DISCLAIMER

All specified data subject to change without notice to reflect updates and improvements made to product. DMM Technology Corp. assumes no responsibility for damages resulting from user related errors or improper use of product. Safety precautions should be considered for all applications. The DHT Series AC Servo Motor product line is not designed or certified to ensure safety of personnel or machinery, and should not be used for such tasks. Always design a higher-level safety feedback to reduce the risks of product and bodily harm.

Products from DMM Technology Corp. are supported by the following warranty:

- 1 year from the date of purchase or 14 months from the month of original date shipment from factory.

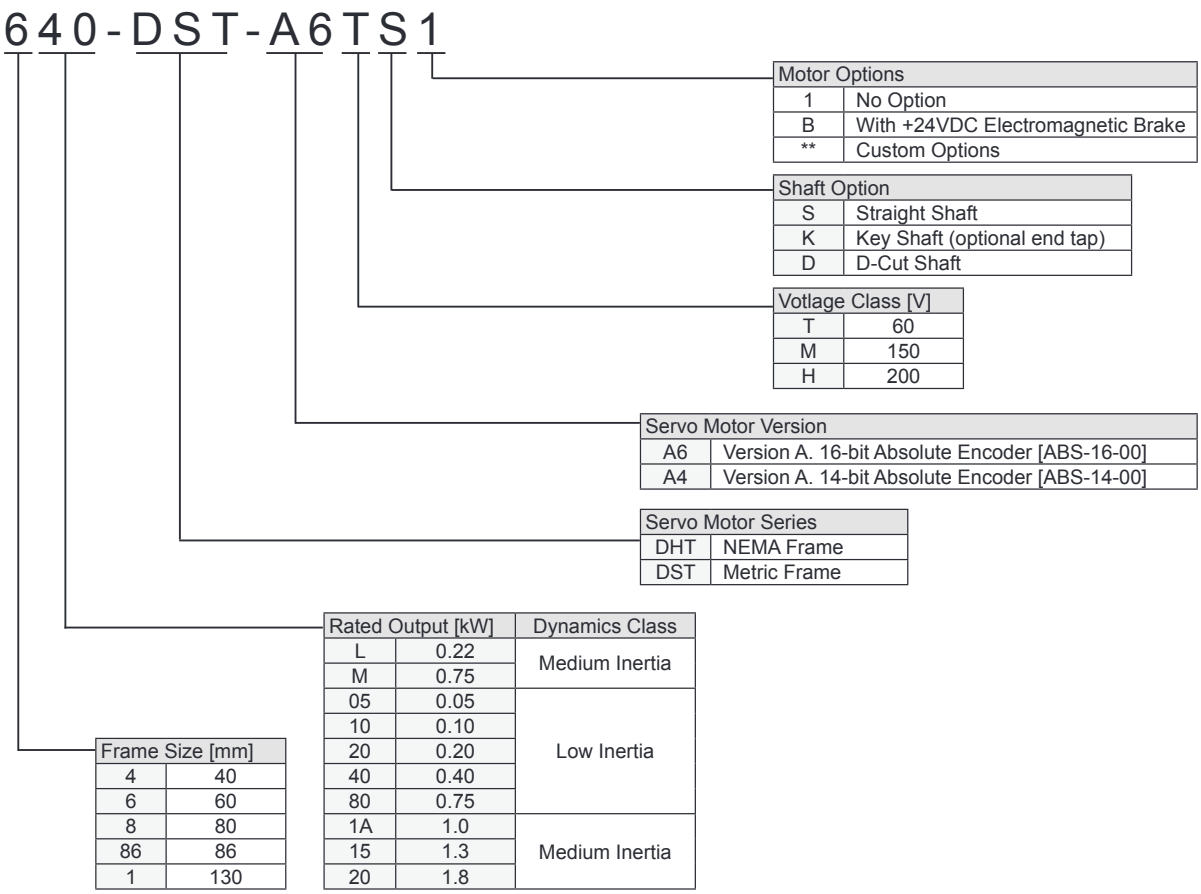
Within the warranty period, DMM Technology Corp. will replace or repair any defective product free of charge given that the cause of the defect is caused by a manufacturing problem. This warranty does not cover cases involving the following conditions:

- The product is used in an unsuitable or hazardous environment, resulting in damages to the product.
- Improperly handling resulting in physical damage to the product. Including falling, heavy impact, or shock.
- Damages resulting from transportation or shipping after the original factory delivery.
- Unauthorized alterations or modifications made to the product, resulting in damages to the product.
- The encoder has been modified or removed from the factory mounted position.
- Alterations have been made to the Name Plate of the product
- Damages resulting in usage of the product not specified by this manual.
- Damages to the product resulting from natural disasters
- Modifications have been made to the servo motor-end connectors (receptacle for 1.5kW and 2.0kW motors).
- The product has been altered either cosmetically or electronically
- Alterations have been made to the Name Plate of the product.

INSTALLATION AND OPERATION

- Install and mount the servo motor in an environment free of hazardous substances such as flammable fluids or gases, corrosive chemical fluids or gases, or water.
- Ensure that the servo motor will not be subject to large amounts of cooling fluid, oil, or residual metal chips from the machinery.
- Do not subject the motor shaft and cables to large amounts of stress. Including tension, bending, or twisting. Never subject the motor shaft or encoder cover to large impact, such as from a hammer.
- The low voltage servo motor class can experience line voltage drops for longer cable lengths. Contact DMM Technology Corp. if the application experiences such effect and require remedy.
- Do not perform unauthorized modifications to the servo motor body or cables.
- Ensure that the servo motor is not in direct contact with any heat sensitive objects. The motor may generate large amounts of hear after prolonged use and can damage nearby objects.
- In general, the servo motor should be installed and mounted in a well ventilated, low humidity area that will not be subject to significant vibration or shock.
- The motor mounted absolute encoder is tuned and calibrated from the factory. Do not make unauthorized modifications or changes to the encoder.

Servo Motor Model Designation



Motor Options	
1	No Option
B	With +24VDC Electromagnetic Brake
**	Custom Options

Shaft Option	
S	Straight Shaft
K	Key Shaft (optional end tap)
D	D-Cut Shaft

Votlage Class [V]	
T	60
M	150
H	200

Servo Motor Version	
A6	Version A. 16-bit Absolute Encoder [ABS-16-00]
A4	Version A. 14-bit Absolute Encoder [ABS-14-00]

Servo Motor Series	
DHT	NEMA Frame
DST	Metric Frame

Rated Output [kW]		Dynamics Class
L	0.22	Medium Inertia
M	0.75	
05	0.05	Low Inertia
10	0.10	
20	0.20	
40	0.40	
80	0.75	
1A	1.0	Medium Inertia
15	1.3	
20	1.8	

Frame Size [mm]	
4	40
6	60
8	80
86	86
1	130

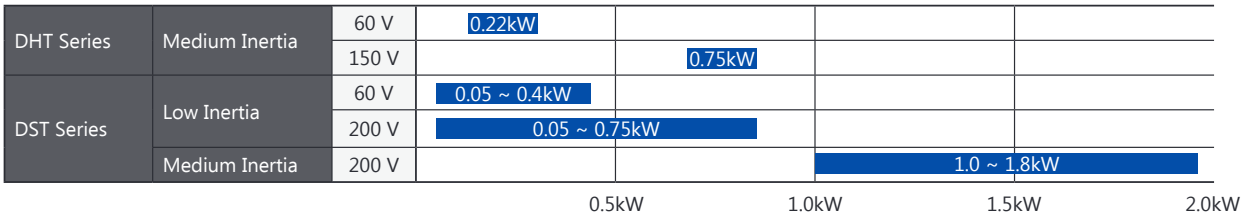
Applicable Servo Drive Pair

Servo Motor Series	Model Name Prefix	Features	Frame Size	Voltage Class	Applicable Servo Drive
DHT	86L	Medium inertia for low reduction, high load capacity, high rigidity applications	86mm NEMA34	60V	DYN2
	86M			150V	DYN2/ DYN4
DST	405	Low inertia for high response, dynamic acceleration rates, high frequency, low rigidity applications	40mm	60V/200V	
	410				
	620		60mm		
	640				
	880		80mm	200V	DYN4
	11A	Medium inertia for low reduction, high load capacity, high rigidity applications	130mm		
	115				
	120				

Consolidated Specifications

Servo Motor Series	Features	Model Name Prefix	Rated Output Capacity [kW]	Frame Size	Voltage Class	Rated Current/ (Peak Current) [A]	Rated Speed/ (Max Speed) [r/min]	Rated Torque/ (Peak Torque) [Nm]	Rotor Inertia [kg-cm^2]	Torque Coefficient	Holding Brake	Applicable Servo Drive
DHT	Medium inertia for low reduction, high load capacity, high rigidity applications	86L	0.22	86mm NEMA34	60V	6.25 (19.8)	3000 (3,000)	0.7 (2.1)	0.65	0.112	X	DYN2
		86M	0.75		150V	7.2 (21.5)	3,000 (5,000)	2.4 (7.1)	2.45	0.33	24VDC/ 90VDC	DYN2/ DYN4
DST	Low inertia for high response, dynamic acceleration rates, high frequency, low rigidity applications	405	0.05	□40mm	60V	2.0 (6.0)	3,000 (5,000)	0.16 (0.48)	0.036	0.08		DYN2
					200V	0.8 (2.4)				0.225		DYN4
		410	0.10		60V	3.0 (9.0)		0.318 (0.955)	0.063	0.106		DYN2
					200V	0.99 (3.0)				0.384		DYN4
		620	0.20	□60mm	60V	4.5 (11.3)		0.637 (1.91)	0.232	0.169		DYN2
					200V	2.1 (6.5)				0.312		DYN4
		640	0.40		60V	8.4 (21.0)		1.27 (3.1)	0.426	0.181		DYN2
					200V	2.8 (8.5)				0.455		DYN4
		880	0.75	□80mm	200V	4.4 (13.4)		2.39 (7.16)	1.4	0.547		
	Medium Capacity, Medium inertia for low reduction, high load mass, high rigidity applications	11A	1.0	□130mm		8.2 (24.6)	1,500 (3,000)	4.77 (14.3)	8.5	0.774		
		115	1.3			10.7 (29.5)		8.27 (23.3)	18.9	0.929		
		120	1.8			16.7 (36.3)		11.5 (28.7)	20.4	0.74		

Output Capacity Line-Up



DHT Series AC Servo Motor

Features

- Standard NEMA34 frame sizing for universal applications
- Factory mounted and tuned ABS-16-00 Absolute Encoder - 16 bits [65,536 ppr]
- High speed serial absolute encoder with 4-wire feedback
- Medium inertia high rigidity applications
- Low cogging, smooth coil response
- Robust against shock and vibration - Robust magnetic encoder
- Low maintenance

Application Examples

- Machine Tooling / CNC
- Y X table
- Lighting / Camera Automation
- Printing / Textile Automation
- Home / Building Automation
- Roller / Conveyor

Motor Options

- +24VDC electromagnetic holding brake
- Straight shaft, key shaft, two flat seat shaft options
- Custom voltage class options

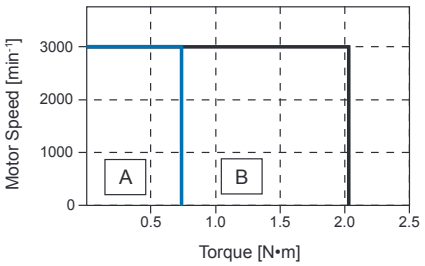
Motor Specification

Motor Model		86L-DHT-A6TD1	86M-DHT-A6MK1
Rated Output	W	220	750
Rated Speed	min^{-1}	3,000*1	3,000*3
Maximum Speed	min^{-1}	3,000	5,000*3
Rated Torque*4	N•m	0.7	2.4
Peak Torque	N•m	2.1	7.1
Voltage Class	V	48	150
Rated Current*5	Arms	6.25	7.2
Peak Current	Arms	19.8	21.5
Rotor Moment of Inertia	kg•cm²	0.650	2.45
Torque Constant	N•m/Arms	0.112	0.33
Line Resistance	Ohm	0.39	0.7
Encoder*2		16-Bit Absolute (65,536 ppr)	
Flange Size		86mm NEMA34	86mm NEMA34
Shaft Length	mm	25	45
Shaft Diameter	mm	12.7	14
Mass	kg	1.4	3.1
Ingress Protection		IP55	IP65
Environment	Temperature	0~40°C Ambient temperature -20~50°C Storage	
	Humidity	85% Max. humidity. no condensation	

Note: 1. The 86L-DHT-□ □ □ □ □ servo motor rates the torque at the same rated and maximum speeds. The torque profile is consistent throughout the speed range. Mechanically permissible speed is higher than rated maximum speed. Maximum speed depends on motor voltage-speed gradient and servo drive input voltage.
2. All encoders are single-turn absolute. Magnetic sensor with high speed serial feedback. Consult DMM Technology Corp. for detailed encoder specifications.
3. The 86M-DHT-A6MK1 750W capacity servo motor has a rated and peak speed of 2,000min^{-1} when paired with DYN2 AC servo drive.
4. Rated torque measured as continuous allowable torque at 40°C with 6mmx□200mm aluminum heat sink.
5. The armature current of servo motor depends on voltage input and power capacity. Lower voltage input at same power capacity yields higher current draw.

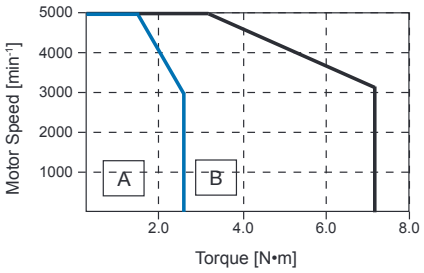
Torque - Speed Curve

86L-DHT-A6TD1



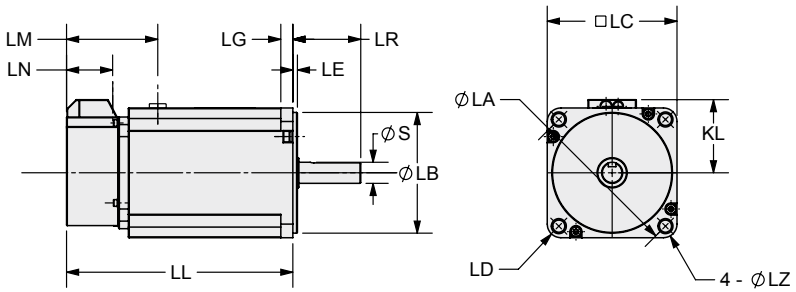
A: Continuous Duty Zone
B: Intermittent Duty Zone

86M-DHT-A6MK1



A: Continuous Duty Zone
B: Intermittent Duty Zone

External Dimensions

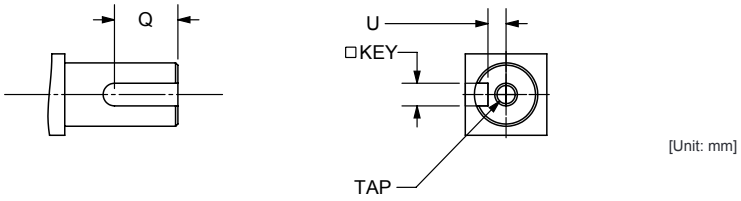


Motor Model	LL	LG	KL	LA	LB	LE	LM*1	LN*1	LD	LC	LZ	LR	S*2
86L-DHT-A6□□1	91	8.5	44	□98.4	$\square 73^{0}_{-0.04}$	1.8	33.5	14.5	112.5	86	4-□5.5	25	$\square 12.7^{0}_{-0.011}$
86M-DHT-A6□□1	149	8	47	□100	$\square 80^{0}_{-0.03}$	3	31	31	112.5	86	4-□8	45	$\square 14^{0}_{-0.011}$

Note: 1. The 86M-DHT-A6MK1 motor has the motor power and encoder cables running from the same location at the back of the motor.
2. Refer to the Shaft section for shaft dimension and type.
3. The Motor Power Cable and Encoder Feedback Cable are leadwire type from the motor and encoder body. The factory length for both leadwire cables is at least 200mm long.

Shaft Options

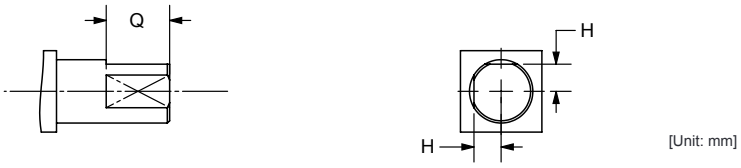
● With Key and Tap



[Unit: mm]

Motor Model	Frame	Q	U	Key	Tap
86L-DHT-A6TK□	□86mm NEMA34	17.5	3.5	5	M5 x 20L
86M-DHT-A6MK□		31	4	5	M5 x 20L

● With Two Flat Seats



[Unit: mm]

Motor Model	Frame	Q	H
86L-DHT-A6TD□	□86mm NEMA34	16 ± 0.5	5.25 ± 0.1
86M-DHT-A6MD□		25 ± 0.5	6 ± 0.1

Connector Specifications

Motor Power Connector

Part	Part No.	Manufacturer
Connector Assembly Plug Housing	VLP-04V	J.S.T.
Socket Contact	SVF-61T-P2.0	J.S.T.
Cable Retainer	VLS-02V	J.S.T.

Pin Layout	Color		Data
	86L-DHT (0.22kW)	86M-DHT (0.75kW)	
1	Red	Blue/Green	Phase A
2	Yellow	Red	Phase B
3	Blue	Black	Phase C
4	Yellow/Green		Frame Ground

Encoder Connector

Part	Part No.	Manufacturer
Connector Assembly Plug Housing	HILP-04V-1-S	J.S.T.
Pin Contact	SHIF-01T-P0.5	J.S.T.

Pin Layout	Color	Data
1	Black	Gnd
2	Blue	S-
3	Green	S+
4	Red	+5VDC

DST Series AC Servo Motor

Features

- Low inertia for high response applications
- Standard servo frame sizing for universal applications
- Factory mounted and tuned ABS-16-00 Absolute Encoder - 16 bits [65,536 ppr]
- High speed serial absolute encoder with 4-wire feedback
- Extremely low vibration, consistent winding density
- Low voltage 60V and high voltage 200V options
- Robust against shock and vibration - Robust magnetic encoder
- IP65 enclosure

Application Examples

- Machine Tooling / CNC
- Y X table
- Textile / Embroidery Automation
- Printing / Packaging
- Medical Machine
- Roller / Conveyor Machines
- Battery Powered / EV / Transport
- Lighting / Camera

Motor Options

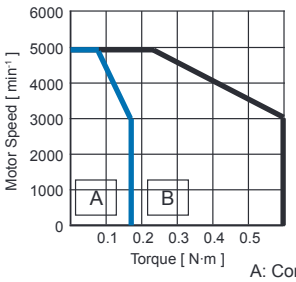
- +24VDC electromagnetic holding brake
- Straight shaft, key shaft, D-cut shaft options
- Shorter frame option with ultra-thin ABS-16-00 encoder
- Custom voltage class options

Motor Specification

Motor Model □□□-DST		405		410		620		640		880	11A	115	120
Rated Voltage	V	60V	200V	60V	200V	60V	200V	60V	200V	200V			
Rated Output	kW	0.05		0.1		0.2		0.4		0.75	1.0	1.3	1.8
Rated Torque	N·m	0.16		0.318		0.637		1.27		2.39	4.77	8.27	11.5
Instantaneous Max. Torque	N·m	0.48		0.955		1.91		3.82		7.16	14.3	23.3	28.7
Rated Current	A	2.0	0.8	3.0	0.99	4.5	2.1	8.4	2.8	4.4	8.2	10.7	16.7
Max. Current	A	6.0	2.4	9.0	3	11.3	6.5	21.0	8.5	13.4	24.6	29.5	36.3
Rated Speed	r/min	3000		3000		3000		3000		3000	1500	1500	1500
Max. Speed	r/min	6000		5000		5000		5000		5000	3000	3000	3000
Rotor Inertia	kg-cm^2	0.036		0.063		0.232		0.426		0.73	8.5	19.4	27.7
Torque Coefficient	N·m/A	0.08	0.225	0.106	0.384	0.169	0.312	0.181	0.455	0.547	0.774	0.929	0.74
Mass	kg	0.47		0.5		1		1.65		2.69	8.95	11.5	14.4
Ratings	Time Rating: Continuous Thermal Class: F Excitation Method: Permanent Magnet Insulation Resistance: DC500V, >20MΩ Noise: ≤60dB; No Special Noise												
Environment	Ambient Temperature: 0~40 °C Storage: -20~50°C Ambient Humidity: 20~80% No Condensation												
Enclosure	IP65												
Shock	98m/s2 Max. (10G)												
Applicable Servo Drive		DYN2 - T1A	DYN4 - L01	DYN2 - T1A	DYN4 - L01	DTN2 - TLA	DYN4 - L01	DYN2 - TLA	DYN4 - L01	DYN4 - H01		DYN4 - T01	

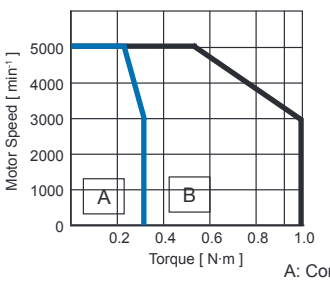
Torque - Speed Curve

405-DST-A6TS1



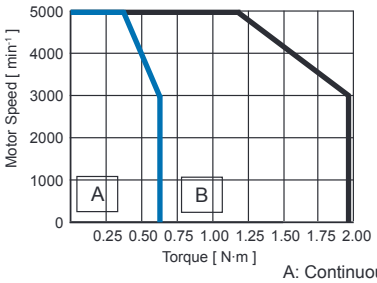
A: Continuous Duty Zone
B: Intermittent Duty Zone

410-DST-A6TS1



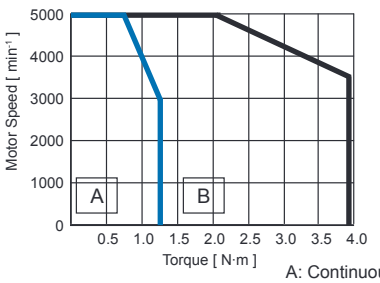
A: Continuous Duty Zone
B: Intermittent Duty Zone

620-DST-A6TS1



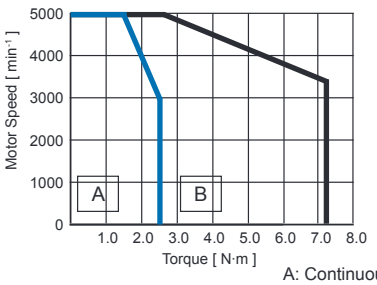
A: Continuous Duty Zone
B: Intermittent Duty Zone

640-DST-A6TS1



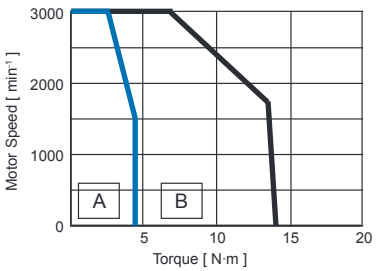
A: Continuous Duty Zone
B: Intermittent Duty Zone

880-DST-A6HK1



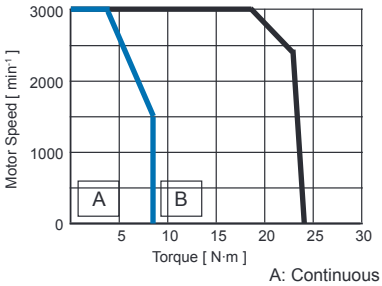
A: Continuous Duty Zone
B: Intermittent Duty Zone

11A-DST-A6HK1



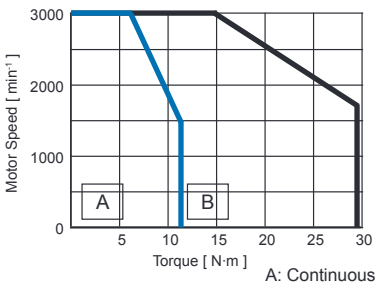
A: Continuous Duty Zone
B: Intermittent Duty Zone

115-DST-A6HK1



A: Continuous Duty Zone
B: Intermittent Duty Zone

120-DST-A6HK1

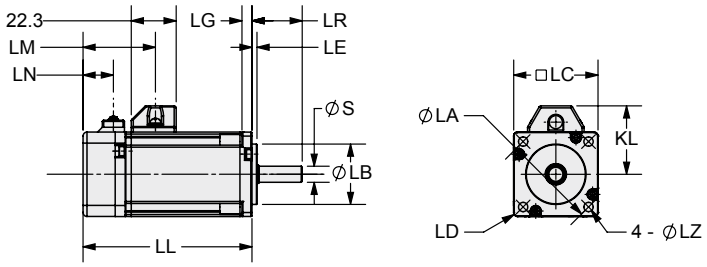


A: Continuous Duty Zone
B: Intermittent Duty Zone

Notes:
1. Data measured at 40 °C warm-boot conditions.
2. Torque - Speed characteristic depends on exact supply voltage to servo drive.

External Dimensions

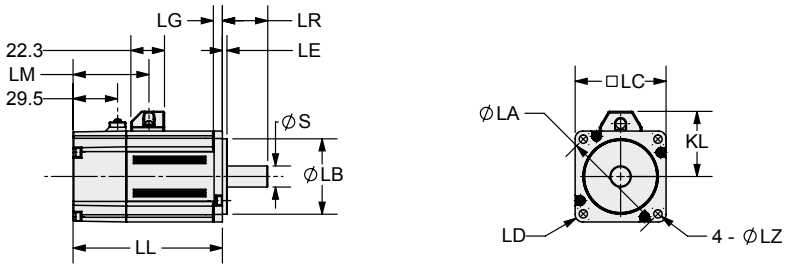
□40mm Frame (0.05kW, 0.1kW)



[Unit: mm]

Motor Model	LL (w/ brake)	LG	KL	LA	LB	LE	LM	LN	LD	LC	LZ	LR	S
405-DST-A6□□1	81 (116.5)	5	34	□46	□30h7	2.5	36	15	58	42	4-□4.5	25	□8h6
410-DST-A6□□1	98.5 (134)	5	34	□46	□30h7	2.5	36	15	58	42	4-□4.5	25	□8h6

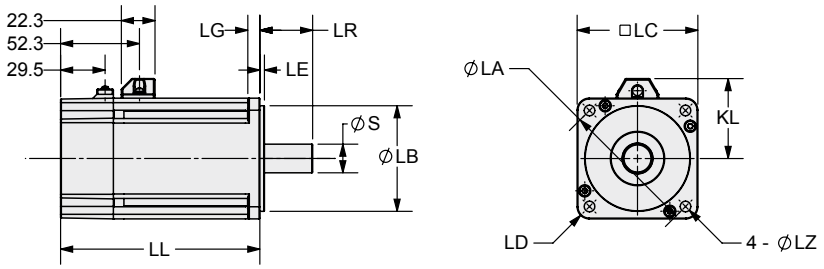
□60mm Frame (0.2kW, 0.4kW)



[Unit: mm]

Motor Model	LL (w/ brake)	LG	KL	LA	LB	LE	LM	LD	LC	LZ	LR	S
620-DST-A6□□1	99 (130)	6	43	□70	□50h7	3	50.3	80	60	4-□5.5	30	□14h6
640-DST-A6□□1	127 (158)	6	43	□70	□50h7	3	50.3	80	60	4-□5.5	30	□14h6

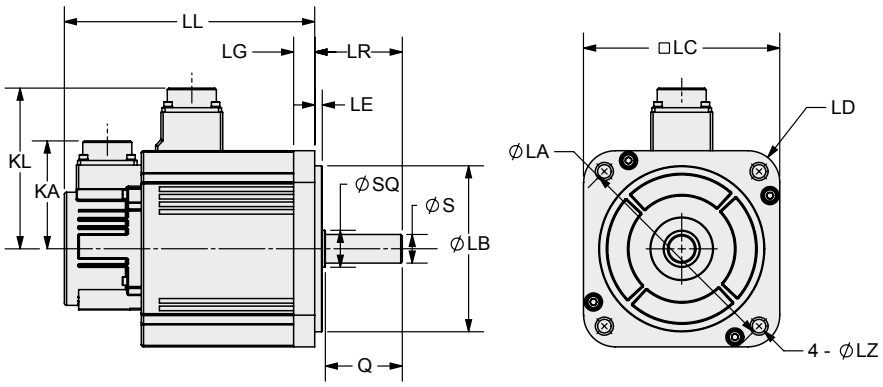
□80mm Frame (0.75kW)



[Unit: mm]

Motor Model	LL (w/ brake)	LG	KL	LA	LB	LE	LD	LC	LZ	LR	S
880-DST-A6□□1	132 (165.5)	8	53	Φ90	Φ70h7	3	105	80	4-Φ7	40	Φ19h6

□130mm Frame (1.0kW, 1.3kW, 1.8kW)



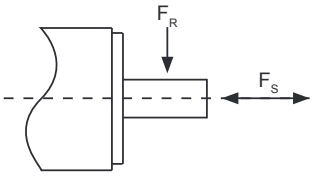
[Unit: mm]

Motor Model	LL (w/ brake)	LG	KL	KA	LA	LB	LE	LD	LC	LZ	LR	S
11A-DST-A6□□1	166 (236)	14	110	78	Φ145	$\Phi 110^{0}_{0.035}$	5	165	130	4-Φ9	57	$\Phi 19^{0}_{0.013}$
115-DST-A6□□1	213 (262)	14	110	78	Φ145	$\Phi 110^{0}_{0.035}$	5	165	130	4-Φ9	57	$\Phi 22^{0}_{0.013}$
120-DST-A6□□1	241 (283)	14	110	78	Φ145	$\Phi 110^{0}_{0.035}$	5	165	130	4-Φ9	57	$\Phi 22^{0}_{0.013}$

Permissible Radial / Thrust Loads

During testing, installation, mounting or operation, the servo motor shaft should never experience radial or thrush loads exceeding the below specifications. The servo motor shaft must be at least ±0.1mm concentric with coupling and mechanical drive shaft. For belt drive systems, ensure the pinion is as close to the servo motor body as possible to reduce unnecessary force on the servo motor shaft.

Motor Model □□□-DST	Radial Load F_R [N]	Thrust Load F_S [N]
405	75	52
410	75	52
620	240	70
640	240	70
880	300	98
11A	600	300
115	680	340
120	980	390

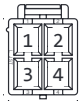


*Permissible radial/thrust load during assembly greater by 10%.

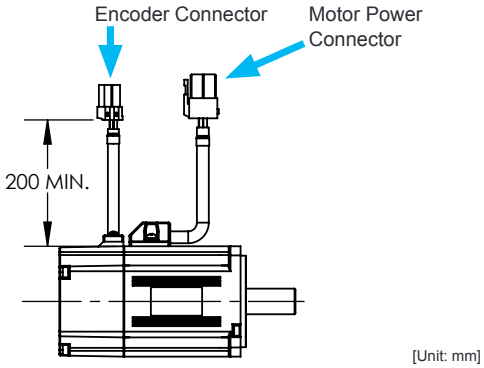
Connector Specifications (□40mm □60mm □80mm frame motors)

Motor Power Connector

Part	Part No.	Manufacturer
Connector Assembly Plug Housing	VLP-04V	J.S.T.
Socket Contact	SVF-61T-P2.0	J.S.T.
Cable Retainer	VLS-02V	J.S.T.



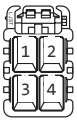
Pin Layout	Color (All DST Servomotors)	Data
1	Blue	Phase A
2	Red	Phase B
3	Black	Phase C
4	Yellow/Green	Frame Ground



[Unit: mm]

Encoder Connector

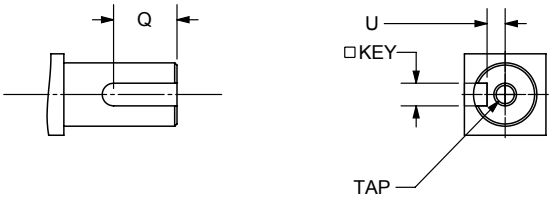
Part	Part No.	Manufacturer
Connector Assembly Plug Housing	HILP-04V-1-S	J.S.T.
Pin Contact	SHIF-01T-P0.5	J.S.T.



Pin Layout	Color	Data
1	Black	Gnd
2	Blue	S-
3	Green	S+
4	Red	+5VDC

Shaft Options

● With Key and Tap



[Unit: mm]

Motor Model	Frame	Q	U	Key	Tap
405-DST-A6□K□	□40mm	14	2.2	3	M3× 6L
410-DST-A6□K□		14	2.2	3	M3× 6L
620-DST-A6□K□	□60mm	14	4	5	M5× 8L
640-DST-A6□K□		14	4	5	M5× 8L
880-DST-A6□K□	□80mm	22	6	6	M6× 15L
11A-DST-A6□K□	□130mm	27	6.5	5	M6× 22L
115-DST-A6□K□		42	7.5	6	M6× 22L
120-DST-A6□K□		42	7.5	6	M6× 22L

● With Two Flat Seats

[Unit: mm]

Motor Model	Frame	Q	H
405-DST-A6□D□	□40mm	16	3.5
410-DST-A6□D□		16	3.5
620-DST-A6□D□	□60mm	20	6
640-DST-A6□D□		20	6
880-DST-A6□D□	□80mm	25	8

Cable Selection

CAEN-LH3-TSP

Cable Specification	
SSP	Straight, Shielded, PVC
TSP	Twisted Pair, Shielded, PVC
**	Custom Options

Length	
3	3m
5	5m
10	10m
15	15m
**	Custom Length

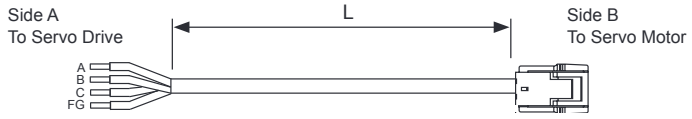
System Capacity	
LH	DYN2
HL	DYN4 - 0.05 ~ 0.75kW
HH	DYN4 - 1.0 ~ 1.8kW

Cable Type	
MP	Motor Cable
EN	Encoder Cable

● Motor Power Cables

Servomotor Rated Output	Applicable Servo Drive	Part Number	Length [L]	Specification
0.05 ~ 0.75kW	DYN2	CAMP-LH3-SSP	3m	(A)
		CAMP-LH5-SSP	5m	
		CAMP-LH10-SSP	10m	
		CAMP-LH15-SSP	15m	
0.05 ~ 0.75kW	DYN4	CAMP-HL3-SSP	3m	(B)
		CAMP-HL5-SSP	5m	
		CAMP-HL10-SSP	10m	
		CAMP-HL15-SSP	15m	
1.0 ~ 1.8kW		CAMP-HH3-SSP	3m	(C)
		CAMP-HH5-SSP	5m	
		CAMP-HH10-SSP	10m	
		CAMP-HH15-SSP	15m	

(A / B) Specification

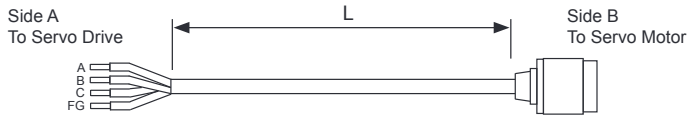


Side A To Servo Drive	
Connector	4-Position Lead Wire

Cable	
Class	600V, 121°C UL1581
Conductor	1.5mm dia. AWG16
Insulator	PVC
O.D.	9mm

Side B To Servo Motor	
Connector Assembly	VLR-04V
Contact	SVM-61T-P2.0
Manufacturer	J.S.T.

(C) Specification



Side A To Servo Drive	
Connector	4-Position Lead Wire

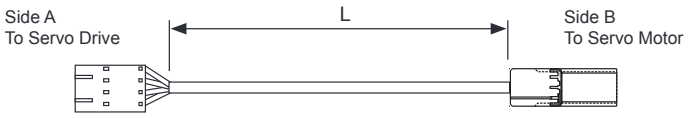
Cable	
Class	600V, 121°C UL1581
Conductor	1.5mm dia. AWG16
Insulator	PVC
O.D.	9mm

Side B To Servo Motor	
Connector Assembly	Circular Connector *Contact DMM for model number
Contact	
Manufacturer	

● Encoder Cables

Servomotor Rated Output	Applicable Servo Drive	Part Number	Length [L]	Specification
0.05 ~ 0.75kW	DYN2	CAEN-LH3-TSP	3m	(D)
		CAEN-LH5-TSP	5m	
		CAEN-LH10-TSP	10m	
		CAEN-LH15-TSP	15m	
0.05 ~ 0.75kW	DYN4	CAEN-HL3-TSP	3m	(E)
		CAEN-HL5-TSP	5m	
		CAEN-HL10-TSP	10m	
		CAEN-HL15-TSP	15m	
1.0 ~ 1.8kW		CAEN-HH3-TSP	3m	(F)
		CAEN-HH5-TSP	5m	
		CAEN-HH10-TSP	10m	
		CAEN-HH15-TSP	15m	

(D) Specification

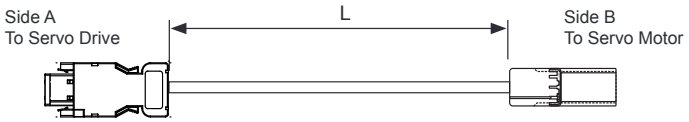


Side A To Servo Drive	
Connector Assembly	50-57-9404 or equivalent
Contact	16-02-0069 or equivalent
Manufacturer	Molex.

Cable	
Class	30V, 105°C UL20789
Conductor	0.63mm dia. AWG24
Insulator	PVC
O.D.	5.6mm

Side B To Servo Motor	
Connector Assembly	HILR-04VF-1-S
Contact	SHIM-01T-P0.5
Manufacturer	J.S.T.

(E) Specification

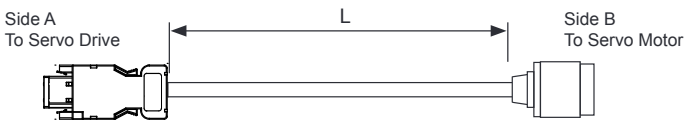


Side A To Servo Drive	
Connector Assembly	3E206-0100KV
Connector Shell Kit	3E306-3200-008
Manufacturer	3M

Cable	
Class	30V, 105°C UL20789
Conductor	0.63mm dia. AWG24
Insulator	PVC
O.D.	5.6mm

Side B To Servo Motor	
Connector Assembly	HILR-04VF-1-S
Contact	SHIM-01T-P0.5
Manufacturer	J.S.T.

(F) Specification



Side A To Servo Drive	
Connector Assembly	3E206-0100KV
Connector Shell Kit	3E306-3200-008
Manufacturer	3M

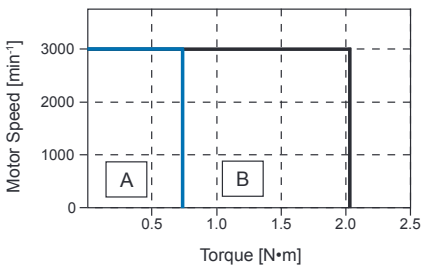
Cable	
Class	30V, 105°C UL20789
Conductor	0.63mm dia. AWG24
Insulator	PVC
O.D.	5.6mm

Side B To Servo Motor	
Connector Assembly	Circular Connector *Contact DMM for model number
Contact	
Manufacturer	

Motor Model		86L-DHT-A6TD1	86M-DHT-A6MK1
Rated Output	W	220	750
Rated Speed	min^{-1}	3,000*1	3,000*3
Maximum Speed	min^{-1}	3,000	5,000*3
Rated Torque*4	N•m	0.7	2.4
Peak Torque	N•m	2.1	7.1
Voltage Class	V	48	150
Rated Current*5	Arms	6.25	7.2
Peak Current	Arms	19.8	21.5
Rotor Moment of Inertia	kg•cm²	0.650	2.45
Torque Constant	N•m/Arms	0.112	0.33
Line Resistance	Ohm	0.39	0.7
Encoder*2		16-Bit Absolute (65,536 ppr)	
Flange Size		86mm NEMA34	86mm NEMA34
Shaft Length	mm	25	45
Shaft Diameter	mm	12.7	14
Mass	kg	1.4	3.1
Ingress Protection		IP55	IP65
Environment	Temperature	0~40°C Ambient temperature -20~50°C Storage	
	Humidity	85% Max. humidity. no condensation	

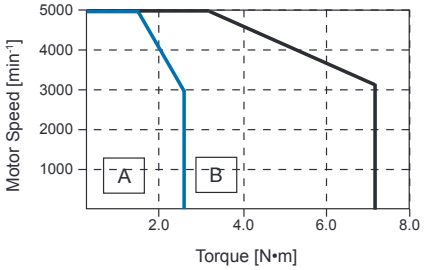
Note: 1. The 86L-DHT-□ □ □ □ □ servo motor rates the torque at the same rated and maximum speeds. The torque profile is consistent throughout the speed range. Mechanically permissible speed is higher than rated maximum speed. Maximum speed depends on motor voltage-speed gradient and servo drive input voltage.
2. All encoders are single-turn absolute. Magnetic sensor with high speed serial feedback. Consult DMM Technology Corp. for detailed encoder specifications.
3. The 86M-DHT-A6MK1 750W capacity servo motor has a rated and peak speed of 2,000min^{-1} when paired with DYN2 AC servo drive.
4. Rated torque measured as continuous allowable torque at 40°C with 6mmx□200mm aluminum heat sink.
5. The armature current of servo motor depends on voltage input and power capacity. Lower voltage input at same power capacity yields higher current draw.

86L-DHT-A6TD1

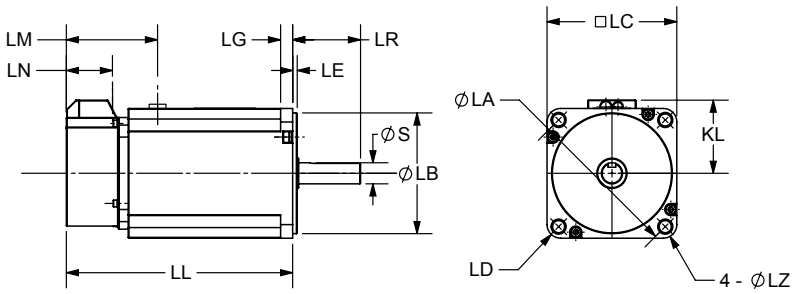


A: Continuous Duty Zone
B: Intermittent Duty Zone

86M-DHT-A6MK1



A: Continuous Duty Zone
B: Intermittent Duty Zone



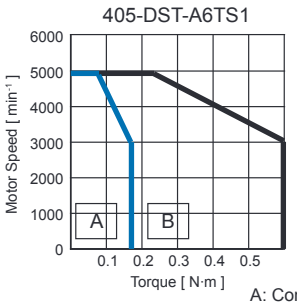
Motor Model	LL	LG	KL	LA	LB	LE	LM*1	LN*1	LD	LC	LZ	LR	S*2
86L-DHT-A6□□1	91	8.5	44	Φ98.4	$\Phi73^{0}_{-0.04}$	1.8	33.5	14.5	112.5	86	4-Φ5.5	25	$\Phi12.7^{0}_{-0.011}$
86M-DHT-A6□□1	149	8	47	Φ100	$\Phi80^{0}_{-0.03}$	3	31	31	112.5	86	4-Φ8	45	$\Phi14^{0}_{-0.011}$

Note: 1. The 86M-DHT-A6MK1 motor has the motor power and encoder cables running from the same location at the back of the motor.
2. Refer to the Shaft section for shaft dimension and type.
3. The Motor Power Cable and Encoder Feedback Cable are leadwire type from the motor and encoder body. The factory length for both leadwire cables is at least 200mm long.

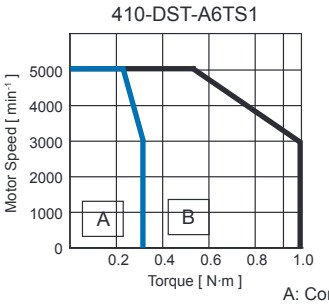
□40mm Frame DST AC Servomotor

0.05kW / 0.1kW

Motor Model □□□-DST		405		410	
Rated Voltage	V	60V	200V	60V	200V
Rated Output	kW	0.05		0.1	
Rated Torque	N·m	0.16		0.318	
Instantaneous Max. Torque	N·m	0.48		0.955	
Rated Current	A	2.0	0.8	3.0	0.99
Max. Current	A	6.0	2.4	9.0	3
Rated Speed	r/min	3000		3000	
Max. Speed	r/min	6000		5000	
Rotor Inertia	kg-cm²	0.036		0.063	
Torque Coefficient	N·m/A	0.08	0.225	0.106	0.384
Mass	kg	0.47		0.5	
Ratings	Time Rating: Continuous Thermal Class: F Excitation Method: Permanent Magnet Insulation Resistance: DC500V, >20MΩ Noise: ≤60dB; No Special Noise				
Environment	Ambient Temperature: 0~40 °C Storage: -20~50°C Ambient Humidity: 20~80% No Condensation				
Enclosure	IP65				
Shock	98m/s2 Max. (10G)				
Applicable Servo Drive		DYN2	DYN4	DYN2	DYN4



A: Continuous Duty Zone
B: Intermittent Duty Zone



A: Continuous Duty Zone
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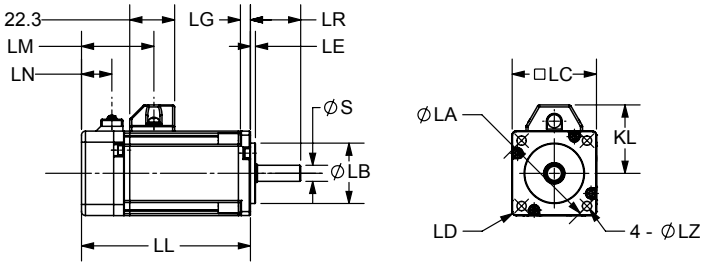


[Unit: mm]

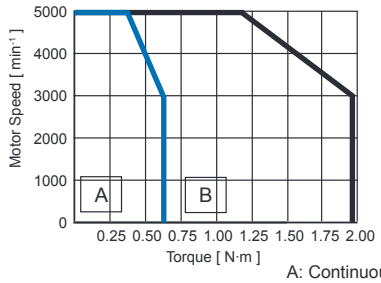
Motor Model	LL (w/ brake)	LG	KL	LA	LB	LE	LM	LN	LD	LC	LZ	LR	S
405-DST-A6□□1	81 (116.5)	5	34	□46	□30h7	2.5	36	15	58	42	4-□4.5	25	□8h6
410-DST-A6□□1	98.5 (134)	5	34	□46	□30h7	2.5	36	15	58	42	4-□4.5	25	□8h6

□60mm Frame DST AC Servomotor

0.2kW / 0.4kW

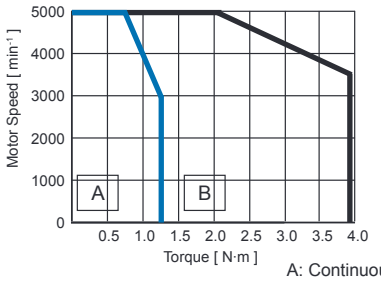
Motor Model □□□-DST		620		640	
Rated Voltage	V	60V	200V	60V	200V
Rated Output	kW	0.2		0.4	
Rated Torque	N·m	0.637		1.27	
Instantaneous Max. Torque	N·m	1.91		3.82	
Rated Current	A	4.5	2.1	8.4	2.8
Max. Current	A	11.3	6.5	21.0	8.5
Rated Speed	r/min	3000		3000	
Max. Speed	r/min	5000		5000	
Rotor Inertia	kg-cm²	0.232		0.426	
Torque Coefficient	N·m/A	0.169	0.312	0.181	0.455
Mass	kg	1		1.65	
Ratings	Time Rating: Continuous Thermal Class: F Excitation Method: Permanent Magnet Insulation Resistance: DC500V, >20MΩ Noise: ≤60dB; No Special Noise				
Environment	Ambient Temperature: 0~40 °C Storage: -20~50°C Ambient Humidity: 20~80% No Condensation				
Enclosure	IP65				
Shock	98m/s2 Max. (10G)				
Applicable Servo Drive		DYN2	DYN4	DYN2	DYN4

620-DST-A6TS1

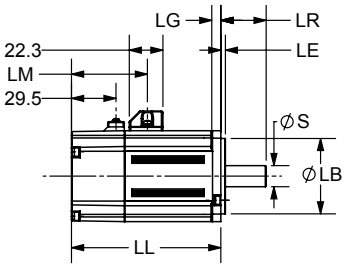


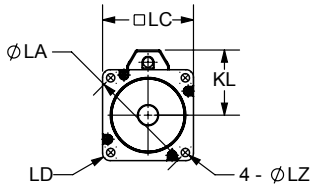
A: Continuous Duty Zone
B: Intermittent Duty Zone

640-DST-A6TS1



A: Continuous Duty Zone
B: Intermittent Duty Zone





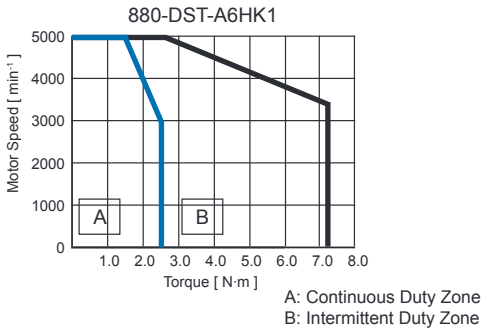
[Unit: mm]

Motor Model	LL (w/ brake)	LG	KL	LA	LB	LE	LM	LD	LC	LZ	LR	S
620-DST-A6□□1	99 (130)	6	43	□70	□50h7	3	50.3	80	60	4-□5.5	30	□14h6
640-DST-A6□□1	127 (158)	6	43	□70	□50h7	3	50.3	80	60	4-□5.5	30	□14h6

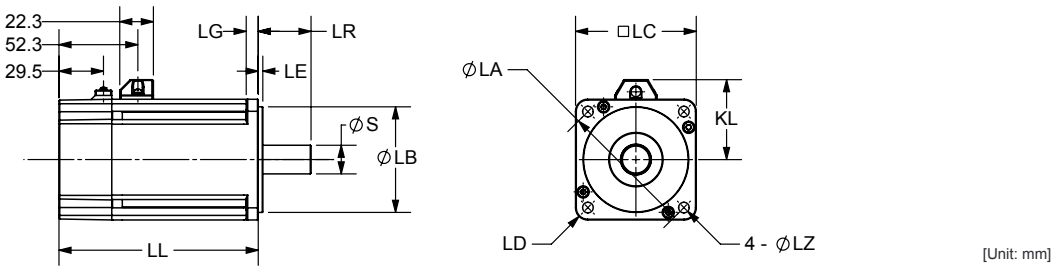
□80mm Frame DST AC Servomotor

0.75kW

Motor Model □□□-DST		880
Rated Voltage	V	200V
Rated Output	kW	0.75
Rated Torque	N·m	2.39
Instantaneous Max. Torque	N·m	7.16
Rated Current	A	4.4
Max. Current	A	13.4
Rated Speed	r/min	3000
Max. Speed	r/min	5000
Rotor Inertia	kg-cm²	0.73
Torque Coefficient	N·m/A	0.547
Mass	kg	2.69
Ratings	Time Rating: Continuous Thermal Class: F Excitation Method: Permanent Magnet Insulation Resistance: DC500V, >20MΩ Noise: ≤60dB; No Special Noise	
Environment	Ambient Temperature: 0~40 °C Storage: -20~50°C Ambient Humidity: 20~80% No Condensation	
Enclosure	IP65	
Shock	98m/s2 Max. (10G)	
Applicable Servo Drive		DYN4



A: Continuous Duty Zone
B: Intermittent Duty Zone



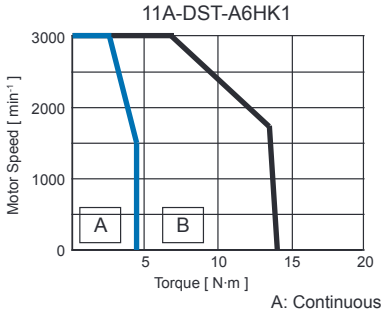
[Unit: mm]

Motor Model	LL (w/ brake)	LG	KL	LA	LB	LE	LD	LC	LZ	LR	S
880-DST-A6□□1	132 (165.5)	8	53	Φ90	Φ70h7	3	105	80	4-Φ7	40	Φ19h6

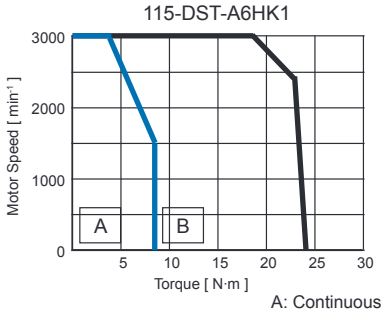
□130mm Frame DST AC Servomotor

1.0kW / 1.3kW / 1.8kW

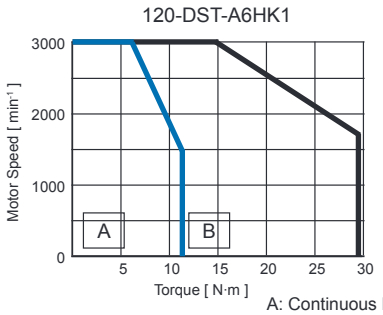
Motor Model □□□-DST		11A	115	120
Rated Voltage	V	200V		
Rated Output	kW	1.0	1.3	1.8
Rated Torque	N·m	4.77	8.27	11.5
Instantaneous Max. Torque	N·m	14.3	23.3	28.7
Rated Current	A	8.2	10.7	16.7
Max. Current	A	24.6	29.5	36.3
Rated Speed	r/min	1500	1500	1500
Max. Speed	r/min	3000	3000	3000
Rotor Inertia	kg-cm²	8.5	19.4	27.7
Torque Coefficient	N·m/A	0.774	0.929	0.74
Mass	kg	8.95	11.5	14.4
Ratings	Time Rating: Continuous Thermal Class: F Excitation Method: Permanent Magnet Insulation Resistance: DC500V, >20MΩ Noise: ≤60dB; No Special Noise			
Environment	Ambient Temperature: 0~40 °C Storage: -20~50°C Ambient Humidity: 20~80% No Condensation			
Enclosure	IP65			
Shock	98m/s2 Max. (10G)			
Applicable Servo Drive		DYN4		



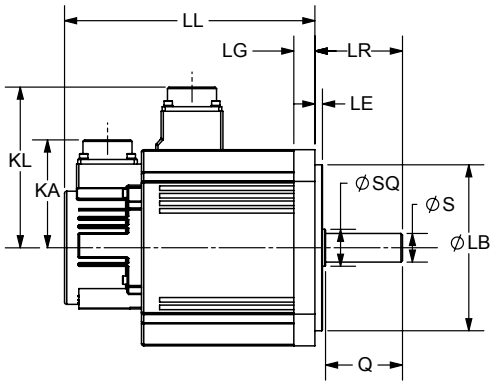
A: Continuous Duty Zone
B: Intermittent Duty Zone

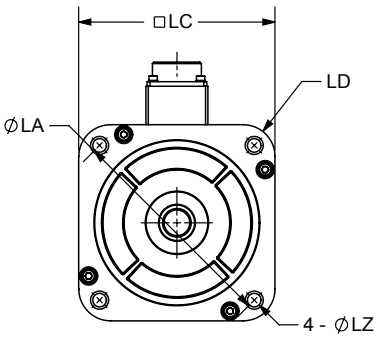


A: Continuous Duty Zone
B: Intermittent Duty Zone



A: Continuous Duty Zone
B: Intermittent Duty Zone





[Unit: mm]

Motor Model	LL (w/ brake)	LG	KL	KA	LA	LB	LE	LD	LC	LZ	LR	S
11A-DST-A6□□1	166 (236)	14	110	78	Φ145	$\Phi 110^{0}_{0.035}$	5	165	130	4-Φ9	57	$\Phi 19^{0}_{0.013}$
115-DST-A6□□1	213 (262)	14	110	78	Φ145	$\Phi 110^{0}_{0.035}$	5	165	130	4-Φ9	57	$\Phi 22^{0}_{0.013}$
120-DST-A6□□1	241 (283)	14	110	78	Φ145	$\Phi 110^{0}_{0.035}$	5	165	130	4-Φ9	57	$\Phi 22^{0}_{0.013}$