



SAX 100

DC SERVOMOTORS



SAX 100

Complete line of DC Servomotors for use with Microspeed, Microspeed Plus, Minispeed and Masterspeed Servo Amplifiers that range from 0.045 to 2.7 Nm (6.4 to 386 oz.-in.)

Typical applications are:
 Small Robotics, X-Y Tables, Medical Equipment, Textile Equipment, Conveyors, Graphic Machinery, Packaging Machinery, Positioners, Converting Machinery, Feeders.

STANDARD FEATURES

- ✓ Complete line of DC Servomotors starting with extremely small sizes
- ✓ Ferrite permanent magnets
- ✓ Extremely favorable cost to performance ratio
- ✓ Easy installation and use
- ✓ Full torque in a wide range of speeds
- ✓ High overload capacity
- ✓ Encoder predisposition (see table on reverse)
- ✓ Environmental working temperature: 5 ±40° C

OPTIONS

- ✓ Tachogenerator
- ✓ Brake
- ✓ Encoder fitted
- ✓ Connectors
- ✓ Terminal Box (except 117 and 130 series)
- ✓ Special flange listing available (see Catalogue)

TORQUE RANGES



DESCRIPTION

With restricted dimensions, the SAX 100 series Servomotors offer the most dynamic features along with high peak torque, therefore they are particularly suitable for driving any type of movement applications where great motion regularity, at low speed is important.

Series: **SAX 117**: 2 poles, Torque range from 0.045 to 0.75 Nm (6.4 to 10.7 oz.-in.)

Series: **SAX 130**: 2 poles, Torque range from 0.13 to 0.49 Nm (18.6 to 70 oz.-in.)

Series: **SAX 156/163**: 2 poles, Torque range from 0.46 to 0.9 Nm (65.7 to 128.6 oz.-in.)

Series: **SAX 165/175**: 4 poles, Torque range from 0.85 to 2.7 Nm (121.4 to 386 oz.-in.)

SERIES	SAX 117 (2 poles)			SAX 130 (2 poles)				SAX 156 / 163 (2 poles)				SAX 163 (2 poles)			SAX 165 / 175 (4 poles)				175 (4 poles)								
	S	M	.075	.13	.17	.3	.3	.43	.49	.49	.55	.65	.7	.75	.75	.65	.8	.9	1.15	1.0	.85	1.7	1.45	1.45	1.8	2.2	2.7
Nm Mo (Stall Torque) (Δt=115°C) oz.-in.	.045	.06	.075	.13	.17	.3	.3	.43	.49	.55	.65	.7	.75	.75	.65	.8	.9	1.15	1.0	.85	1.7	1.45	1.45	1.8	2.2	2.7	
N_n Nominal Speed RPM	3900	3500	1100	2750	2800	3200	3150	2750	2750	2800	2650	2900	3100	3000	2000	3200	2250	3000	2100	3300	4600	2250	3500	4850	3200	3400	2100
In0 ADC (Δt=115°C)	1.4	1.7	.75	2.5	3.1	5.2	-	6.3	-	7.3	-	10	-	-	10	-	-	-	-	-	-	-	-	-	-	-	-
BLOCKED ROTOR RATED CURRENT	48V DC	-	-	-	-	-	2.5	-	4.1	-	4	-	5.6	-	-	5.6	5.9	-	-	-	-	-	-	-	-	-	-
	65V DC	-	-	-	-	-	-	-	-	-	-	4	2.9	-	-	-	-	4.6	5.8	6.5	6.8	8.5	11.5	-	-	-	-
	90V DC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.4	8.8	7
Rotor Inertia J kgm ² ·10 ⁻⁴	0.03	0.052		0.2	0.28	0.43		0.75		2.8		3.8		5		3.9		7		8.5							
Tacho (OPTIONAL)	DT03 - 3V/1000 Rpm (2 POLES)							DT10 - 10V/1000 Rpm (2 POLES)								DT10 - 10V/1000 Rpm (2 POLES)											
Tacho Inertia Jt kgm ² ·10 ⁻⁴	0.015							0.057								0.8											
Brake (OPTIONAL)	Not available							1 Nm - 24 Vdc - 0.3A								2 Nm - 24 Vdc - 0.4A											
Brake Inertia Jb kgm ² ·10 ⁻⁴	—							0.1								0.24											

★ AXOR IND. A COMPLETE LINE OF MOTORS AND SERVODRIVES ★

Drawings are not to scale (see quotations)

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

MECHANICAL DIMENSIONS

VERSION WITH BRAKE: N+35 mm		WITH TACHO	
SAX	117S	117M	
N	73	97	
Motor WT	0.3 (Kg) 0.7 (Lbs)	0.4 (Kg) 0.9 (Lbs)	
TACHO WT	0.2 (Kg) 0.4 (Lbs)	0.2 (Kg) 0.4 (Lbs)	

VERSION WITH BRAKE: N+35 mm		WITH TACHO	
SAX	130 S	130 M	130 L 130 XL
D	6	7	7 9
I	18	18	18 25
E	-	-	10
F	-	-	3
N	72	92	117 169
U	M4	M4	M4 M5
Motor WT	0.7 (Kg) 1.5 (Lbs)	0.9 (Kg) 2.0 (Lbs)	1.3 (Kg) 2.9 (Lbs) 2 (Kg) 4.4 (Lbs)
TACHO WT	0.58 Kg - 1.3 (Lbs)		
BRAKE WT	0.5 Kg - 1.1 (Lbs)		

VERSION WITH BRAKE: N+35 mm		WITH TACHO	
SAX	156 S	156 M	163 S 163 M 163 L
B	50	50	60 60 60
D	9	9	11 11 11
E	10	10	12 12 12
F	3	3	4 4 4
I	20	20	23 23 23
N	139	157	139 157 188
R	80	80	90 90 90
T	65	65	75 75 75
Motor WT	2.7 (Kg) 5.9 (Lbs)	3.2 (Kg) 7.0 (Lbs)	2.7 (Kg) 5.9 (Lbs) 3.2 (Kg) 7.0 (Lbs) 4.0 (Kg) 8.8 (Lbs)
TACHO WT	0.38 Kg - 0.8 (Lbs)		
BRAKE WT	0.5 Kg - 1.1 (Lbs)		

VERSION WITH BRAKE: N+35 mm		WITH TACHO	
SAX	165 S	165 M	175 S 175 M 175 L
D	11	11	14 14 14
E	12	12	16 16 16
F	4	4	5 5 5
I	20	20	27 27 27
N	147	207	147 207 272
Motor WT	3.1 (Kg) 6.8 (Lbs)	5.2 (Kg) 11.4 (Lbs)	3.1 (Kg) 6.8 (Lbs) 5.2 (Kg) 11.4 (Lbs) 6.8 (Kg) 15 (Lbs)
TACHO WT	0.8 Kg - 1.8 (Lbs)		
BRAKE WT	0.55 Kg - 1.2 (Lbs)		

ORDERING CODE

Example:

SAX - 117 - S - 3.90 / 024 - XX - 09 - P - 00

NAME: Line of DC Servomotors

SERIES: 117, 130, 156, 163, 165 or 175

SIZE: S, M, L or XL

NOMINAL SPEED: (KRPM) Ex: 3.9=3900 Rpm (see table on reverse)

NOMINAL VOLTAGE: 24, 48, 65 or 90Vdc (at nominal speed)

FLANGES & SHAFTS:
XX = Standard (see above)

CUSTOM MADE:
00 = Standard

ELECTRICAL CONNECTIONS:

P = Flying leads
C = Connectors (optional)
F = Fast-on

OPTIONS: 09 = Only motor (standard)

01 = With Tacho

06 = Brake+Tacho

...other solutions in our catalogue



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Part number D.S./09.00/SAX100/02