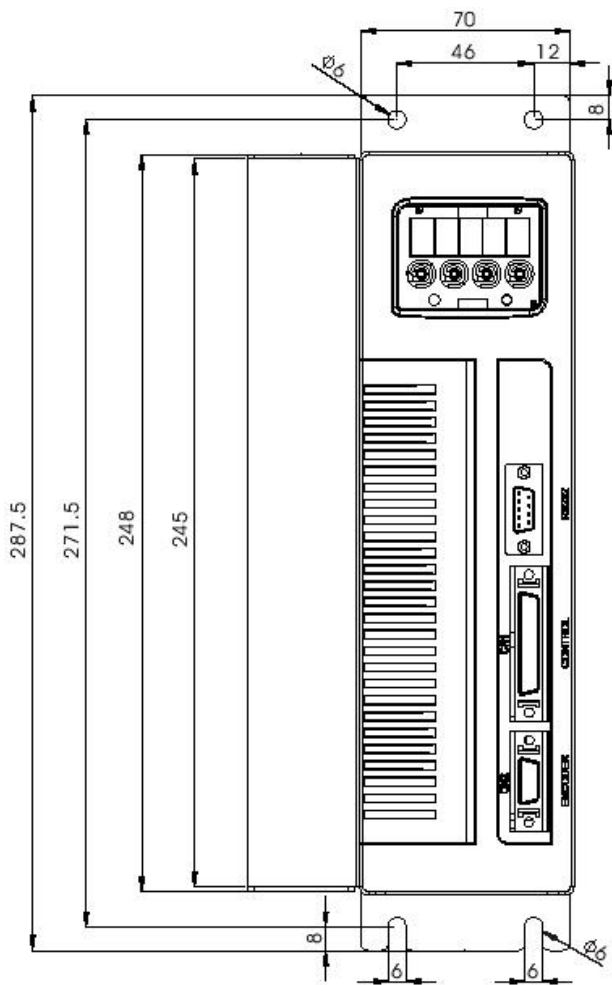
Dimension : JSDA – 15 / 20 / 30



註 : JSDA-15/20 Heatsink doesn't have Fin

Servo Driver – JSDA series

Dimension : JSDA – 50 / 75



Servo Driver – JSDA series

Feature :

- **Speed / Torque / Position/Point to Point setting and Dual Control Control Mode Selected**
- **Incremental Encoder : 2500 / 8192 ppr**
- **Speed Mode Frequency Response Characteristic : Max. 400Hz**
- **Speed Controlled Range :**
 - 1:5000 (Internal Speed Command)**
 - 1:2000 (External Analog Command)**
- **Five types of Position Input Pulse**
- **Position Mode Max. Input Pulse Frequency :**
 - 500K pps (Differential Receiver 、 Line Driver)**
 - 200K pps (Open Collector)**

Servo Driver – JSDA series

Feature :

- **Electronic Gear : $1/100 < A/B < 100$**
- **Encoder Ratio : 1 ~ 8192 encoder ratio**
〈 any arbitrary value 〉
- **Notch Filters for Resonant Suppression**
- **Auto Tuning Function : ON-Line / OFF-Line**
adjustment of loop gains according to measured inertia
- **Speed / Torque Limit Operation**
- **Fifteen types of Protection Function**

Servo Driver – JSDA series

Feature :

- **Applicative TECO JSMA Series Servo Motor**
- **Capacity : 200W ~ 3KW**
- **Operating Keypad Friendly :**
Numeric and Fault Display
- **Built-in RS232 for PC Remote Operator Link**
- **PC-Software : TECO SERVO**
- **Similar to a Digital Oscilloscope ,**
Graphical Display of Internal Signal

Servo Driver – JSDA series

Specification :

JSDA Series Specification		JSDA-15	JSDA-20	JSDA-30	JSDA-50	JSDA-75
Input Voltage	Main R、S、T	Single/Three-Phase 200 ~ 230 Vac +10 % , -15 % 50 / 60 Hz			Three-Phase 200 ~ 230 Vac +10 % , -15 % 50 / 60 Hz	
	Control r、s	Single-Phase 200 ~ 230 Vac +10 % , -15 % 50 / 60 Hz				
Cooling System		Natural Air Circulation			Fan Cooling	
Applicable Motor Model		JSMA-LC03	JSMA-LC08	JSMA-SC08	JSMA-MB15	JSMA-MB30
		JSMA-SC02	JSMA-SC04	JSMA-MA10	JSMA-MC15	JSMA-MC30
		JSMA-SC04	JSMA-SC08	JSMA-MB10	JSMA-MB20	-
		-	JSMA-MA05	-	-	-
Control of Main Circuit		SVPWM Control				
Control Mode		Position , Speed , Torque , Position/Speed , Speed/Torque , Position/Torque , Point to Point Positioning				
Encoder Resolution / Feedback Resolution		2500ppr/10000ppr or 8192ppr/32768ppr				
Dynamic Brake		Built-in				

Servo Driver – JSDA series

Specification :

Position Control Mode	Input Pulse	Type	Pulse + Direction, A phase + B phase, CCW pulse + CW pulse
			Line driver < + 5V > , Open collector < + 5V or +24V >
		Max. Frequency	500KPPS (Line driver) / 200KPPS (Open collector)
		Command Source	External pulse train
		Feed Forward Gain	0~100%
		Built-in Control Voltage	+24V
		Electronic Gear	$1/100 \leq A/B \leq 100$ (A=1~50000,B=1~50000)
		Input Ripple Filtering	Time Constant 0~10sec
		In Position	0~50000 Pulse
		Torque Limit Operation	Set by parameters
	Feed Forward Compensation	Set by parameters	

Servo Driver – JSDA series

Specification :

Speed Control Mode	Speed Control Range	1 :5000 〈 Internal 〉 1:2000 〈 External 〉
	Speed Fluctuation Rate	- 0.03% or less at load fluctuation 0 to 100% (at rated speed) 0.2% or less at power fluctuation $\pm 10\%$ (at rated speed) 0.5% or less at ambient temperature fluctuation 0°C to 50 °C (at rated speed)
	Internal Speed Command	Three preset speeds available through defining User's Parameter
	Zero Speed determination	0~3000rpm
	Specified speed reached	0~3000rpm
	Frequency Response Characteristic	Max. 400Hz
	Torque Limit Operation	Set by parameters or via Analog input
	Voltage Range	0 ~ ± 10 Vdc / 0 ~ ± 3000 rpm
	Input Resistance	10K Ω

Servo Driver – JSDA series

Torque Control Mode	Voltage Range	0 ~ ±10 Vdc / 0 ~ ±300%
	Input Resistance	10KΩ
	Time Constant	0 ~ 50sec
Digital Input/ Output	Encoder Output	A · B · Z Phase Line driver Output
	Encoder Ratio	1 ~ 8192encoder ratio < any arbitrary value >
	Digital Input	Servo ON, Reset, Reverse Inhibit, Control Mode, External Torque Limit Emergency Stop, Pulse Input Inhibit, etc.
	Digital Output	Servo Ready, Error, In Position, Zero Speed, Encoder Output, etc.

Servo Driver – JSDA series

Analog Monitoring output		Set by parameters, Speed and Torque
Protection		Voltage, Current, Load, Speed; Encoder, memory malfunction, etc.
Communication		RS232 for User's Parameter setting and status monitoring
Environment	Altitude	Altitude 1000m or lower above sea level
	Installation Site	Indoor location (free from direct sunlight), no corrosive liquid and gas (far away from oil mist, flammable gas, dust)
	Temperature	Operation 0~ 55°C , Storage -20 ~ +85°C
	Humidity	Operation/Storage: < 85% RH
	vibration	< 0.5G

Servo Driver – JSDA series

Competitors(Simple type) :

	JAPAN			EUROPE	USA	
TECO	Mitsubishi	Panasonic	Yaskawa	ABB	AB	Ac-tech (Lenze)
		MINAS E MLDET2310P		MINIVECTOR 300 MVC300R03(A) 1Phase 220V 3~7A	Kinetix 6000 (Multi-Axis) 230V 1.9~3.4KW 460V 3.9~ 6.6KW	SS500 SS504A(A) 95~250V 0.5~1KW
	MR-C MR- C02A1(KW) 1Phase 220V 0.03~0.4KW	MINAS S MUDS042A1A (KW) 1/3Phase 110V /220V 0.03~0.75KW	Σ -L SGDL- 04AP(KW) 1/3Phase 220V 0.03~0.75KW	DGV300 DGV300R03(A) 3Phase 220V 3~7A	1394 1394X- AM03(A) 3Phase 220V 5~22KW	SS600 SS604A(A) 3Phase 220V 0.5~2.5KW

Servo Driver – JSDA series

Competitors(Normal type) :

	JAPAN			TAIWAN	EUROPE		USA			
TECO	Mitsubishi	Panasonic	Yaskawa	Delta	ABB	Siemens	AB	Ac-tech (Lenze)	Emerson (CT)	
JSDA JSDA-20A(A) 3Phase 220V 0.2~3KW	MR-H 200V 30~37KW 400V 11~55KW	MINAS A MSDA042A1 A(KW) 1/3Phase 110V /220V 0.03~7.5KW	Σ SGDA(B)- 04AP(KW) 1/3Phase 110V /220V 0.03~55KW		DGV700 3Phase 110/220/400/ 440/480V 3~25A 110V 0.7~4.8KVA 220V 1.3~9.5KVA 400V 2.4~17.3KVA 440V 2.7~19.1KVA 480V 2.9~20.8KVA	1FT5,1FT6,IF K6,1FK7 Machine Tool use	ULTRA1500 (Multi-Axis) 0.4~4KW	SSI1000 SSI1004A(A) 95~250V 0.5~2.5KW	Unidrive V UNI1401(HP) 380/460V 0.75~160KW	
	MR-J2S-A 200V 11~37KW 400V 11~55KW							ULTRA3000 2098-DS0- 005(KW) 230V 0.5~15KW 460V 3~ 22KW	L-force 9400 SERVO SYSTEM 400V 0.37~55KW	M'AX M'AX403(A) 400V 1N-M~15N-M
	MR-J2- SUPER MR-J2S- 10A4(KW) 1/3Phase 220V/440V 0.05~7KW	MINAS A3 MADCT1107 1/3Phase 110V/220V 0.05~5KW	Σ -2 SGDM(H)- 04AD(KW) 1/3Phase 110V/220V/ 440V 0.03~15KW	ASDA ASDA04(KW) 3Phase 220V 0.1~3KW						

Servo Driver – JSDA series

Competitors(Hi-performance type) :

	JAPAN		
TECO	Mitsubishi	Panasonic	Yaskawa
	MR-J3 MR-J3-10A(KW) 0.05~7KW	MINAS A4 MADDT1207 1/3Phase 110V/220V 0.05~5KW	Σ-3 SGDS-04A01A(KW) 3Phase 220V 0.03~3KW

Servo Driver – JSDA series

Compare with Competitors(Dimension) :

TYPE		TECO	J2-S	SIGMA-II	MINAS A	SINANO	DELTA
Driver W x H x D (mm)	200W	W66xH175xD185	W50xH168xD135	W55xH162xD140	W50xH160xD130	W70xH210xD139	W75xH162xD140
	400W	W66xH175xD185	W70xH168xD135	W55xH162xD140	W65xH160xD130	W70xH210xD139	W75xH162xD140
	750W	W66xH175xD185	W70xH168xD190	W90xH160xD180	W65xH160xD170	W80xH210xD139	W93xH162xD191
	1KW	W80xH175xD185	W70xH168xD190	W90xH160xD180	W76xH160xD205	W88xH205xD186	W93xH162xD191
	2KW	W110xH250xD185	W90xH168xD195	W110xH250xD180	W76xH220xD205	W128xH223xD203	W110xH245xD206
	3KW	W110xH250xD185	W90xH168xD195	W110xH250xD180	W150xH220xD275	W128xH223xD203	W110xH245xD206

Servo Driver – JSDA series

Compare with Competitors(Specification) :

Item		TECO	SIGMA-II	MINAS A	SINANO	DELTA	
Capacity		0.2~3KW(3000RPM)	0.02~5KW(3000RPM) 0.5-55KW(1500RPM)	0.03~5KW(3000RPM) 0.5~5KW(2000RPM)	0.2~6KW(3000RPM)	0.1~3KW(3000RPM) 1KW~5KW(2000RPM)	
Input Voltage		1/3 Φ 200~230V +10~-15% 50/60Hz	1/3 Φ 200~230V +10~-15% 50/60Hz	3 Φ 200~230V +10~-15% 50/60Hz	1/3 Φ 200~230V +10~-15% 50/60Hz	3 Φ :170~255V 1 Φ :200~255V 50/60HZ +-5%	
Position	Input Pulse Frequency	500kpps (line drive) 200kpps (open collector)	500kpps (line drive) 200kpps (open collector)	500kpps (line drive) 200kpps (open collector)	450kpps	500kpps (line drive) 200kpps (open collector)	
Speed/ Torque	Control Range		1:5000	1:5000	1:5000	1:5000	
	Frequency Response		400HZ	400HZ	500HZ	200HZ	450HZ
	Speed Fluctuation Rate	Load	0~100% <-0.03%	0~100% <+0.01%		0~100% <-0.03%	0~100% <+0.01%
		Power	+10% <0.2%	+10% <0%		+10% <0.2%	+10% <0.01%
Temp		25 +/- 25 $^{\circ}$ C <0.5%	25 +/- 25 $^{\circ}$ C <+0.1%		25 +/- 25 $^{\circ}$ C <0.5%	25 +/- 25 $^{\circ}$ C <0.01%	

Servo Driver – JSDA series

Compare with Competitors(Specification) :

Item		TECO	SIGMA-II	MINAS A	SINANO	DELTA
Input Command	Position	CW/CCW,CLK+DIR, AB phase Five types	CW/CCW,CLK+DIR, AB phase Five types	CW/CCW,CLK+DIR, AB phase Five types	CW/CCW,CLK+DIR, AB phase Five types	CW/CCW,CLK+DIR, AB phase Five types
	Speed/ Torque	0~+/-10VDC	+2~+10VDC Max.+/-15VDC	+2~+10VDC Max.+/-15VDC	0~+10VDC Max.+/-10VDC	0~+/-10VDC
Electronic Gear		1/100<A/B<100	1/100<A/B<100	1/50<A/B<20	1/50<A/B<50	1/50<A/B<200
LED Display		5 digit	5 digit	5 digit	4 / 5 digit	5 digit
Communication		RS232	RS232/422	RS232	RS232/485	RS232/485/422
Brake Resistance		Built-in 50W / External	Built-in / External	Built-in / External	Built-in 50W / External	Built-in / External
Encoder		2500/8192PPR	13,16,17 bits	2048/2500PPR	2000/2048PPR	2500PPR

Servo Driver – JSDA series

TECO VS. MIRLE(TED)



Servo Driver – JSDA series

TECO VS. MIRLE(TED)

Frequency Response Characteristic	Max 400Hz	Max 250Hz
Notch Filters	1~1000Hz	X
Auto Tuning	OFF-line Gain Tuning On-line Gain Tuning	X
Position Input Pulse Type	Five types 1.CCW/CW - Forward 2.Pulse+Dir - Forward 3.AB Phase 4.CCW/CW - Reverse 5.Pulse+Dir - Reverse	Three types 1.Pulse+Dir 2.CCW/CW 3.AB Phase
Encoder Ratio	1 ~ 8192encoder ratio < any arbitrary value >	1~16
Built-in DC24V	Yes	X
Current Response Characteristic	1.4kHz	700Hz

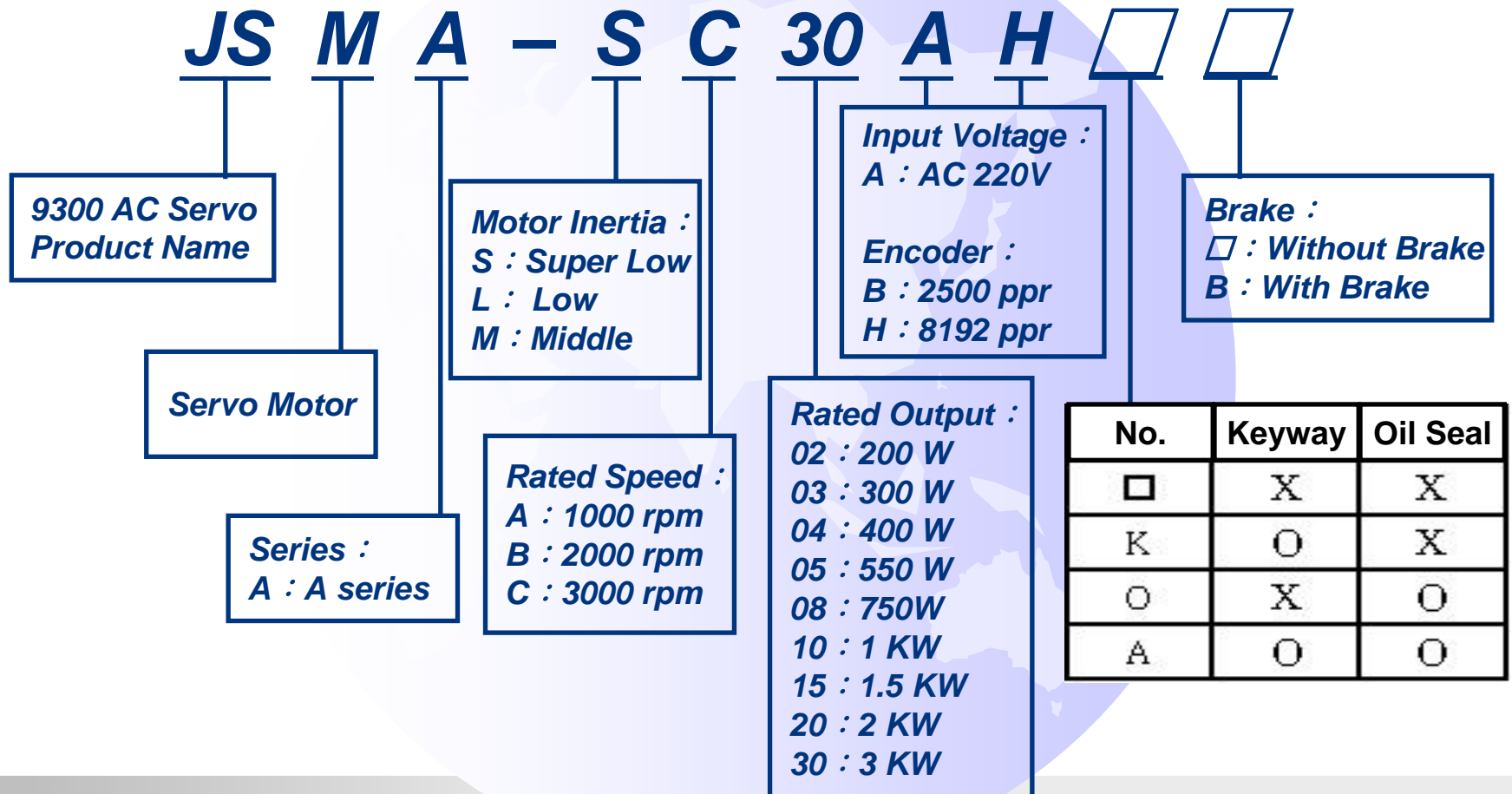
Introduction for 9300 Series



Servo Motor JSMA Series

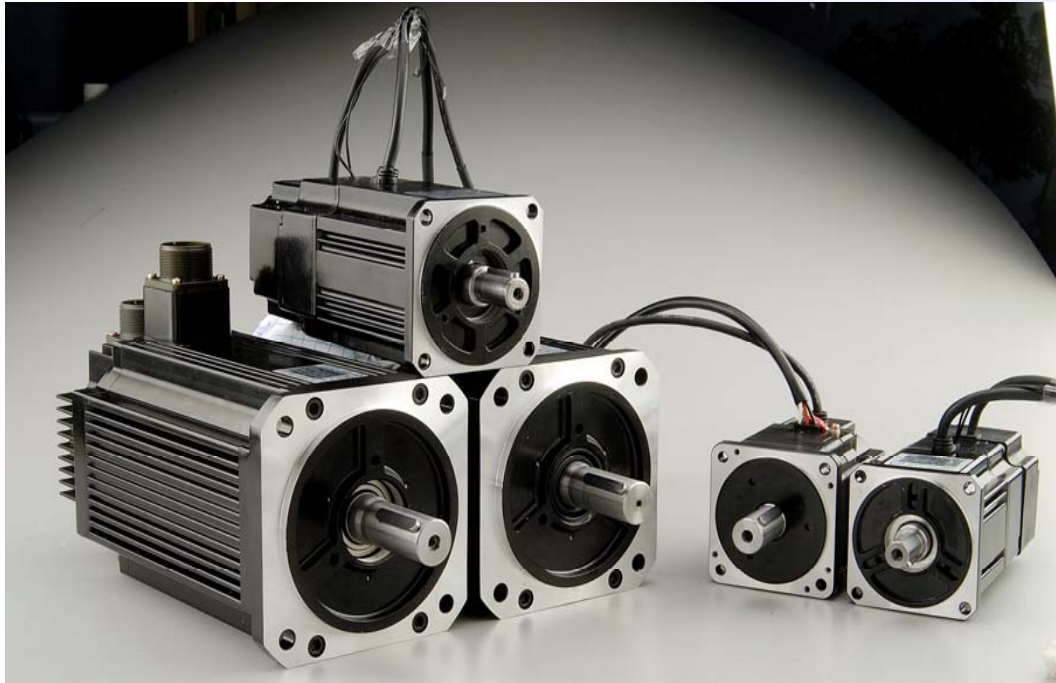
Servo Motor – JSMA series

Model Name Explanation :



Servo Motor – JSMA series

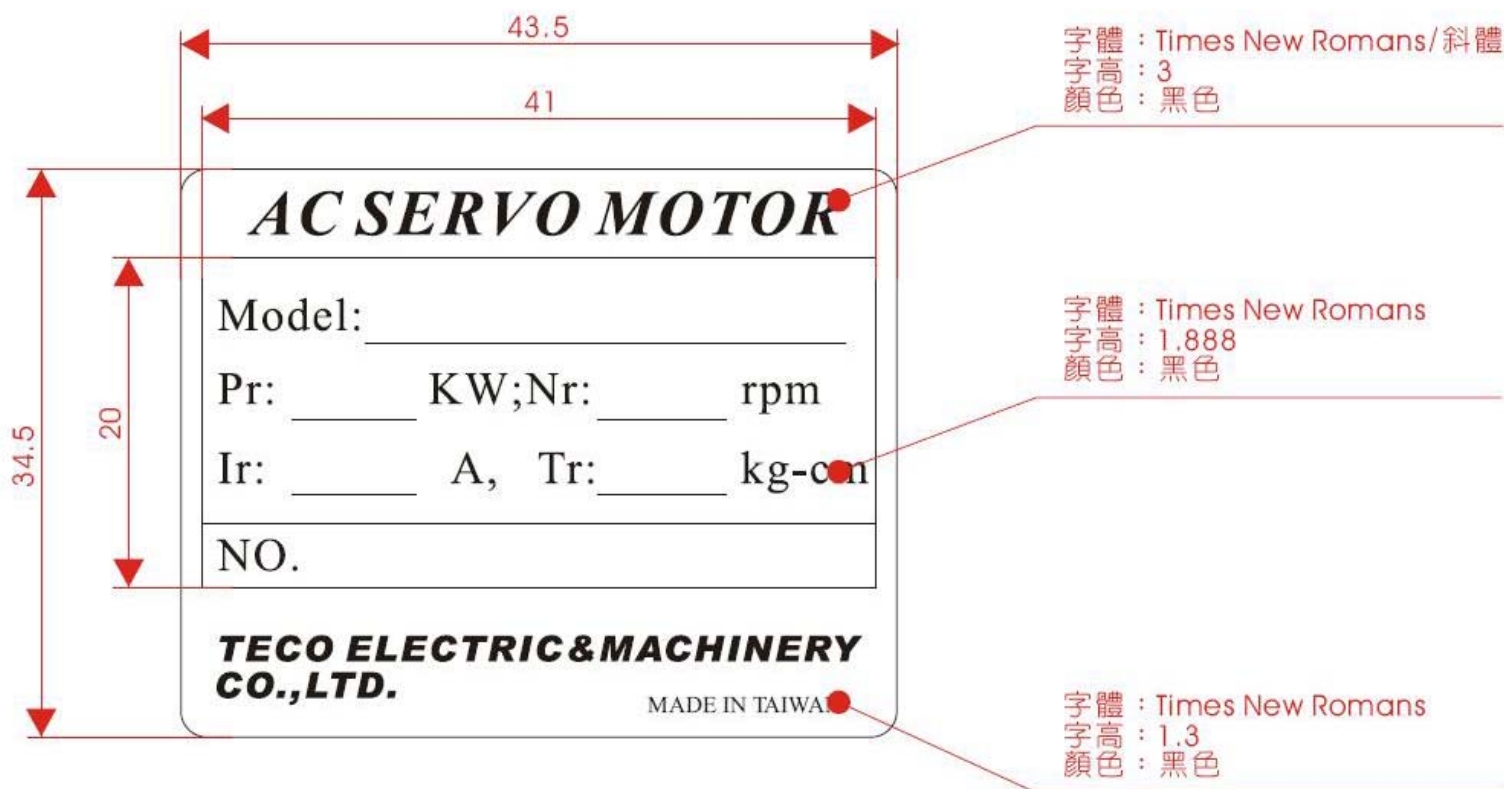
Externals :



Servo Driver – JSDA series

Nameplate :

Model Label



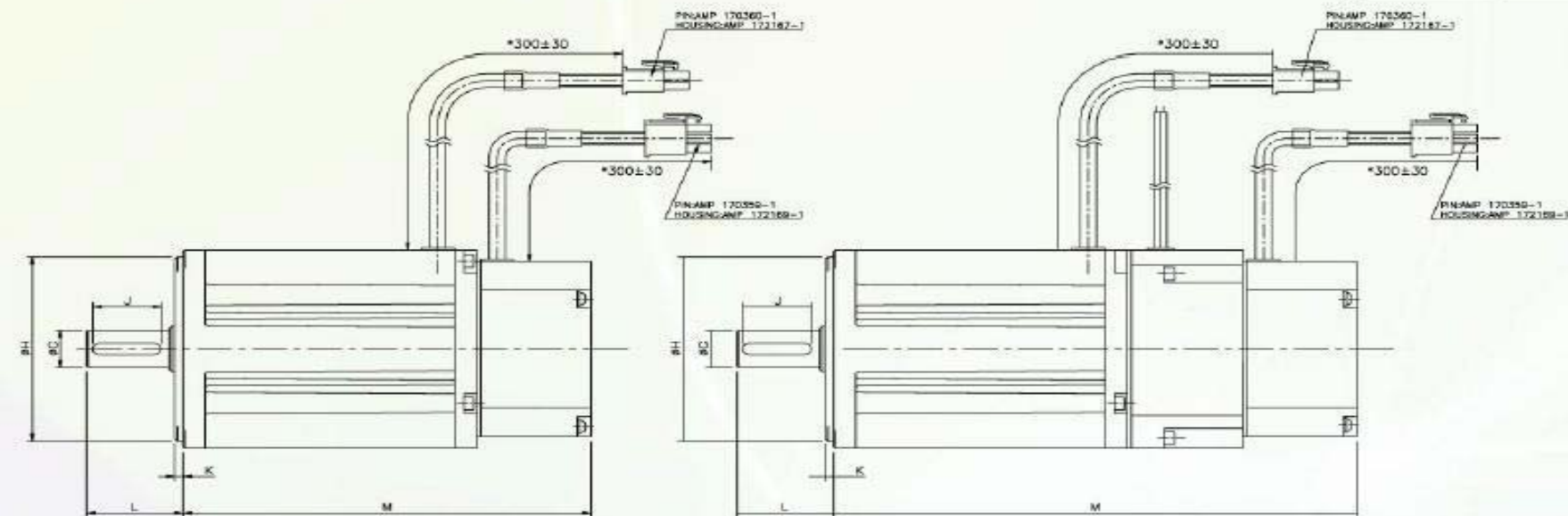
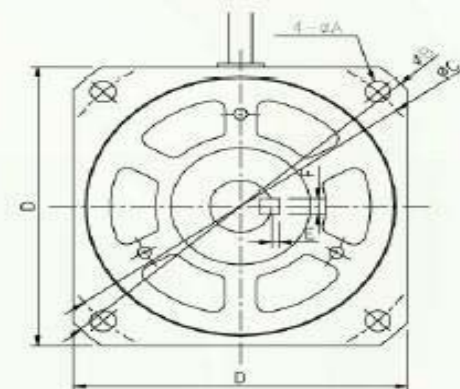
Servo Motor – JSMA series

低慣量馬達尺寸圖

Dimension

JSMA-L series

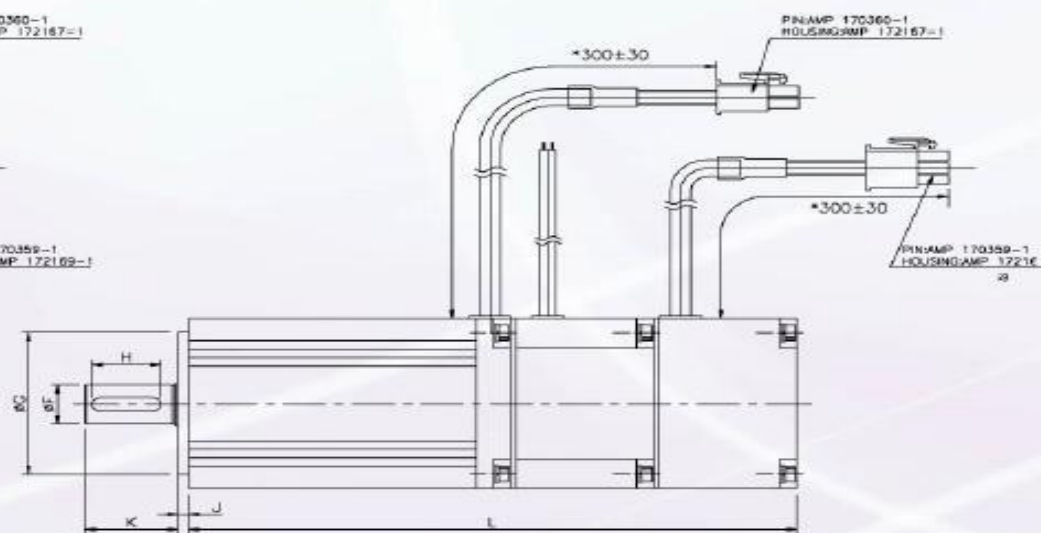
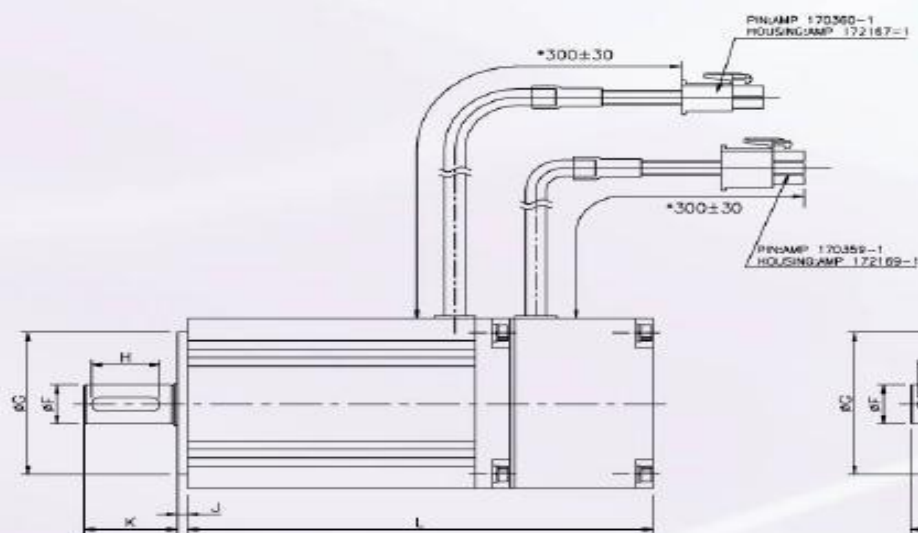
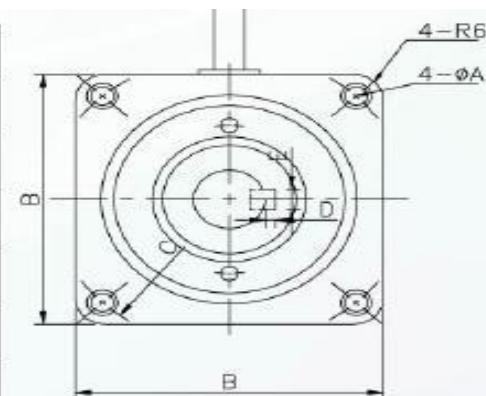
	型號	A	B	C	D	E	F	G	H	J	K	L	M
附煞車	JSMA-LC03	φ5.5	φ100	φ90	76	2	5	φ14	φ70	20	3	30	151.5
	JSMA-LC08	φ6.5	φ112	φ100	86	2	5	φ16	φ80	25	3	35	190
不附煞車	JSMA-LC03	φ5.5	φ100	φ90	76	2	5	φ14	φ70	20	3	30	113.5
	JSMA-LC08	φ6.5	φ112	φ100	86	2	5	φ16	φ80	25	3	35	148



Servo Motor – JSMA series

JSMA-S series Dimension

	型號	A	B	C	D	E	F	G	H	J	K	L
附煞車	JSMA-SC02	φ4.5	60	φ70	2	5	φ14	φ50	25	3	27	154.5
	JSMA-SC04	φ4.5	60	φ70	2	5	φ14	φ50	25	3	27	176.5
	JSMA-SC08	φ5.5	80	φ90	2.5	6	φ19	φ70	30	3	37	185.5
不附煞車	JSMA-SC02	φ4.5	60	φ70	2	5	φ14	φ50	25	3	27	113
	JSMA-SC04	φ4.5	60	φ70	2	5	φ14	φ50	25	3	27	135
	JSMA-SC08	φ5.5	80	φ90	2.5	6	φ19	φ70	30	3	37	144



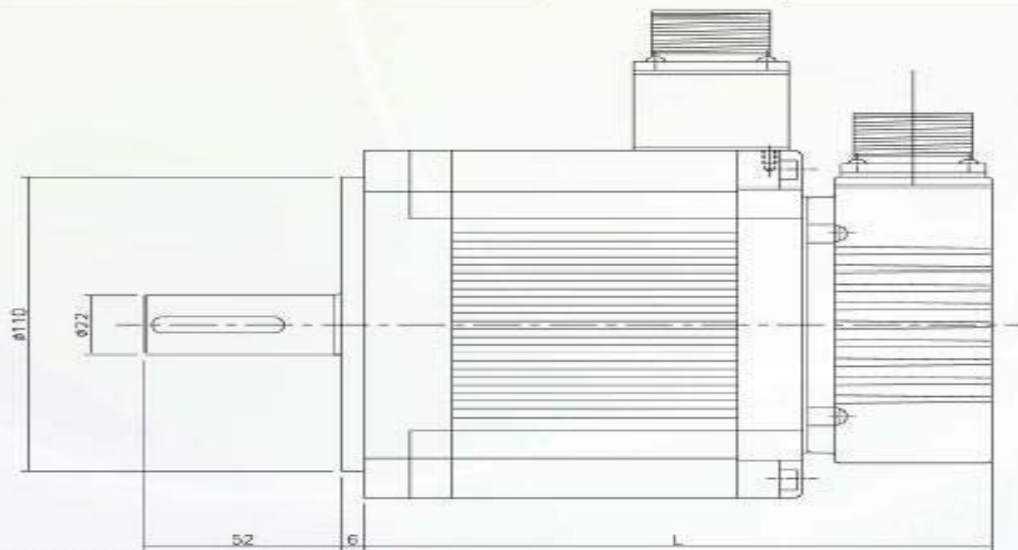
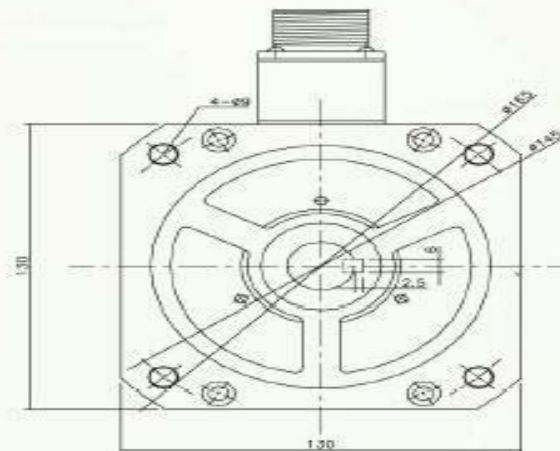
Servo Motor – JSMA series

中慣量馬達尺寸圖

JSMA-M series

Dimension

型號	附煞車 L (mm)	不附煞車 L (mm)
JSMA-MA05	211.8	165.3
JSMA-MA10	261.8	261.8
JSMA-MA15	316.8	316.8
JSMA-MB10	211.8	211.8
JSMA-MB20	261.8	261.8
JSMA-MB30	316.8	316.8
JSMA-MC15	211.8	211.8
JSMA-MC30	261.8	261.8



Servo Motor – JSMA series

Feature :

- ***Applicative TECO JSDA Series Servo Driver***
- ***These compact , ac servo motors are designed by TECO to meet the demanding requirements of high performance motion systems.***
- ***Newly design that reduces motor size while delivering significantly higher torque.***
- ***Low-inertia***
- ***High Torque Output***
- ***Low Cogging Torque***
- ***With 8192ppr Incremental Encoder***

Servo Motor – JSMA series

Specification :

$$1 \text{ (kgf} \cdot \text{cm)} = 0.0980665 \text{ (N} \cdot \text{m)}$$

$$1 \text{ (gf} \cdot \text{cm} \cdot \text{s}^2) = 0.980665 \text{ (kg} \cdot \text{cm}^2)$$

規格項目\ 馬達種類		符號	單位	JSMA-LC03	JSMA-LC08	JSMA-SC02	JSMA-SC04	JSMA-SC08
額定輸出		P _R	W	300	750	200	400	750
搭配驅動器				JSDA-15A	JSDA-20A	JSDA-15A	JSDA-20A	JSDA-30A
額定線間電壓		V _T	V	107.7	149.4	81.92	77.53	105.3
額定扭矩		T _R	N · m	0.95	2.391	0.637	1.274	2.386
額定相電流		I _R	A	2.0	3.4	2.2	4.4	5
額定轉速		N _R	rpm	3000	3000	3000	3000	3000
瞬間最大扭矩		T _P (N)	N · m	2.861	7.164	1.911	3.822	7.159
瞬間最大機子電流		I _P	A	6.0	10.2	6.6	13.2	15
轉矩常數		K _T	N·m/A	0.524	0.776	0.325	0.325	0.533
誘起電壓常數		K _E	V/k rpm	54.9	81.4	34.6	34.6	55.792
轉子慣量		J _M	kg·cm ²	0.671	2.449	0.27	0.58	1.12
機子阻抗		R _a	Ω	8.37	3.27	10	4	2.6
機子感抗		L _a	mH	17.4	10.2	10.8	5.8	5.07
機械時定數		T _m	ms	1.96	1.032	2.29	1.97	0.935
電氣時定數		t _e	ms	2.05	3.12	0.92	0.69	1.954
重量			kgf	1.82	3.41	1.6	2	3.5
絕緣等級				F級 (155℃)				
額定電壓			V	VDC 24V±10				
機 械 式 剎 車	靜止摩擦扭力		N · m	1.176	2.352	1.176	1.176	2.352
	轉子慣量		kg·cm ²	0.098	0.225	0.098	0.098	0.225
	消耗電流		A	0.45	0.44	0.45	0.45	0.44
	重量		kgf	0.68	1.94	0.68	0.68	1.94
馬達使用時周圍溫度			℃	0~40				

Servo Motor – JSMA series

Specification :

規格項目\ 馬達種類		符號	單位	JSMA-MA05	JSMA-MA10	JSMA-MB10	JSMA-MA15
額定輸出		P _R	W	550	1000	1000	1500
搭配驅動器				JSDA-30A	JSDA-30A	JSDA-30A	JSDA-50A3
額定線間電壓		V _T	V	162.3	188.7	185.3	194.4
額定扭矩		T _R	N·m	5.252	9.545	4.782	14.327
額定相電流		I _R	A	3.43	5.16	5.16	7.45
額定轉速		N _R	rpm	1000	1000	2000	1000
瞬間最大扭矩		T _P (N)	N·m	15.758	28.645	14.327	42.963
瞬間最大機子電流		I _P	A	10.3	15.5	15.5	22.35
轉矩常數		K _T	N·m/A	1.679	2.039	1.019	2.26
誘起電壓常數		K _E	V/k rpm	175.9	213.6	106.8	236.6
轉子慣量		J _M	kg·cm ²	6.37	12.25	6.37	18.03
機子阻抗		R _a	Ω	5.37	2.78	1.82	1.785
機子感抗		L _a	mH	27.5	18.21	10.05	12.66
機械時定數		T _m	ms	1.21	0.82	1.11	
電氣時定數		t _e	ms	5.12	6.55	5.52	7.092
重量			kgf	6.6	10.3	6.6	14
絕緣等級				F級 (155 °C)			
機 械 式 剎 車	額定電壓		V	VDC 24V±10%			
	靜止摩擦扭力		N·m	8	15	8	15
	轉子慣量		kg·cm ²	0.675	0.725	0.675	0.725
	消耗電流		A	0.58	0.59	0.58	0.59
	重量		kgf	1.2	1.7	1.2	1.7
馬達使用時周圍溫度			°C	0~40			

Servo Motor – JSMA series

Specification :

規格項目\ 馬達種類	符號	單位	JSMA-MC15	JSMA-MB20	JSMA-MB30	JSMA-MC30
額定輸出	P_R	W	1500	2000	3000	3000
搭配驅動器			JSDA-50A3	JSDA-50A3	JSDA-75A3	JSDA-75A3
額定線間電壓	V_T	V	200.3	205.4	189.4	199.7
額定扭矩	T_R	N·m	4.782	9.545	14.327	9.545
額定相電流	I_R	A	7.06	9.18	14	14
額定轉速	N_R	rpm	3000	2000	2000	3000
瞬間最大扭矩	$T_P(N)$	N·m	14.327	28.645	42.963	28.645
瞬間最大機子電流	I_P	A	21.2	27.5	42	42
轉矩常數	K_T	N·m/A	0.74	1.139	1.13	0.75
誘起電壓常數	K_E	V/k rpm	77.5	119.4	118.3	78.5
轉子慣量	J_M	kg·cm ²	6.37	12.25	18.03	12.25
機子阻抗	R_a	Ω	0.98	0.86	0.5	0.37
機子感抗	L_a	mH	5.37	5.67	3.54	2.43
機械時定數	T_m	ms	1.14	0.81	0.71	0.81
電氣時定數	t_e	ms	5.48	6.59	7.08	6.57
重量		kgf	6.6	10.3	14	10.3
絕緣等級			F級 (155 °C)			
額定電壓		V	VDC 24V±10%			
靜止摩擦扭力		N·m	8	15	15	15
轉子慣量		kg·cm ²	0.675	0.725	0.725	0.725
消耗電流		A	0.58	0.59	0.59	0.59
重量		kgf	1.2	1.2	1.7	1.7
馬達使用時周圍溫度		°C	0~40			

Servo Motor – JSMA series

Compare with Competitors(Dimension) :

TYPE		TECO	J2-S	SIGMA-II	MINAS A	DELTA
Motor Φ x W (mm)	200W	14 / 60	14 / 60	14 / 60	11 / 60	14 / 60
	400W	14 / 60	14 / 60	14 / 60	14 / 60	14 / 60
	750W	19 / 80	19 / 80	16 / 80	19 / 80	19 / 80
	1KW	22 / 110	24 / 130	19 / 130	22 / 130	22 / 130
	2KW	22 / 110	35 / 176	35 / 180	22 / 130	35 / 180
	3KW	22 / 110	35 / 176	35 / 180	24 / 130	35 / 180

Servo Motor – JSMA series

Compare with Competitors(Specification) :

TYPE		TECO	J2-S	SIGMA-II	MINAS A	DELTA	
Motor	Rated Torque / Peak Torque (N · m)	200W	0.637 / 1.911	0.64 / 1.9	0.637 / 1.91	0.64 / 1.91	
		400W	1.274 / 3.822	1.3 / 3.8	1.27 / 3.82	1.3 / 3.8	
		750W	2.386 / 7.159	2.4 / 7.2	2.39 / 7.16	2.4 / 7.1	
		1KW	4.782 / 14.327	4.78 / 14.4	5.39 / 13.8	4.8 / 14.4	
		2KW	9.545 / 28.645	9.55 / 28.5	11.5 / 28.7	9.54 / 28.5	
		3KW	14.327 / 42.963	16.7 / 50.1	18.6 / 45.1	14.3 / 42.9	
	Rated Speed (rpm) 0.2-0.75KW / 1-3 KW		3000 / 2000	3000 / 2000	3000 / 1500	3000 / 2000	3000 / 2000
	Max Speed (rpm) 0.2-0.75KW / 1-3 KW		4000 / 2000	4500 / 2000	5000 / 3000	5000 / 3000	5000 / 4500

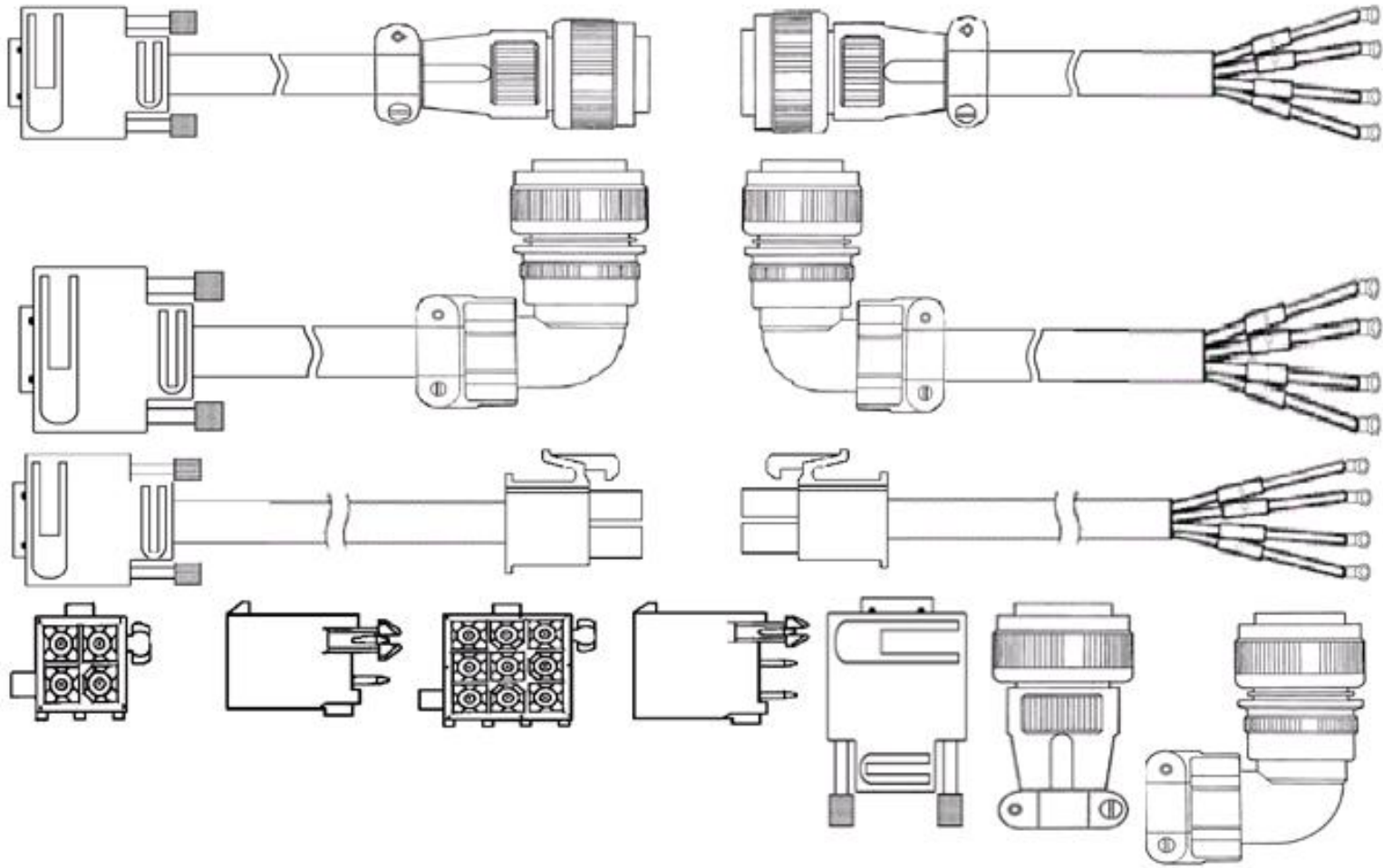
Introduction for 9300 Series



**Accessory
JSS**

Accessory – JSS series

Externals :



Accessory – JSS series

Model Name Explanation	TECO JSS
3M接頭 20pin	JSSCN20P
3M接頭 50pin	JSSCN50P
JSMA-S/L UVW中繼接頭(AMP 4pin)	JSSCNM04
JSMA-S/L PG中繼接頭(AMP 9pin)	JSSCNP09
JSMA-M UVW L型軍規接頭(MS 4pin)	JSSCNML04
JSMA-M 附煞車UVW / PG L型軍規接頭(MS 9pin)	JSSCNPL09
JSMA-M UVW 直型軍規接頭(MS 4pin)	JSSCNMS04
JSMA-M 附煞車UVW / PG 直型軍規接頭(MS 9pin)	JSSCNPS09
JSMA-S/L 3米UVW連接線(AMP) 0.75mm ²	JSSLM003
JSMA-S/L 5米UVW連接線(AMP) 0.75mm ²	JSSLM005
JSMA-S/L 10米UVW連接線(AMP) 0.75mm ²	JSSLM010
JSMA-S/L 3米PG連接線(AMP+3M)	JSSLP003
JSMA-S/L 5米PG連接線(AMP+3M)	JSSLP005

Accessory – JSS series

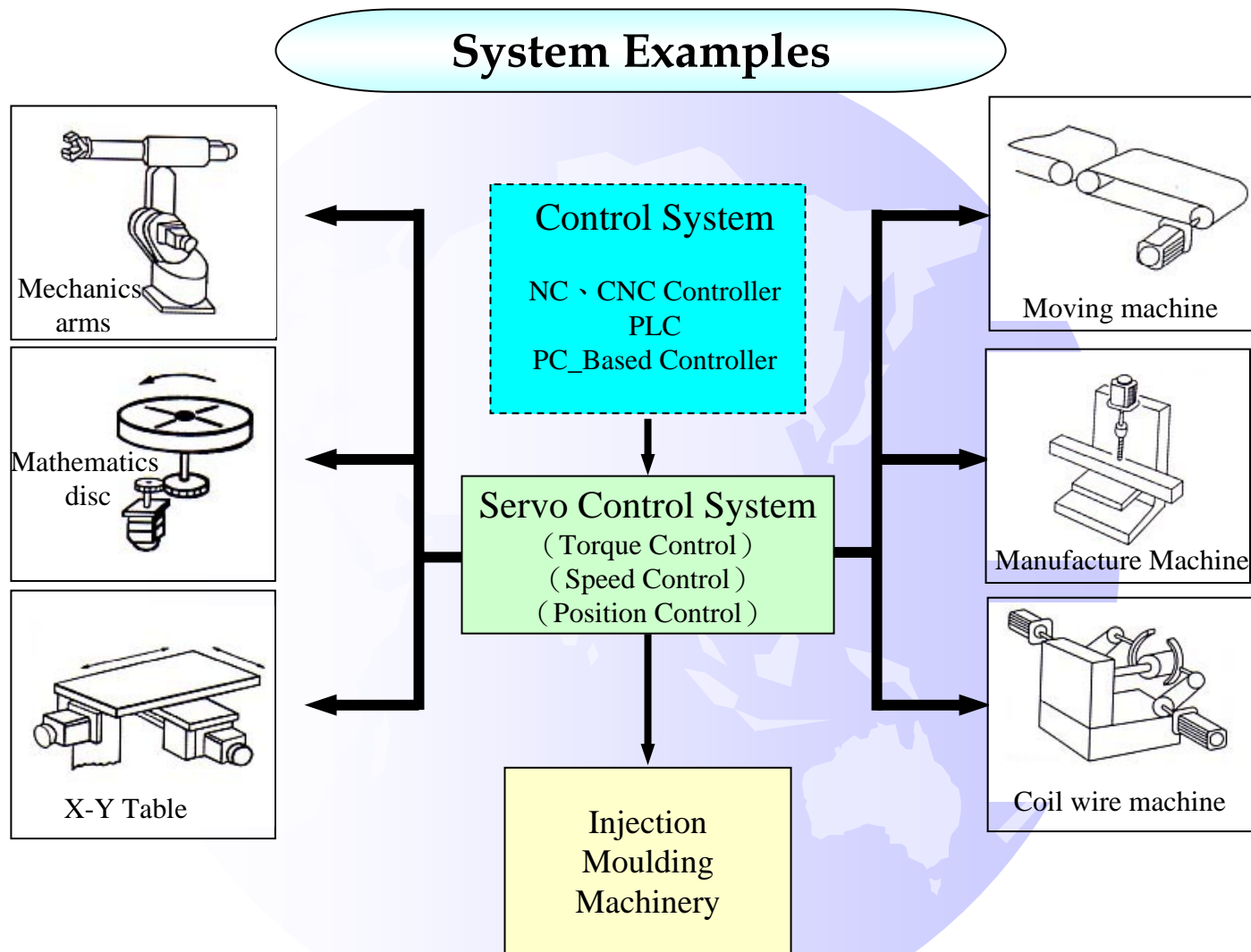
<i>Model Name Explanation</i>	TECO JSS
JSMA-S/L 10米PG連接線(AMP+3M)	JSSLP010
JSMA-M 3米L型UVW連接線(MSL) 2.0mm²	JSSMLM003
JSMA-M 5米L型UVW連接線(MSL) 2.0mm²	JSSMLM005
JSMA-M 10米L型UVW連接線(MSL) 2.0mm²	JSSMLM010
JSMA-M 3米L型PG連接線(MSL+3M)	JSSMLP003
JSMA-M 5米L型PG連接線(MSL+3M)	JSSMLP005
JSMA-M 10米L型PG連接線(MSL+3M)	JSSMLP010
JSMA-M 3米直型UVW連接線(MSS) 2.0mm²	JSSMSM003
JSMA-M 5米直型UVW連接線(MSS) 2.0mm²	JSSMSM005
JSMA-M 10米直型UVW連接線(MSS) 2.0mm²	JSSMSM010
JSMA-M 3米直型PG連接線(MSS+3M)	JSSMSP003
JSMA-M 10米直型PG連接線(MSS+3M)	JSSMSP010

Introduction for 9300 Series



Servo System Application

Servo System Application



Servo System Application

落地式機械手臂



側取式伺服機械手臂



樑式機械手臂 (1)



樑式機械手臂 (2)

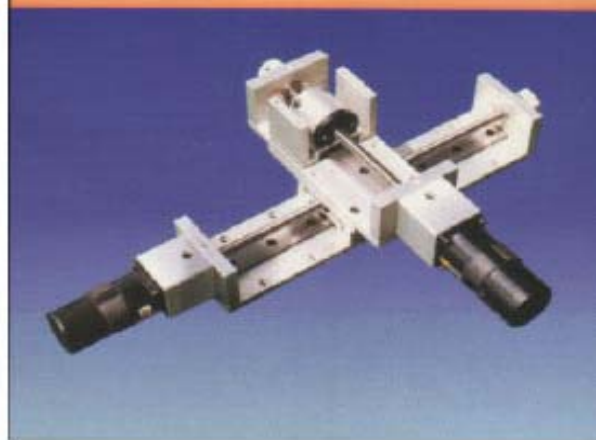


Servo System Application

單軸滑台 (OEM電子業用)



直交滑台 (OEM電子業用)



滑台動態測試台



X-Y直交滑台



Servo System Application

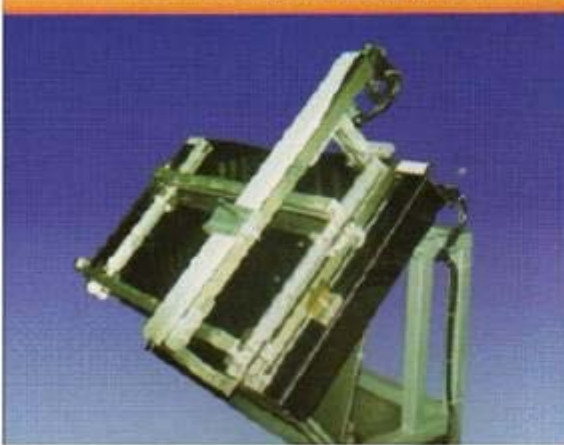
雕刻機



大型壓克力雕刻機



工業用標點畫線機



Servo System Application



銑床、雕刻機

Servo System Application



彈簧機

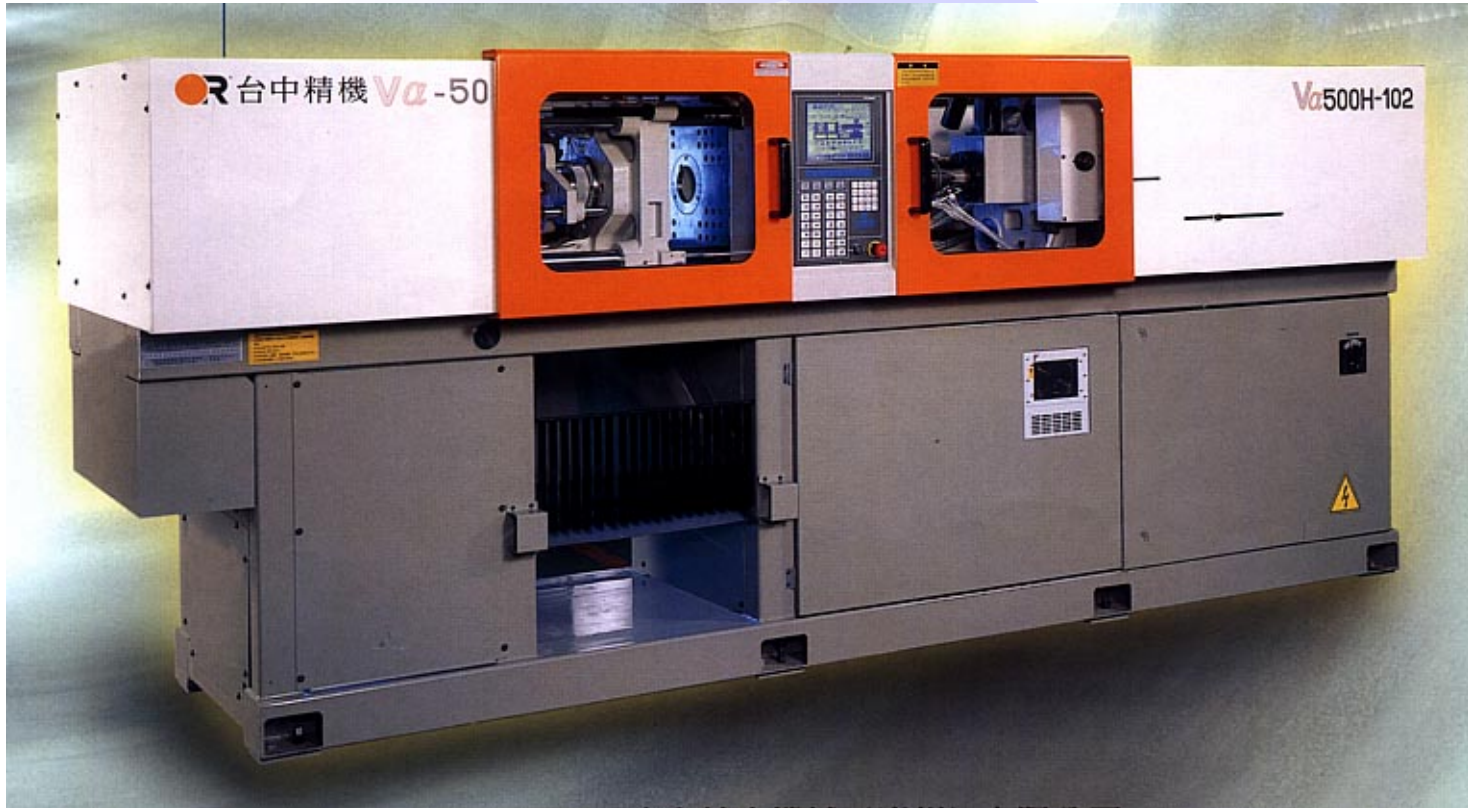
Servo System Application

ZNC-50



放電加工機

Servo System Application



射出成型機

Industrial Product & System Automation Division
Development & Technical Center



Servo System Application



鑽孔機、點塗膠機

Servo System Application



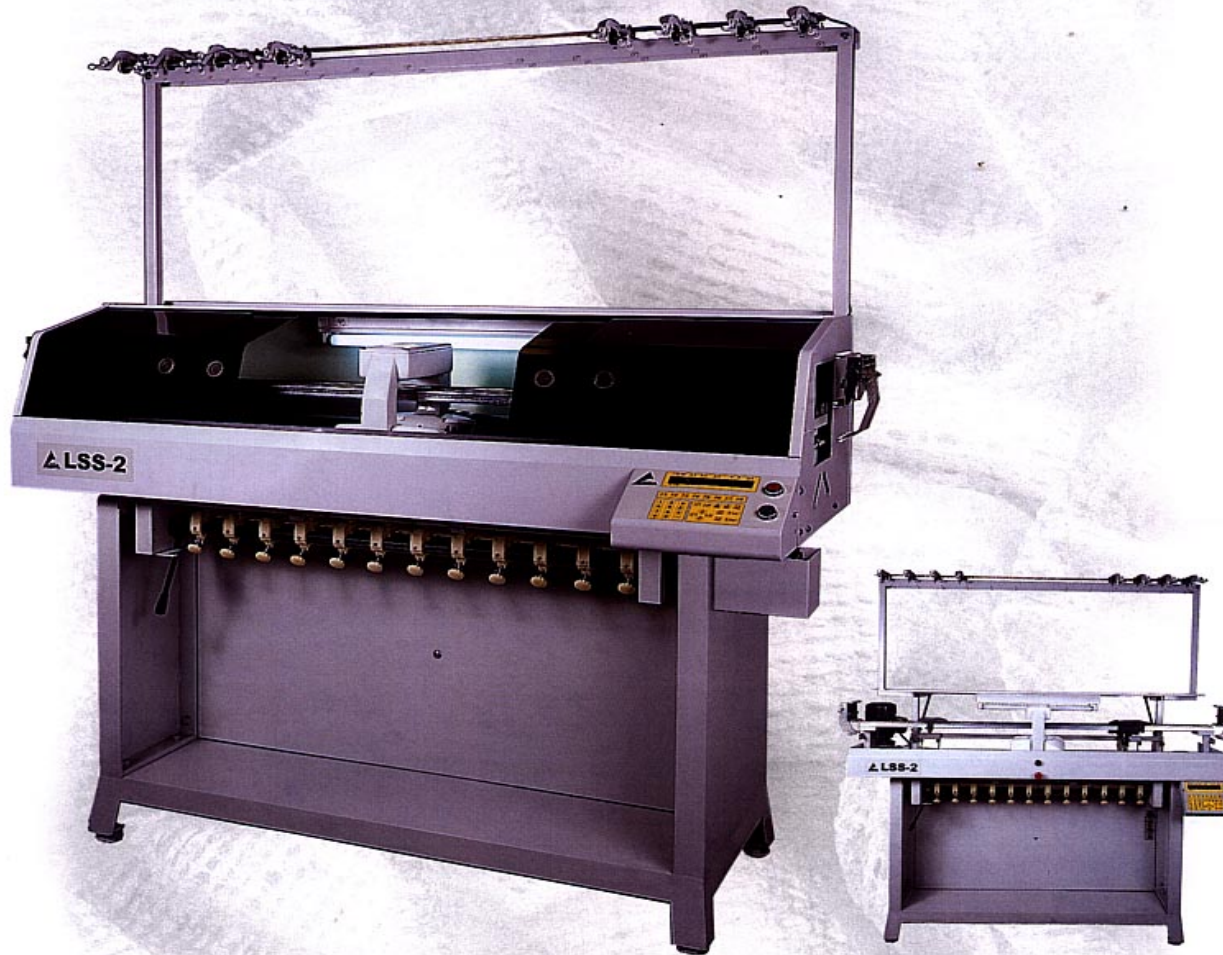
立式車床

Servo System Application



電子組立機械

Servo System Application



橫編織機

Introduction for 9300 Series



Thank you !!