TECO

JSDA+

JSDE+

AC Servo System


TECO
JSDA-200A3
CN 3
CN 4
POWER
MODE
ENTER
CHARGE
CN 1
CN
CN1
CN2
CN3
CN4
R
S
T
P
PC
U
V
W
CAUTION
WARNING

Contents

JSDE+ Series

Standard Servo Amplifier

Frame	1				2	
JSDEP	10A	15A	20A	30A	50A3	75A3*
Max. Capacity	100W	400W	750W	1kW	2kW	3kW

*Launch in 2012 Q1

Model Designation

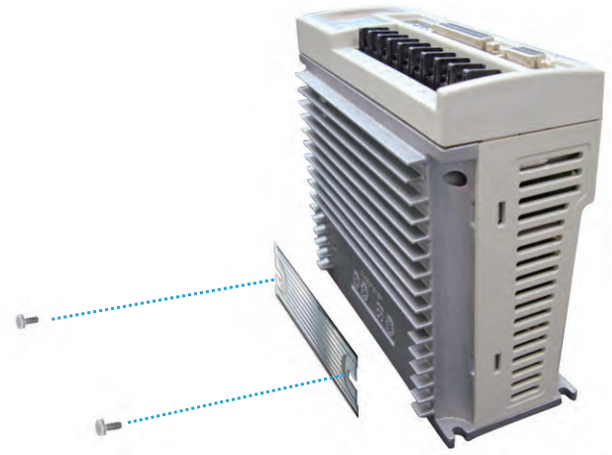
JS D EP – 15 A □

- JS: TECO AC Servo Series
- D: Servo Pack
- EP: Series: EP:E+ Series
- 15: Model Type: 10/15/20/30/50/75 Max. output power capacity
  - 10 : 100W
  - 15 : 400W
  - 20 : 750W
  - 30 : 1kW
  - 50 : 2kW
  - 75 : 3kW
- A: Input voltage: A : AC 220V
- □: Power supply:
  - □: Single/Three phase
  - 3 : Three phase

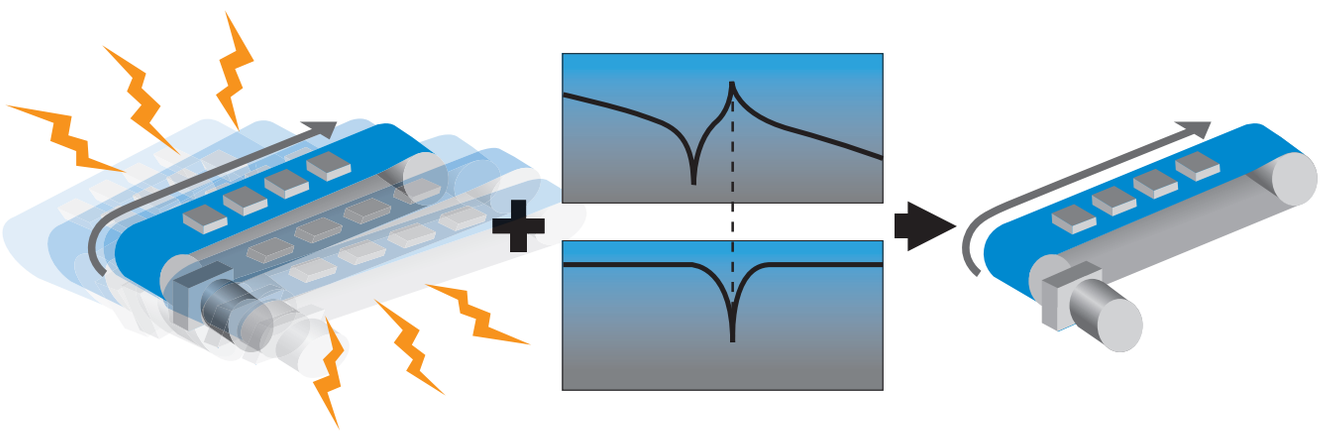
Friendly Interface for Division of Encoder Feedback

The division of the encoder feedback pulse could be set by parameter, and the setting value allowed 0 to the encoder pulse per rotation.

Reserved Braking resistor Installation space



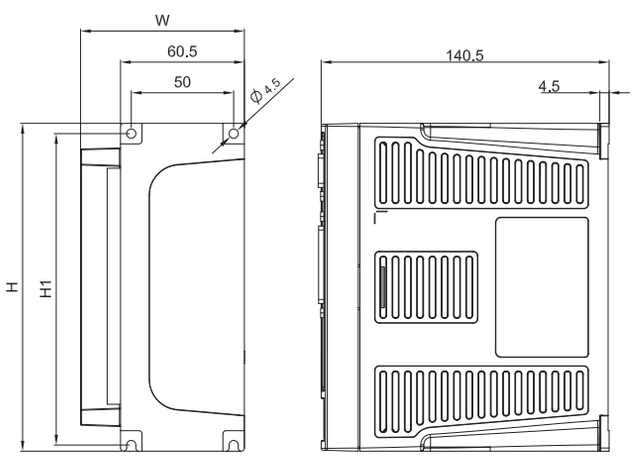
Notch Filter



JSDE+ Dimension

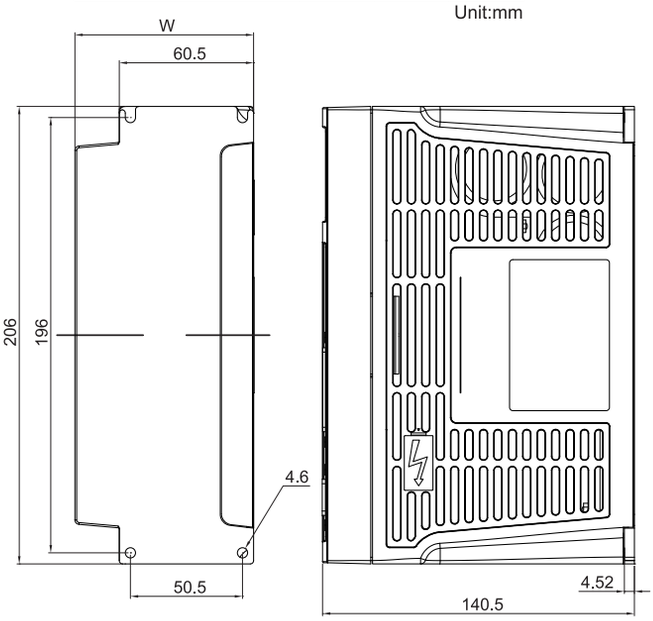
Model	H	H1	W
JSDEP-10A/15A	160	152	67
JSDEP-20A/30A	160	152	80

Unit:mm



Model	H	H1	W
JSDEP-50A3/75A3	206	195	80

Unit:mm



JSDE+ Specifications

	Servo Amplifier model JSDEP-□□□□		10A	15A	20A	30A	50A3
Basic Specification	Max. Applicable Servo Motor Capacity[KW]		0.1	0.4	0.75	1.0	2.0
	Continuos Current output[A rms]		0.94	2.5	4.4	5.16	9.5
	Max. output Current[A rms]		2.82	7.5	13.2	15.5	28.5
	Power Supply	Main Circuit R , S , T	Single Phase/Three Phase AC 170 ~ 253V				Three Phase AC 170 ~ 253V
			50 / 60Hz ±5%				
	Cooling System		Natural Air Circulation		Fan Cooling		
	Control Mothed		Three Phase full-wave rectification IGBT-PWM(SPWM)				
	Feedback[Encoder Resolution]		Incremental Encoder : 2500ppr / 8192ppr				
Common Function	LED Display		Charge / Power lamps ; Five 7-segment LEDs ; Four function keys				
	Control Mothed		Position(External Pulse Command/Internal Pulse Command), Speed/Torque and Dual control mode(P/S、S/T、P/T)				
	Regenerative Discharge		Built-in braking transistor (External braking resistor available)				
	Protective Function		Under voltage, Over voltage, Over load, Over current, Encoder error, Abnormal DI/DO programming, Memory abnonal, Emergency stop, Pulse deviation, Over speed, CPU abnomal, Limit switch error, Over heat...ect.				
	Communication interface		RS-232 / RS-485 (Modbus protocol)				
Position control	Command Source		External pulse train / Internal parameter (32 steps)				
	Input Signals	Type	Positive / Negative edge trigger : Sign+Pulse train, CCW+CW pulse train, 90° phase difference 2-phase pulse(A phase+B phase)				
		Form	Line Driver (+5V Level) 、 Open Collector (+5 ~ +24V Level)				
		Frequency	4Mpps(Line driver) / 200Kpps(Open collector)				
	Electronic Gear Ratio		1/200 ≦ A/B ≦ 200 (A=1 ~ 50000 ; B=1 ~ 50000)				
	Position Time Constant		smoothing : 0 ~ 10sec				
	Final Position Tolerance		0 ~ 50000 Pulse				
	Feed Forward Compensation		0 ~ 100 %				
	Homing Function		Set by parameter				
Speed control	Command Source		External analog signal / Internal parameter(3 speed set-up)				
	Analog Input Signals	Voltage Range	0 ~ ±10Vdc / 0 ~ 4500rpm (Set by parameter)				
		Impedance	10KΩ				
	Speed Control Range		1 : 5000 (Internal command) / 1 : 2000 (External command)				
	Speed Fluctuation Rate		Load fluctuation : 0 ~ 100% ±0.03% or less (at rated speed)				
			Power fluctuation : ±10% ±0.2% or less(at rated speed)				
			Ambient temperature fiuctuation : 0 ~ 50°C ±0.5% or less (at rated speed)				
	Accel/Decel. Time Constant		Linear : 0 ~ 50sec, S-Curve : 0 ~ 5sec, Smoothing : 0 ~ 10sec				
	Frequency Characteristic		600Hz (at J_L=J_M)				
	Torque Limit Operation		External analog signal / Internal parameter				
	Zero Speed / Speed Reach Range		0 ~ 4500rpm (Set by parameter)				
Torque control	Command Source		External analog signal				
	Analog Input Signals	Voltage Range	0 ~ ±10Vdc / 0 ~ ±300%				
		Impedance	10KΩ				
	Accel/Decel. Time Constant		Linear : 0 ~ 50sec				
	Speed Limit Operation		External analog signal / Internal parameter				
	Torque Reach Range		0 ~ 300% (set by parameter)				
I/O signals	Position Output	Output Signal	Phase A、B、Z Line Driver / Phase Z Open Collector				
		Division of encoder feedback pulse	Set up of any value is enabled (encoder pulse is the max.)				
	Digital Input [NPN/PNP]	Programmable 6 Points	Servo on, Alarm reset, P/PI switching, Forward/Reserve limit switch, External torque limit, Pulse deviation clear, Servo lock, Emergency stop, Speed command selection, Control mode switching, Pulse command inhibit, Gain switching, Electronic gear ratio setting, Internal pulse command trigger, Internal pulse sommand pause, Homing mode positioning, External reference signal, Internal position command switching, Speed/Torque command reverse, Torque mode forward / reverse start...ect.				
	Digital Output [Photocoupler]	Programmable 3 Points	Servo ready, Servo alarm, Zero speed, Brake interlock, Speed reach, Positioning completed, Homing completed, Torque reach				
Envirnoment	Installation Site		Indoor location(Avoiding direct sunshine) No corrosive liquid and gas(avoiding oil mist, flammable gas, dust)				
	Aititude		Altitude 1000M or lower above sea level				
	Temperature		Operating temperatue : 0 ~ 50°C ; Storage temperature : -20 ~ +65°C				
	Humidity		90%RH or less(No condensation)				
	Vibration		10 ~ 57Hz : 20m/s2 ; 57 ~ 150Hz : 2G				

JSDA+ Series

Advanced Servo Amplifier

Frame	1				2			3	4	
200V	10A	15A	20A	30A	50A3	75A3	100A3	150A3	200A3	300A3
Max. Capacity	100W	400W	750W	1kW	2kW	3kW	4.4kW	5.5kW	7.5kW	15kW

Model Designation

JS D AP–15 A □

TECO AC Servo Series

Servo Pack

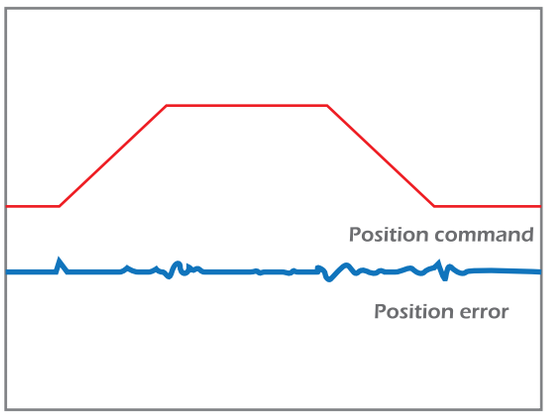
Series:
AP: A+ Series

Model Type:
10/15/20/30/50/75/100/150/200/300
Max. output power capacity
10 : 100W
15 : 400W
20 : 750W
30 : 1kW
50 : 2kW
75 : 3kW
100 : 4.4kW
150 : 5.5kW
200 : 7.5kW
300 : 15 kW

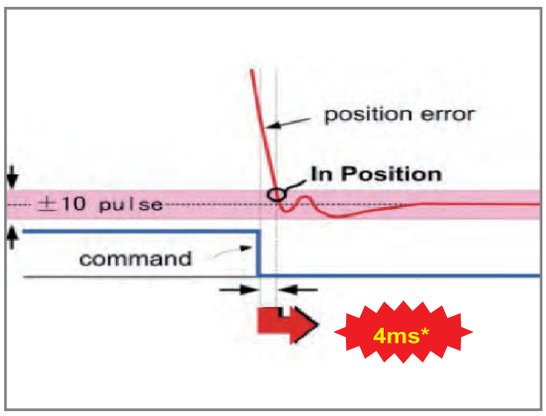
Input voltage:
A : AC 220V

Power supply:
□: Single/Three phase
3 : Three phase

Excellent Performance



Performance of the position doubled in comparison with current models by adoption of the optimized position and speed control algorithm.



A optimized method drastically shortens positioning settling time for equipment.

*Determined under field conditions.

High Resolution

Built-in Regenerative Resistor

*Built-in regenerative resistor below JSDAP-150A3

Battery Module for Absolute Encoder

Frame 1

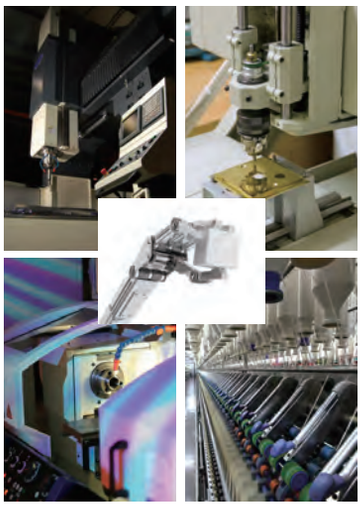
Frame 2

Frame 3

Auto-Classification

Through 17-bit and 15-bit encoders, servo motor can be identified.

Applications



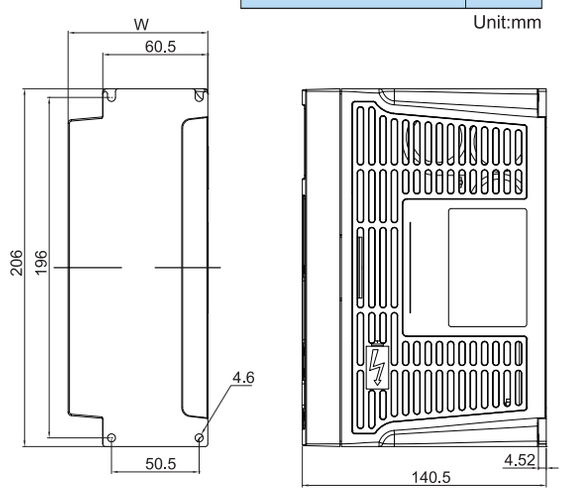
- Mechanics arm
- Engraving machine
- Computerized flat knitting machine
- CNC Lathe machine
- CNC wire cutting machine
- Injection molding machine
- PCB Router machine

JSDA+ Dimension

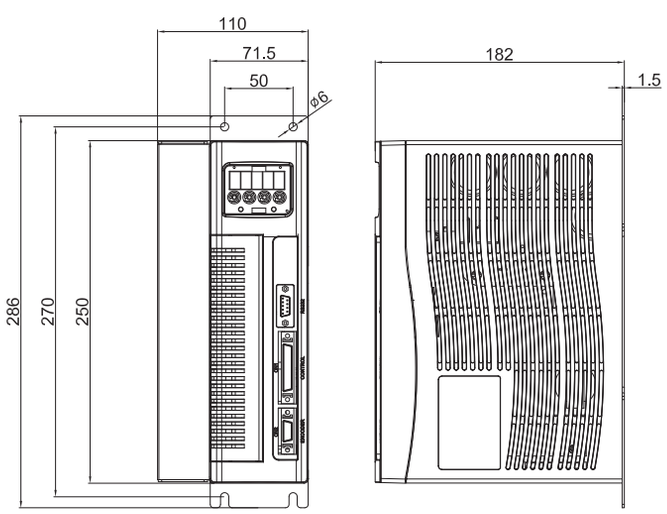
JSDAP-10A/15A/20A/30A

Model	W
JSDAP-10A/15A	69.5
JSDAP-20A/30A	80.5

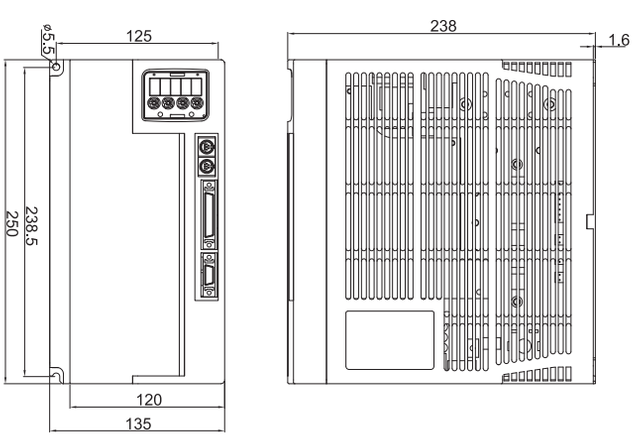
Unit:mm



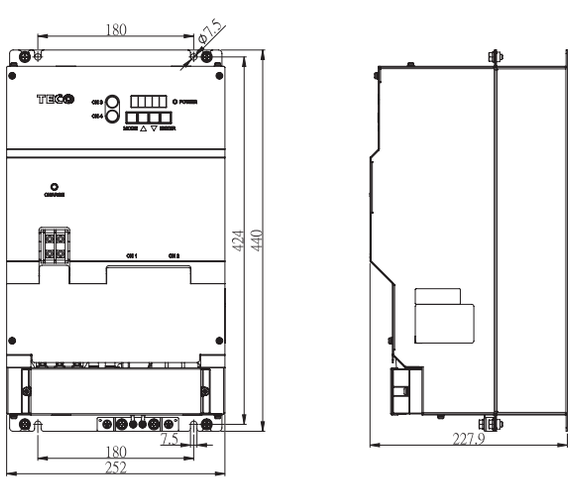
JSDAP-50A3/75A3/100A3



JSDAP-150A3



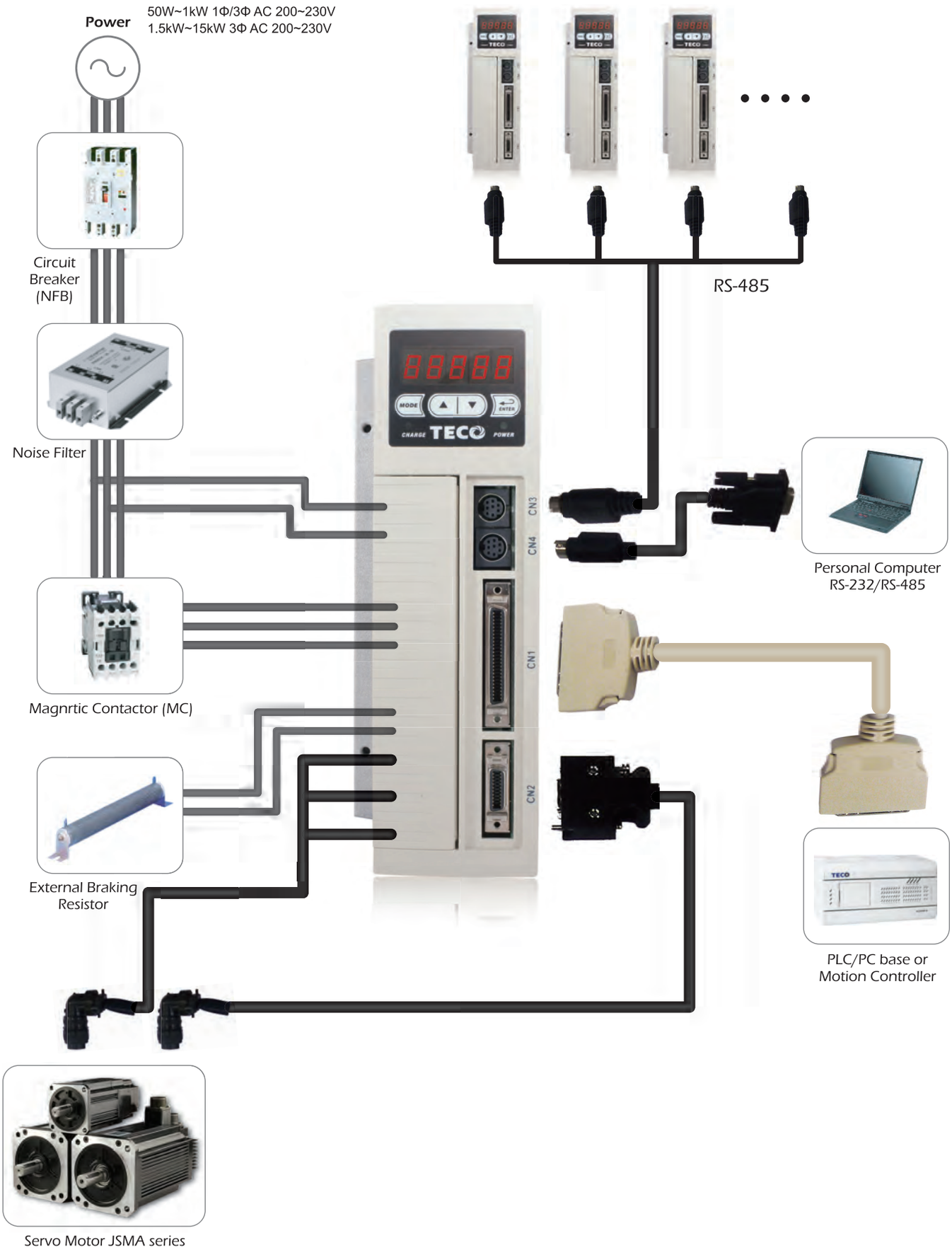
JSDAP-200A3/300A3

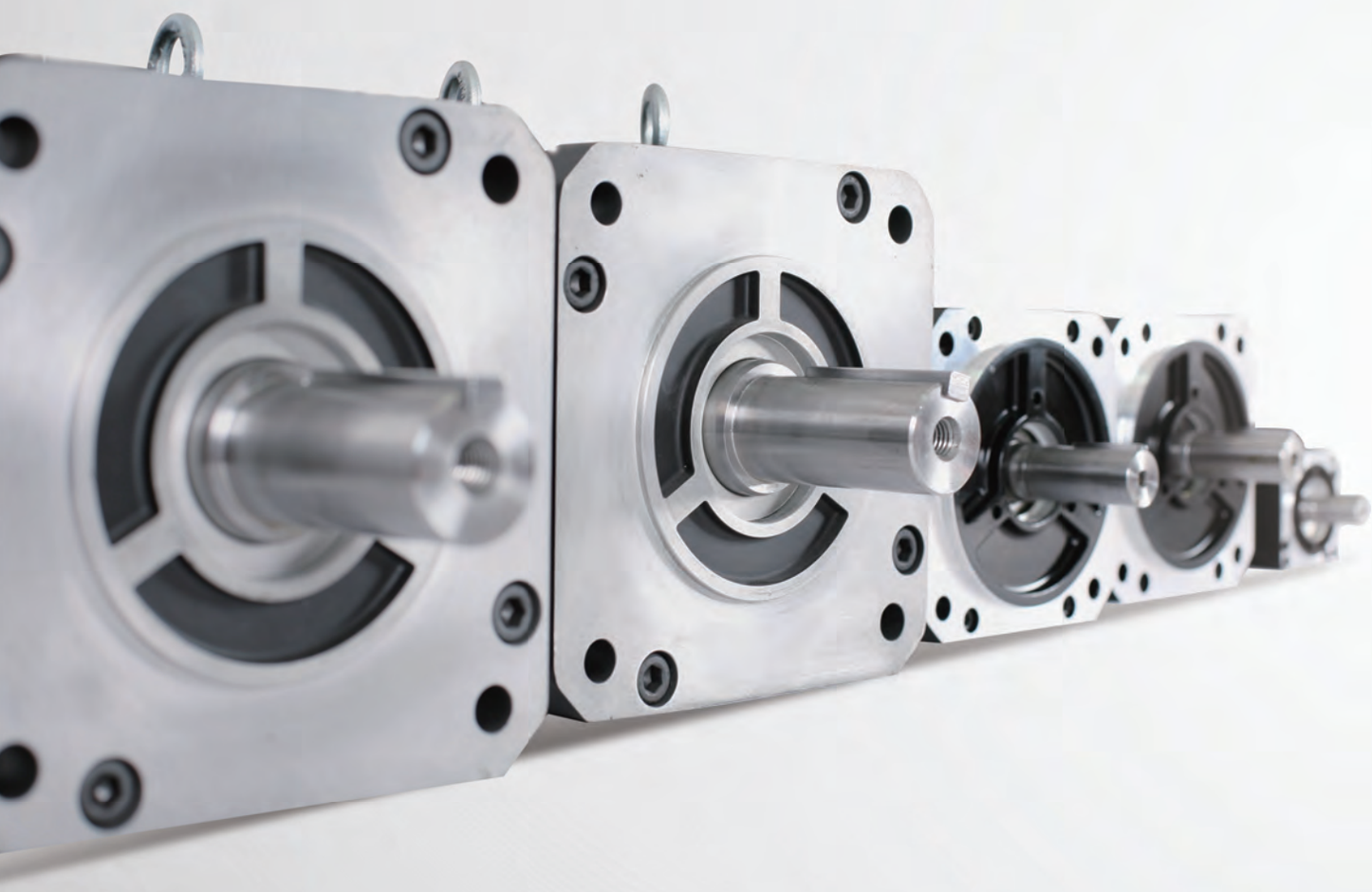


JSDA+ Specifications

	Servo Amplifier model JSDAP-□□□□		10A	15A	20A	30A	50A3	75A3	100A3	150A3	200A3	300A3
Basic Specification	Max. Applicable Servo Motor Capacity[KW]		0.1	0.4	0.75	1.0	2.0	3.0	4.4	5.5	7.5	15.0
	Continuos Current output[A rms]		0.94	2.5	4.4	5.16	9.5	15.0	23.0	33.2	42.1	78.0
	Max. output Current[A rms]		2.82	7.5	13.2	15.5	28.5	42.0	59.8	86.3	109.5	170.0
	Power Supply	Main Circuit R , S , T	Single Phase/Three Phase AC 170 ~ 253V				Three Phase AC 170 ~ 253V					
			50 / 60Hz ±5%									
		Control Circuit r , s	Single Phase AC 170 ~ 253V									
			50 / 60Hz ±5%									
	Cooling System		Natural Air Circulation				Fan Cooling					
	Control Mothed		Three Phase full-wave rectification IGBT-PWM(SPWM)									
	Feedback[Encoder Resolution]		15-bit Absolute encoder / 17-bit Incremental encoder									
Common Function	LED Display		Charge / Power lamps ; Five 7-segment LEDs ; Four function keys									
	Control Mothed		Position(External Pulse Command/Internal Pulse Command) 、Speed 、Torque and Dual control mode(P/S 、S/T 、P/T)									
	Regenerative Discharge		Built-in braking transistor and resistor (External braking resistor available)								Built-in brking transistor(External braking resistor available)	
	Dymanic Brake		Active after Power-off, Servo-off, Limit switch and protective function									
	Protective Function		Under voltage, Over voltage, Over load, Over current, Encoder error, Abnormal DI/DO programming, Memory abnonal, Emergency stop, Pulse deviation, Over speed, CPU abnomal, Limit switch error, Over heat...ect.									
	Communication interface		RS-232 / RS-485 (Modbus protocol)									
Position control	Command Source		External pulse train / Internal parameter									
	Input Signals	Type	Positive / Negative edge trigger : Sign+Pulse train, CCW+CW pulse train, 90° phase difference 2-phase pulse(A phase+B phase)									
		Form	Line Driver (+5V Level) 、 Open Collector (+5 ~ +24V Level)									
		Frequency	4Mpps(Line driver) / 200Kpps(Open collector)									
	Electronic Gear Ratio		1/200 ≦ A/B ≦ 200 (A=1 ~ 50000 ; B=1 ~ 50000)									
	Position Time Constant		smoothing : 0 ~ 10sec									
	Final Position Tolerance		0 ~ 50000 Pulse									
	Feed Forward Compensation		0 ~ 100%									
	Homing Function		Set by parameter									
Speed control	Command Source		External analog signal / Internal parameter(3 speed set-up)									
	Analog Input Signals	Voltage Range	0 ~ ±10Vdc / 0 ~ 4500rpm (Set by parameter)									
		Impedance	10KΩ									
	Speed Control Range		1 : 5000 (Internal command) / 1 : 2000 (External command)									
	Speed Fluctuation Rate		Load fluctuation : 0 ~ 100% ±0.03% or less (at rated speed)									
			Power fluctuation : ±10% ±0.2% or less(at rated speed)									
			Ambient temperature fiuctuation : 0 ~ 50°C ±0.5% or less (at rated speed)									
	Accel/Decel. Time Constant		Linear : 0 ~ 50sec, S Curve : 0 ~ 5sec, Smoothing : 0 ~ 10sec									
	Frequency Characteristic		800Hz (at J_L=J_M)									
	Torque Limit Operation		External analog signal / Internal parameter									
	Zero Speed / Speed Reach Range		0 ~ 4500rpm (Set by parameter)									
Torque control	Command Source		External analog signal									
	Analog Input Signals	Voltage Range	0 ~ ±10Vdc / 0 ~ ±300%									
		Impedance	10KΩ									
	Accel/Decel. Time Constant		Linear : 0 ~ 50sec									
	Speed Limit Operation		External analog signal / Internal parameter									
	Torque Reach Range		0 ~ 300% (set by parameter)									
I/O signals	Position Output	Output Signal	Phase A 、B 、Z Line Driver / Phase Z Open Collector									
		Division of encoder feedback pulse	Set up of any value is enabled (encoder pulse is the max.)									
	Digital Input [NPN/PNP]	Programmable 12 Points	Servo on, Alarm reset, P/PI switching, Forward/Reserve limit switch, External torque limit, Pulse deviation clear, Servo lock, Emergency stop, Speed command selection, Control mode switching, Pulse command inhibit, Gain switching, Electronic gear ratio setting, Internal pulse command trigger, Internal pulse sommand pause, Homing mode positioning, External reference signal, Internal position command switching, Speed/Torque command reverse, Torque mode forward / reverse start...ect.										
	Digital Output [Photocoupler]	Programmable 4 Points	Servo alarm code, Torque limit, Limit switch, Baseblock									
		Programmable 4 Points	Servo ready, Servo alarm, Zero speed, Brake interlock, Speed reach, Positioning completed, Homing completed, Torque reach									
	Analog Output Signal	Programmable 3 Points	Speed feedback, Torque / Speed / Position command, Pulse deviation value, Electrical angle, Main circuit voltage(DC Bus)									
Envirnoment	Installation Site		Indoor location(Avoiding direct sunshine) No corrosive liquid and gas(avoiding oil mist, flammable gas, dust)									
	Aititude		Altitude 1000M or lower above sea level									
	Temperature		Operating temperatue: 0 ~ 50°C ; Storage temperature: -20 ~ +65°C									
	Humidity		90%RH or less(No condensation)									
	Vibration		10 ~ 57Hz : 20m/s2 ; 57 ~ 150Hz : 2G									

System Configuration





Servo Motor JSMA Series

Model Designation

JS M A – P S C 08 A H □ □

- **JS** — TECO AC Servo Series
- **M** — Servo Motor
- **A** — Series: AP: A Series
- **P** — IP67 (except shaft and connectors)
- **S** — Inertia: S: Super Low; L: Low; M: Middle; H: Middle
- **C** — Motor Speed: A: 1000rpm; B: 2000rpm; C: 3000rpm; H: 1500rpm
- **08** — Rated Output Power: 01 : 100W; 03 : 300W; 04 : 400W; 05 : 500W; 08 : 750W; 10 : 1kW; 15 : 1.5kW; 20 : 2kW; 30 : 3kW; 44 : 4.4kW; 55 : 5.5kW; 75 : 7.5kW; 110 : 11 kW; 150 : 15 kW
- **A** — Input Voltage: A : AC 220V
- **H** — Encoder Resolution: B : 2500ppr; H: 8192ppr; 7 : 17-bit; 5 : 15-bit(absolute)
- **□** — Mechanical Brake: □: without brake; B : with brake(24VDC)
- **□** — Oil seal / Keyway:

No.	Keyway	Oil seal
□	No	No
K	Yes	No
O	No	Yes
A	Yes	Yes

***The information above is for model description, please contacts our sales for more detail.**

Standard Specification

S/L Series Low Inertia (50W~750W)

Motor Mode	Symbol	Unit	JSMA-P□□□□					
			SCP5	SC01	SC04	SC08	LC03	LC08
Standard / Customization			Standard	Standard	Standard	Standard	Standard	Standard
Drive Mode			10A	10A/15A	15A/20A	20A/30A	15A	20A
Rate Output	P_R	kW	0.05	0.1	0.4	0.75	0.3	0.75
Rated Torque	T_R	N · m	0.16	0.32	1.27	2.39	0.95	2.39
Max. Torque	T_{max}	N · m	0.48	0.95	3.82	7.16	2.86	7.16
Rated Speed	N_R	rpm	3000				3000	
Max. Speed	N_{max}	rpm	4500			4200	4500	4200
Rated Current	I_R	A	0.65	0.94	3.5	4.3	2.0	3.4
Max. Armature Current	I_{max}	A	1.95	2.82	10.5	12.9	6.0	10.2
Torque Constant	K_T	N·m/A	0.356	0.380	0.39	0.610	0.523	0.774
Induced Voltage Constant	K_E	V/k rpm	40.4	39.8	40.4	63.8	54.8	81.4
Rotor Moment of Inertia	J_M	Kg·cm^2	0.029	0.036	0.277	0.940	0.677	2.459
Armature Resistance	Ra	Ω	71.00	25.00	1.96	2.41	5.58	2.18
Armature Inductance	La	mH	24.3	35.0	3.8	8.0	11.6	6.8
Mechanical Time Constant	Tm	ms	1.43	0.59	0.34	0.58	1.32	0.85
Electrical Time Constant	Te	ms	0.34	1.40	1.94	3.30	2.08	3.12
Weight (standard)	W	kgw	0.48	0.70	1.37	2.47	1.59	3.05
Insulation Grade	—	—	Class B (130℃)		Class F (155℃)			
Operating Ambient Temp.	T	℃	0 ~ 40					
Operating Ambient Humidity	RH	%	<80			<90		
Storage Temp.	T	℃	-20 ~ 60					
Storage Humidity	RH	%	<80			<90		

1(kgf · cm)=0.0980665(N · m) ; 1(gf · cm · s^2)=0.980665(kg · cm^2)

Standard Specification

M series Middle inertia (550W~3kW)

Motor Mode	Symbol	Unit	JSMA-P□□□□				
			MA05	MA10	MA15	MH05	MH10
Standard / Customization			Standard	Standard	Standard	Customization	Customization
Drive Mode			20A	30A	30A/50A3	20A	30A
Rate Output	P_R	kW	0.55	1.0	1.5	0.55	1.0
Rated Torque	T_R	N · m	5.25	9.55	14.32	3.50	6.40
Max. Torque	T_{max}	N · m	15.76	28.65	42.96	10.51	19.21
Rated Speed	N_R	rpm	1000			1500	
Max. Speed	N_{max}	rpm	1500			2000	
Rated Current	I_R	A	3.43	5.16	7.45	2.98	5.0
Max. Armature Current	I_{max}	A	10.3	15.5	22.35	8.94	15.0
Torque Constant	K_T	N·m/A	1.679	2.039	2.110	1.293	1.411
Induced Voltage Constant	K_E	V/k rpm	175.9	213.6	221.3	135.6	147.6
Rotor Moment of Inertia	J_M	Kg·cm^2	6.26	12.14	17.92	6.26	12.14
Armature Resistance	Ra	Ω	3.58	1.85	1.19	2.31	0.95
Armature Inductance	La	mH	18.33	12.14	8.44	10.80	8.78
Mechanical Time Constant	Tm	ms	0.76	0.52	0.46	0.83	0.55
Electrical Time Constant	Te	ms	5.12	6.55	7.09	4.68	9.28
Weight (standard)	W	kgw	6.45	10.18	13.87	6.45	10.18
Insulation Grade	—	—	Class B (130℃)				
Operating Ambient Temp.	T	℃	0 ~ 40				
Operating Ambient Humidity	RH	%	<90				
Storage Temp.	T	℃	-20 ~ 60				
Storage Humidity	RH	%	<90				

1(kgf · cm)=0.0980665(N · m) ; 1(gf · cm · s^2)=0.980665(kg · cm^2)

Motor Mode	Symbol	Unit	JSMA-P□□□□							
			MB10	MB15	MB20	MB30	MC10	MC15	MC20	MC30
Standard / Customization			Standard	Standard	Standard	Standard	Customization	Customization	Customization	Customization
Drive Mode			30A	30A/50A3	50A3	75A3	30A	30A/50A3	50A3	75A3
Rate Output	P_R	kW	1.0	1.5	2.0	3.0	1.0	1.5	2.0	3.0
Rated Torque	T_R	N · m	4.78	7.16	9.55	14.33	3.20	4.78	6.37	9.55
Max. Torque	T_{max}	N · m	14.33	21.49	28.65	42.96	9.60	14.33	19.11	28.65
Rated Speed	N_R	rpm	2000				3000			
Max. Speed	N_{max}	rpm	2800				4000			
Rated Current	I_R	A	5.16	7.57	9.18	14.0	4.96	7.06	9.5	14.0
Max. Armature Current	I_{max}	A	15.5	22.71	27.5	42.0	14.88	21.2	28.5	42.0
Torque Constant	K_T	N·m/A	1.019	1.060	1.140	1.130	0.715	0.740	0.740	0.750
Induced Voltage Constant	K_E	V/k rpm	106.8	108.7	119.3	118.3	74.6	77.5	77.4	78.5
Rotor Moment of Inertia	J_M	Kg·cm^2	6.26	8.88	12.14	17.92	4.60	6.26	8.88	12.14
Armature Resistance	Ra	Ω	1.22	0.79	0.58	0.33	1.02	0.65	0.40	0.25
Armature Inductance	La	mH	6.70	4.74	3.78	2.12	5.06	3.58	2.40	1.62
Mechanical Time Constant	Tm	ms	0.70	0.61	0.52	0.45	0.88	0.71	0.62	0.51
Electrical Time Constant	Te	ms	5.49	6.00	6.52	6.38	4.96	5.48	6.00	6.56
Weight (standard)	W	kgw	6.47	8.08	10.16	13.87	5.29	6.49	8.08	10.16
Insulation Grade	—	—	Class B (130℃)							
Operating Ambient Temp.	T	℃	0 ~ 40							
Operating Ambient Humidity	RH	%	<90							
Storage Temp.	T	℃	-20 ~ 60							
Storage Humidity	RH	%	<90							

1(kgf · cm)=0.0980665(N · m) ; 1(gf · cm · s^2)=0.980665(kg · cm^2)

Standard Specification

MH/HH series Middle inertia (3kW~15kW)

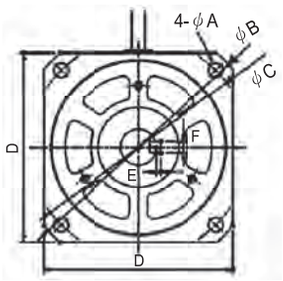
Motor Mode	Symbol	Unit	JSMA-P□□□□				
			MH30	MH44	MH55	MH75	MH110
Standard / Customization			Standard	Standard	Standard	Standard	Standard
Drive Mode			75A3	100A3	150A3	200A3	300A3
Rate Output	P_R	kW	3.0	4.4	5.5	7.5	11.0
Rated Torque	T_R	N · m	19.1	28.0	35.1	47.8	70.1
Max. Torque	T_{max}	N · m	49.5	71.5	89.6	122.6	179.0
Rated Speed	N_R	rpm	1500				
Max. Speed	N_{max}	rpm	2000				
Rated Current	I_R	A	15.0	22.5	28.5	38.0	58.0
Max. Armature Current	I_{max}	A	39.0	58.5	74.1	98.8	152.0
Torque Constant	K_T	N·m/A	1.27	1.24	1.23	1.26	1.21
Induced Voltage Constant	K_E	V/k rpm	81.32	82.23	81.20	81.62	83.40
Rotor Moment of Inertia	J_M	Kg·cm^2	39.99	51.44	63.52	93.94	160.94
Armature Resistance	Ra	Ω	0.18	0.12	0.09	0.05	0.03
Armature Inductance	La	mH	2.89	1.98	1.52	1.02	0.80
Mechanical Time Constant	Tm	ms	0.69	0.60	0.56	0.49	0.48
Electrical Time Constant	Te	ms	16.12	16.81	17.24	18.96	26.77
Weight (standard)	W	kgw	19.5	26.2	30.0	42.0	52.5
Insulation Grade	—	—	Class F (155℃)				
Operating Ambient Temp.	T	℃	0 ~ 40				
Operating Ambient Humidity	RH	%	<90				
Storage Temp.	T	℃	-20 ~ 60				
Storage Humidity	RH	%	<90				

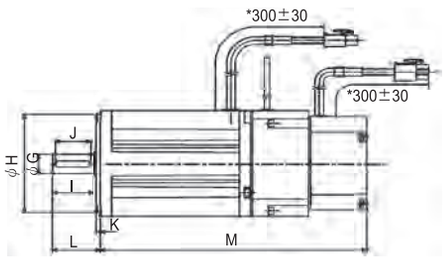
1(kgf · cm)=0.0980665(N · m) ; 1(gf · cm · s^2)=0.980665(kg · cm^2)

Motor Mode	Symbol	Unit	JSMA-P□□□□				
			MH150	HH30	HH44	HH55	HH75
Standard / Customization			Standard	Standard	Standard	Standard	Standard
Drive Mode			300A3	100A3	150A3	200A3	300A3
Rate Output	P_R	kW	15.0	3.0	4.4	5.5	7.5
Rated Torque	T_R	N · m	95.5	19.1	28.0	35.1	47.8
Max. Torque	T_{max}	N · m	204.0	49.5	71.4	89.6	122.6
Rated Speed	N_R	rpm	1500	1500			
Max. Speed	N_{max}	rpm	2000	3000			
Rated Current	I_R	A	78.0	23.0	33.2	42.1	58.0
Max. Armature Current	I_{max}	A	170.0	59.8	86.3	109.5	151.0
Torque Constant	K_T	N·m/A	1.22	0.83	0.84	0.83	0.82
Induced Voltage Constant	K_E	V/k rpm	83.10	54.21	54.82	53.27	53.75
Rotor Moment of Inertia	J_M	Kg·cm^2	222.20	39.99	53.02	63.52	93.94
Armature Resistance	Ra	Ω	0.02	0.08	0.05	0.04	0.02
Armature Inductance	La	mH	0.50	1.48	0.89	0.68	0.43
Mechanical Time Constant	Tm	ms	0.37	0.70	0.62	0.56	0.51
Electrical Time Constant	Te	ms	29.12	18.75	16.54	17.46	18.00
Weight (standard)	W	kgw	70.5	19.5	26.2	30.0	42.0
Insulation Grade	—	—	Class F (155℃)				
Operating Ambient Temp.	T	℃	0 ~ 40				
Operating Ambient Humidity	RH	%	<90				
Storage Temp.	T	℃	-20 ~ 60				
Storage Humidity	RH	%	<90				

1(kgf · cm)=0.0980665(N · m) ; 1(gf · cm · s^2)=0.980665(kg · cm^2)

Dimension

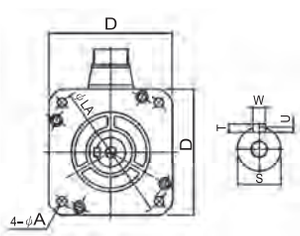


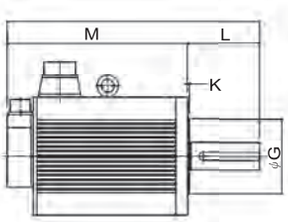


Servo Motor Mode			A	B	C	D	E	F	G	H	I	J	K	L	M
JSMA-PL Series	Without Brake	LC03AB/H	φ5.5	φ100	φ90	76	2	5	φ14	φ70	25	20	3	30	113.4
		LC08AB/H	φ6.5	φ112	φ100	86	2	5	φ16	φ80	30	25	3	35	148
		LC08AB/H-0C	φ6.5	φ112	φ100	86	2	5	φ19	φ80	30	25	3	35	148
	With Brake	LC03AB/H	φ5.5	φ100	φ90	76	2	5	φ14	φ70	25	20	3	30	147.8
		LC08AB/H	φ6.5	φ112	φ100	86	2	5	φ16	φ80	30	25	3	35	183.2
		LC08AB/H-0C	φ6.5	φ112	φ100	86	2	5	φ19	φ80	30	25	3	35	183.2

JSMA-PS Series	Without Brake	SCP5AB/H	φ3.5	φ55	φ48	42	-	-	φ8	φ30	22.5	16	2.5	25	85.8
		SC01AB/H	φ3.5	φ55	φ48	42	-	-	φ8	φ30	22.5	16	2.5	25	106.8
		SC04AB/H	φ5.5	-	φ70	60	2	5	φ14	φ50	25	20	3	30	121.7
		SC08AB/H	φ5.5	-	φ90	80	2.5	6	φ19	φ70	35	30	3	40	139
	With Brake	SC04AB/H	φ5.5	-	φ70	60	2	5	φ14	φ50	25	20	3	30	157.1
		SC08AB/H	φ5.5	-	φ90	80	2.5	6	φ19	φ70	35	30	3	40	174

Unit:mm





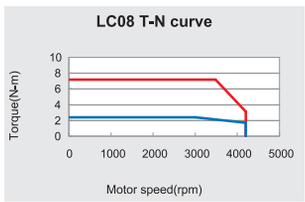
Servo Motor Mode			A	LA	D	U	W	S	G	K	L	M
JSMA-PM JSMA-PH Series	Without Brake	MA05	9	145	130	2.5	6	22	110	6	58	164.8
		MH05	9	145	130	2.5	6	22	110	6	58	164.8
		MA10	9	145	130	2.5	6	22	110	6	58	214.8
		MB10	9	145	130	2.5	6	22	110	6	58	164.8
		MC10	9	145	130	2.5	6	22	110	6	58	149.8
		MH10	9	145	130	2.5	6	22	110	6	58	214.8
		MA15	9	145	130	2.5	6	22	110	6	58	264.8
		MB15	9	145	130	2.5	6	22	110	6	58	184.8
		MC15	9	145	130	2.5	6	22	110	6	58	164.8
		MB20	9	145	130	2.5	6	22	110	6	58	214.8
		MC20	9	145	130	2.5	6	22	110	6	58	184.8
		MB30	9	145	130	2.5	6	22	110	6	58	264.8
		MC30	9	145	130	2.5	6	22	110	6	58	214.8
		MH30	13.5	200	180	5	10	35	114.3	3.2	79	254
		MH44	13.5	200	180	5	10	35	114.3	3.2	79	283
		MH55	13.5	200	180	5	12	42	114.3	3.2	113	297
		MH75	13.5	200	180	5	12	42	114.3	3.2	113	382
		MH110	13.5	235	220	5	12	42	200	4	116	352
		MH150	13.5	235	220	5	12	42	200	4	116	429
		HH30	13.5	200	180	5	10	35	114.3	3.2	79	245
		HH44	13.5	200	180	5	10	35	114.3	3.2	79	273.5
		HH55	13.5	200	180	5	12	42	114.3	3.2	113	282.5
		HH75	13.5	200	180	5	12	42	114.3	3.2	113	371
	With Brake	MA05	9	145	130	2.5	6	22	110	6	58	219.8
		MH05	9	145	130	2.5	6	22	110	6	58	219.8
		MA10	9	145	130	2.5	6	22	110	6	58	269.8
		MB10	9	145	130	2.5	6	22	110	6	58	219.8
		MC10	9	145	130	2.5	6	22	110	6	58	204.8
		MH10	9	145	130	2.5	6	22	110	6	58	269.8
		MA15	9	145	130	2.5	6	22	110	6	58	319.8
		MB15	9	145	130	2.5	6	22	110	6	58	239.8
		MC15	9	145	130	2.5	6	22	110	6	58	219.8
		MB20	9	145	130	2.5	6	22	110	6	58	269.8
		MC20	9	145	130	2.5	6	22	110	6	58	239.8
		MB30	9	145	130	2.5	6	22	110	6	58	319.8
		MC30	9	145	130	2.5	6	22	110	6	58	269.8

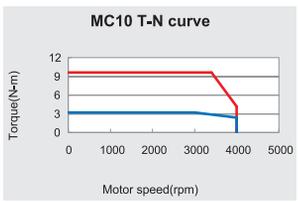
Unit:mm

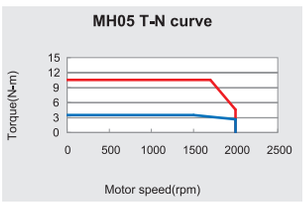
Performance Curve

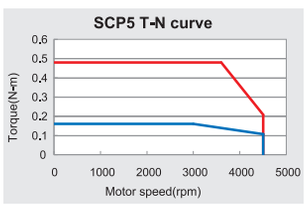
Intermittent

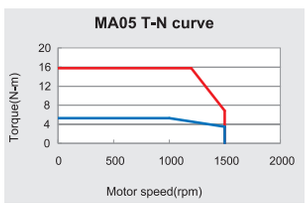
Continuous

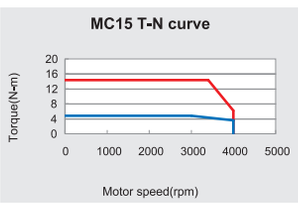


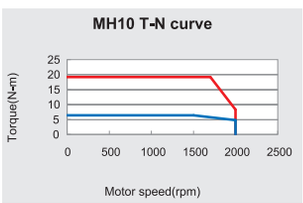


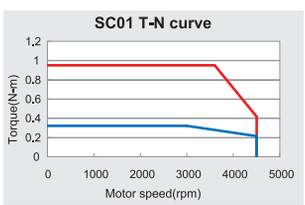


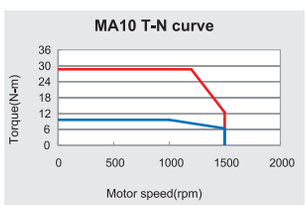


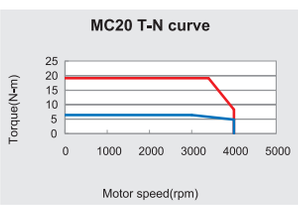


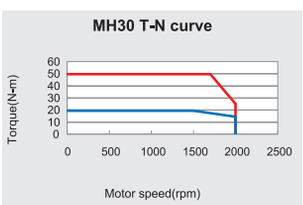


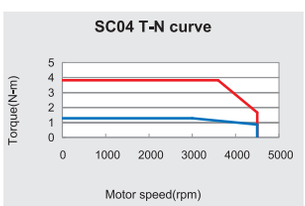


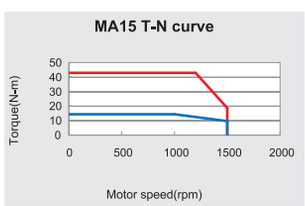


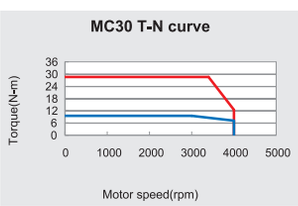


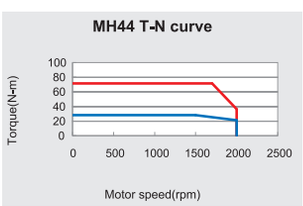


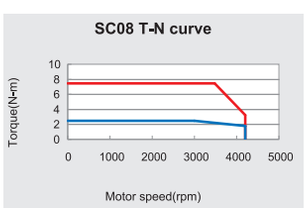


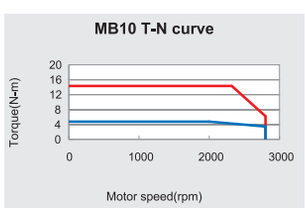


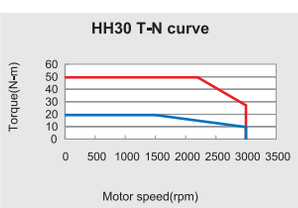


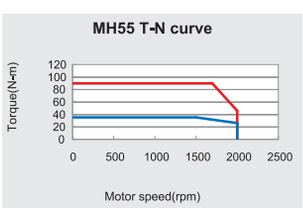


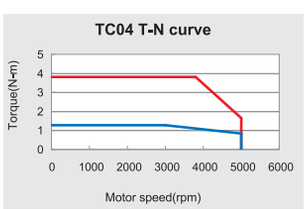


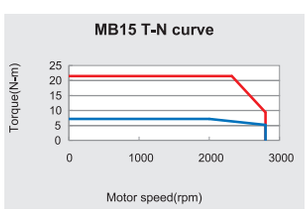


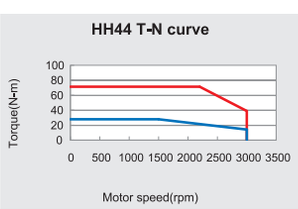


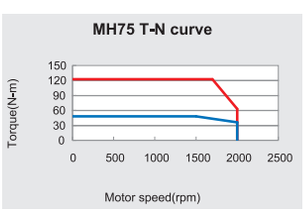


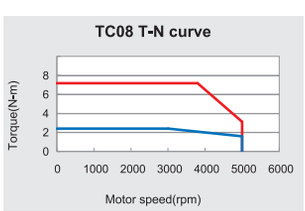


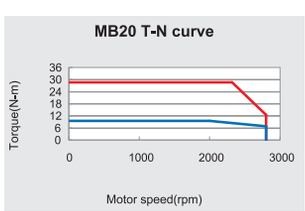


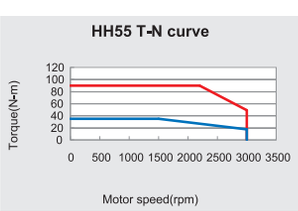


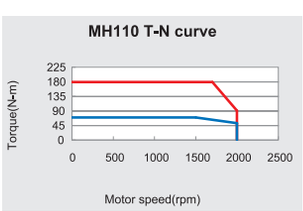


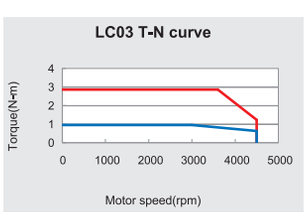


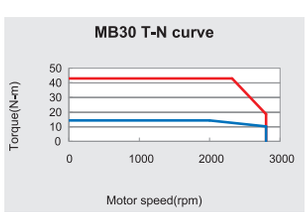


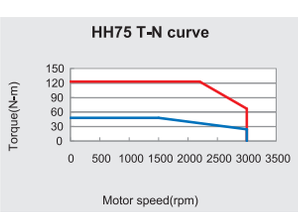


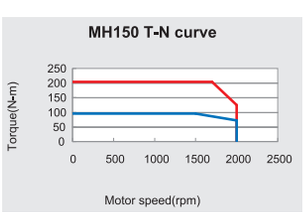






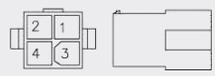




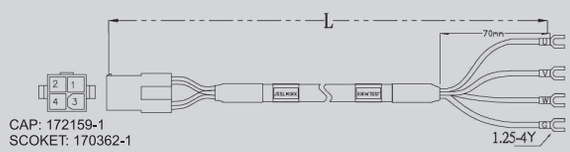
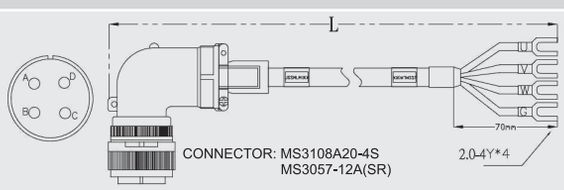
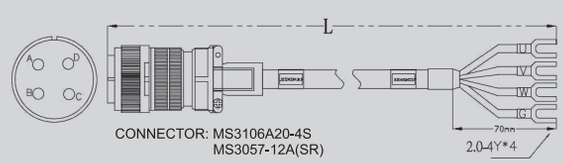
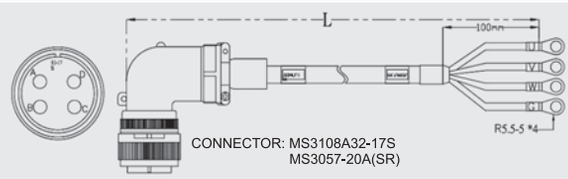
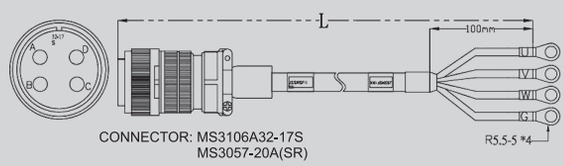


Accessories

Power Connectors

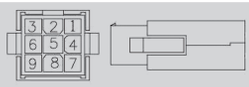
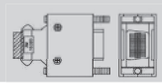
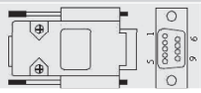
Part No.	Description	Model
JSSCNM04	For JSMA-S/L Series (50W~750W)	 CAP: 172159-1 SCOKET: 170362-1
JSSCNML04	For JSMA-M Series without brake (550W~3kW)	 CONNECTOR: MS3108A20-4S MS3057-12A(SR)
JSSCNMS04	For JSMA-M Series without brake (550W~3kW)	 CONNECTOR: MS3106A20-4S MS3057-12A(SR)
JSSCNBL04	For JSMA-MM/MH Series without brake (3kW~15kW)	 CONNECTOR: MS3108A32-17S MS3057-20A(SR)
JSSCNBS04	For JSMA-MM/MH Series without brake (3kW~15kW)	 CONNECTOR: MS3106A32-17S MS3057-20A(SR)
JSSCNML07	For JSMA-M Series with brake (550W~3kW)	 CONNECTOR: MS3108A20-15S MS3057-12A(SR)
JSSCNMS07	For JSMA-M Series with brake (550W~3kW)	 CONNECTOR: MS3106A20-15S MS3057-12A(SR)

Power Connectors

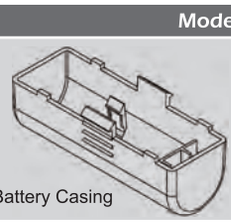
Part No.	L (Meter)	Description	Model
JSSLM001	1	For JSMA-S/L Series (50W~750W)	 CAP: 172159-1 SCOKET: 170362-1
JSSLM003	3		
JSSLM005	5		
JSSLM010	10		
JSSLM015	15		
JSSLM020	20		
JSSMLM001	1	For JSMA-M Series without brake (550W~3kW)	 CONNECTOR: MS3108A20-4S MS3057-12A(SR)
JSSMLM003	3		
JSSMLM005	5		
JSSMLM010	10		
JSSMLM015	15		
JSSMLM020	20		
JSSMSM001	1	For JSMA-M Series without brake (550W~3kW)	 CONNECTOR: MS3106A20-4S MS3057-12A(SR)
JSSMSM003	3		
JSSMSM005	5		
JSSMSM010	10		
JSSMSM015	15		
JSSMSM020	20		
JSSBLM001	1	For JSMA-MM/MH Series without brake (3kW~15kW)	 CONNECTOR: MS3108A32-17S MS3057-20A(SR)
JSSBLM003	3		
JSSBLM005	5		
JSSBLM010	10		
JSSBLM015	15		
JSSBLM020	20		
JSSBSM001	1	For JSMA-MM/MH Series without brake (3kW~15kW)	 CONNECTOR: MS3106A32-17S MS3057-20A(SR)
JSSBSM003	3		
JSSBSM005	5		
JSSBSM010	10		
JSSBSM015	15		
JSSBSM020	20		

Accessories

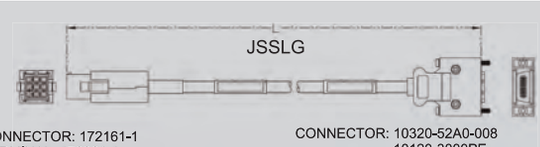
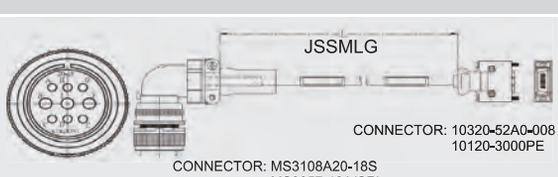
Encoder Connectors

Part No.	Description	Model
JSSCNP09	For JSMA-S/L Series	 CONNECTOR: 172161-1 TERMINAL: 170361-1
JSSCNPL09	For JSMA-M Series	 CONNECTOR: MS3108A20-18S MS3057-12A(SR)
JSSCN20P	For JSDA+ Series (CN2)	 CONNECTOR: 10320-52A0-008 12120-3000PE
JSSECN09P	For JSDE+ Series (CN2)	 CONNECTOR: D-SUB9PM Male COVER: DC-9CT Screw

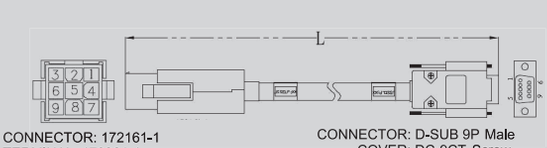
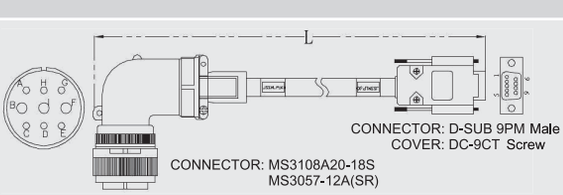
Battery Module (For JSDA+ Series)

Part No.	Description	Model
JSSBAT	For absolute encoder	 Battery Casing  Battery

Encoder Cables (For 15-bit / 17-bit encoders)

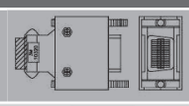
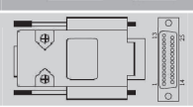
Part No.	L (Meter)	Description	Model
JSSLG001	1	For JSMA-S/L Series and JSDA+ Amplifiers	 JSSLG CONNECTOR: 172161-1 TERMINAL: 170361-1 CONNECTOR: 10320-52A0-008 10120-3000PE
JSSLG003	3		
JSSLG005	5		
JSSLG010	10		
JSSLG015	15		
JSSLG020	20		
JSSMLG001	1	For JSMA-M Series and JSDA+ Amplifiers	 JSSMLG CONNECTOR: 10320-52A0-008 10120-3000PE CONNECTOR: MS3108A20-18S MS3057-12A(SR)
JSSMLG003	3		
JSSMLG005	5		
JSSMLG010	10		
JSSMLG015	15		
JSSMLG020	20		

Encoder Cables (For 2500ppr / 8192ppr encoders)

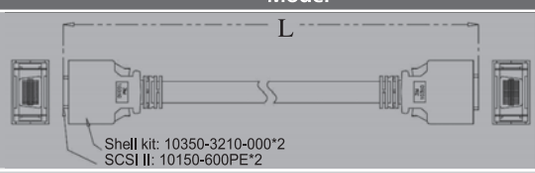
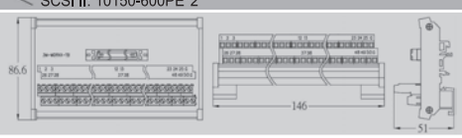
Part No.	L (Meter)	Description	Model
JSSELP001	1	For JSMA-S/L Series and JSDE+ / JSDA+ Series	 L CONNECTOR: 172161-1 TERMINAL: 170361-1 CONNECTOR: D-SUB 9P Male COVER: DC-9CT Screw
JSSELP003	3		
JSSELP005	5		
JSSELP010	10		
JSSELP015	15		
JSSELP020	20		
JSSEMLP001	1	For JSMA-M Series and JSDE+/JSDA+ Series	 L CONNECTOR: D-SUB 9PM Male COVER: DC-9CT Screw CONNECTOR: MS3108A20-18S MS3057-12A(SR)
JSSEMLP003	3		
JSSEMLP005	5		
JSSEMLP010	10		
JSSEMLP015	15		
JSSEMLP020	20		

Accessories

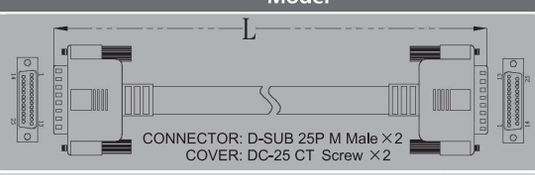
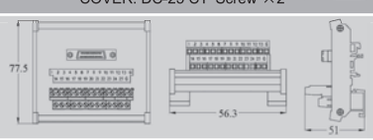
I/O Signal Connector

Part No.	Description	Model
JSSCN50P	For JSDA+ Series (CN1)	 CONNECTOR: 10350-52A0-008 10150-3000PE
JSSECN25P	For JSDE+ Series (CN1)	 CONNECTOR: D-SUB 25P M Male COVER: DC-25 CT Screw

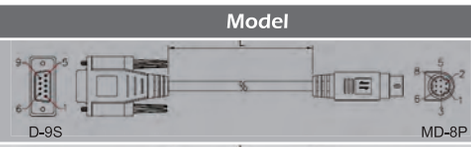
Terminal Block (For JSDA+ Series)

Part No.	L (Meter)	Description	Model
JSSTBC0P5	0.5	For JSDA+ Series	
JSSTBC001	1		
JSSTBC002	2		
JSSTB50P	—	For JSDA+ Series	

Terminal Block (For JSDE+ Series)

Part No.	L (Meter)	Description	Model
JSSETBC0P5	0.5	For JSDE+ Series	
JSSETBC001	1		
JSSETBC002	2		
JSSETB25P	—	For JSDE+ Series	

Communication Cables

Part No.	L (Meter)	Description	Model
JSSDTC001	1	Connection to PC	
JSSDTC002	2		
JSSDTD001	1	Connection to Drive	
JSSDTD002	2		

Distributor

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