



SUPER SAX 2000 SC

BRUSHLESS SERVOMOTOR

Screw Connectors



SUPERSAX 2000 SC (SSAX2000sc)

Complete line of Sinusoidal Brushless Servomotors (6 poles) for use with AXOR's Drives (MCB, MCB Plus, B17 and B24). Torque range from 0.35 to 17 Nm (50 to 2428.5 oz.-in.)

Typical applications are: Axis Controlled by CNC, Strongly Intermittent Motor Duties, Machine Tools, Textile and Graphic Machines, Robots, Transfer Lines, Manufacturing, Packaging and Wood Working Machines.

STANDARD FEATURES

- ✓ Sinusoidal B.E.M.F.
- ✓ Very low moment of inertia resulting in high acceleration and deceleration
- ✓ Permanent rare earth magnets (NdFeB)
- ✓ Very low fluctuations of torque at minimum speed
- ✓ High overload capacity (4 x stall torque)
- ✓ Protection class IP54
- ✓ Four different Nominal Voltages (44, 95, 145 and 220 VAC)
- ✓ Two different feedback systems: Encoder 2048P/Rev, 5V LD or resolver
- ✓ All motors with flying screw connectors (both power and signal)

OPTIONS

- ✓ Brake
- ✓ Protection class:
- ✓ IP65
- ✓ IP65S (with shaft sealing, motor length increases 10 mm)



DESCRIPTION

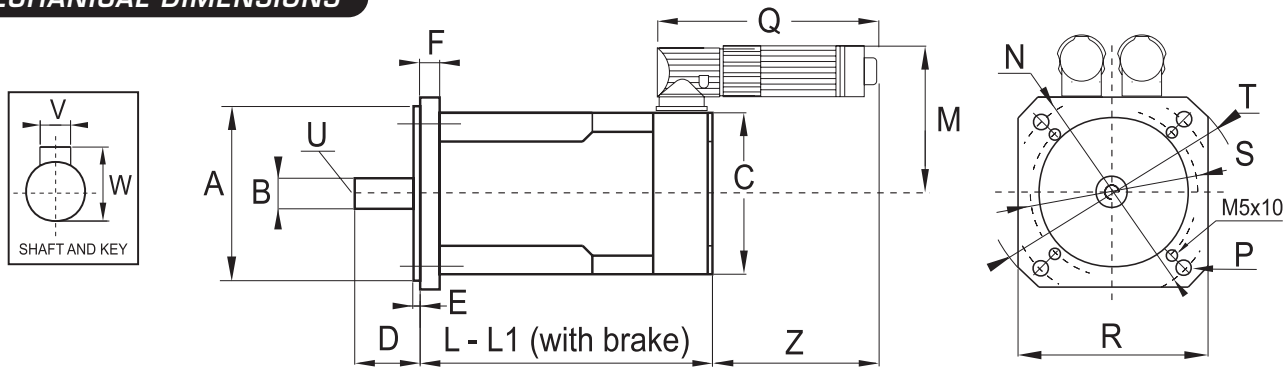
The **SSAX 2000** Series Brushless Servomotors with permanent magnets are designed to meet the most demanding needs of industrial automation with very high performance levels and are extremely reliable, requiring little maintenance. The servomotors range from 0.35 to 17 Nm (50 to 2428.5 oz.-in.). High motor torque and low inertia give an excellent torque/inertia ratio. The maximum environmental temperature to which the Nominal performance refers is +40°C.

TORQUE RANGE

SERIES			SSAX 2055			SSAX 2075 (2088)			SSAX 2115			SSAX 2142		
SIZE			S	M	L	S	M	L	S	M	L	S	M	L
Mo stall Torque ($\Delta t=100^{\circ}\text{C}$)	(Nm)		0.35	0.6	0.8	0.6	1.3	2.5	2.5	5.2	7.5	10.5	13.5	17
" "	(oz.-in.)		50	86	114	86	186	357	357	742	1071	1500	1928	2428
Nmax Peak Torque	(Nm)		1.6	2.4	3.2	2.6	5.2	10	10	21	30	45	54	68
" "	(oz.-in.)		228	342	457	371	743	1428	1428	3000	4285	6428	7714	9714
220 VAC	Stall Ac Current	Io (Arms)	0.9	1.2	1.7	1.25	2.4	4.3	2.9	6.2	8.6	12	15.3	20.0
Drive's main voltage	Rated speed	Nn (Rpm)	4000	4000	4000	4000	4000	4000	3000	3000	3000	3000	3000	3000
	Stall DC Current	IoDC (Aoc)	1.1	1.5	2.2	1.6	3	5.5	3.8	8	11	15.3	19.5	-
145 VAC	Stall Ac Current	Io (Arms)	1.3	1.5	1.95	2	3.6	5.7	4	9.8	12.5	16.9	16.2	-
Drive's main voltage	Rated speed	Nn (Rpm)	4000	4000	4000	4000	4000	3500	3000	3000	3000	2500	2000	-
	Stall DC Current	IoDC (Aoc)	1.7	1.9	2.5	2.5	4.6	7.2	5	12.5	16	21.5	-	-
95 VAC	Stall Ac Current	Io (Arms)	1.94	2.9	3.8	2.7	5.2	7.8	7.4	14.9	-	-	-	-
Drive's main voltage	Rated speed	Nn (Rpm)	4000	4000	4000	4000	4000	3500	3000	3000	-	-	-	-
	Stall DC Current	IoDC (Aoc)	2.5	3.6	4.8	3.5	6.6	9.9	9.4	19	-	-	-	-
44 VAC	Stall Ac Current	Io (Arms)	2.9	6.3	8.9	6.7	10	14.7	13.9	-	-	-	-	-
Drive's main voltage	Rated speed	Nn (Rpm)	4000	4000	4000	4000	3000	3000	2500	-	-	-	-	-
	Stall DC Current	IoDC (Aoc)	3.7	8	11.3	8.5	12.7	19	17.6	-	-	-	-	-
J	Rotor Inertia	(Kg m^2) $\cdot 10^{-4}$	0.08	0.11	0.15	0.44	0.7	1.2	1.62	3.13	4.5	12	13.5	17
Jb	Brake Inertia	(Kg m^2) $\cdot 10^{-4}$	0.07			0.38			1.06			3.6		
BRAKE = 24 Voc \pm 10% (optional)			1.2 Nm			2.5 Nm			5 Nm			12 Nm		

Part number D.S./11.00/SSAX2000sc/01

MECHANICAL DIMENSIONS



All dimensions refer to both resolver and encoder versions

To obtain the dimensions in INCHES, divide mm by 25.4 Ex: 40 mm=1.57 Inches / 25.4

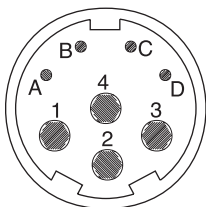
REFERENCES	A _{jg}	B _{k6}	C	D	E	F	L	L1	M	N	P	Q	R	S	T	U	V	W	Z	Weight	Weight with brake
VERSION Nm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	Kg	Kg
2055 S 0.35	40	9	50 (74)*	24	2.5	7	121 (145)*	155 (179)*	60 (78)*	63	5.8	116	55	-	74	-	3x 18	11	87	1.1	1.36
2055 M 0.6							136 (160)*	170 (194)*												1.25	1.51
2055 L 0.8							151 (175)*	185 (209)*												1.45	1.71
2075 S 0.6	60	11	74	23	2.5	10	116 (134)*	149 (167)*	78	90	5.8	116	75	75	100	M4x 12	5x 24	13	87	1.9	2.3
2075 M 1.3							134 (152)*	167 (185)*												2.3	2.7
2075 L 2.5							170 (188)*	203 (221)*												3.3	3.7
2088 S 0.6	80	14	74	30	3	9	116 (134)*	149 (167)*	78	100	7	116	88	-	115	M4x 16	5x 22	16	87	1.9	2.3
2088 M 1.3							134 (152)*	167 (185)*												2.3	2.7
2088 L 2.5							170 (188)*	203 (221)*												3.3	3.7
2115 S 2.5	95	19	97	40	3	10	155 (174)*	187 (206)*	81.5	115	9	116	105	-	134	M5x 17	6x 32	22	85	4.5	5.3
2115 M 5.2							185 (204)*	218 (237)*												5.7	6.5
2115 L 7.5							230 (249)*	263 (282)*												7.6	8.4
2142 S 10.5	130	24	97	50	3.5	11	220	263	81.5	165	11	116	142	-	188	M8x 25	8x 40	27	85	9.8	11.3
2142 M 13.5							237	280												11.2	12.7
2142 L 17							276	319												14	15.5

*: For encoder version (where not specified same dimensions for encoder and resolver)

CONNECTION DATA

POWER CONNECTOR

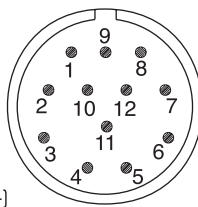
- 1 = U
- 4 = V
- 3 = W
- 2 = GND (⊥)
- C = BRAKE (+)
- D = BRAKE (-)
- A - B = UNCONNECTED



(valid for both Encoder and Resolver versions)

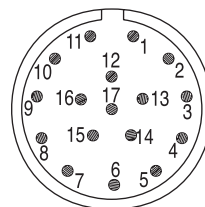
SIGNAL CONNECTOR "RESOLVER"

- 1 = SHIELD
- 4 = COS (+)
- 8 = COS (-)
- 3 = SEN (+)
- 7 = SEN (-)
- 5 = SUPPLY (+)
- 9 = SUPPLY (-)
- 2 = THERMAL SWITCH
- 6 = THERMAL SWITCH
- 10 - 11 - 12 = UNCONNECTED



SIGNAL CONNECTOR "ENCODER"

- 1 = SHIELD
- 3 = POWER SUPPLY (+5V_{oc})
- 4 = GND
- 5 = ChA
- 6 = ChA (-)
- 7 = ChB
- 8 = ChB (-)
- 9 = ChZ
- 10 = ChZ (-)
- 11 = HALL U = A
- 12 = HALL U (-)
- 13 = HALL V (-)
- 14 = HALL V = B
- 15 = HALL W = C
- 16 = HALL W (-)
- 2 = THERMAL SWITCH
- 17 = THERMAL SWITCH



FLYING CONNECTOR (SOLDER SIDE VIEW)

ORDERING CODE

Example:

SSAX - 2055 - M - 30 / 220 - XX - OE - SC - 05 - 54

NAME: Line of Brushless Servomotors

SERIES: 2055, 2075, 2088, 2115 and 2142

SIZE: S, M, L

NOMINAL SPEED Ex: 30=3000 Rpm (see table on reverse)

NOMINAL SUPPLY INPUT DRIVE VOLTAGE: 044, 095, 145 and 220 VAc

FLANGES & SHAFTS: XX = Standard (see above)
XW = Without keyway

ELECTRICAL CONNECTIONS:

SC = Screw Connector

DEGREE OF PROTECTION (IP)

- 54 = Standard
- 65 = Option, without shaft sealing
- 65S = Option, with shaft sealing

CUSTOM MADE:

- 01 = Encoder 2000 p / rev (Std)
- 02 = Encoder 1000 p / rev
- 03 = Encoder 2500 p / rev
- 04 = Encoder 1024 p / rev
- 05 = Encoder 2048 p / rev
- 06 = Encoder 4096 p / rev
- R1 = Resolver type 1

OPTIONS:

- OR = With Resolver
- OE = With Encoder
- 1R = With Brake+Resolver
- 1E = With Brake+Encoder

OFFICIAL-DEALER

NEE Controls Inc
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