



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	.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	65V DC	-	-	-	-	-	2.5	-	4.1	-	4	-	5.6	-	-	5.6	5.9	-	-	-	-	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																

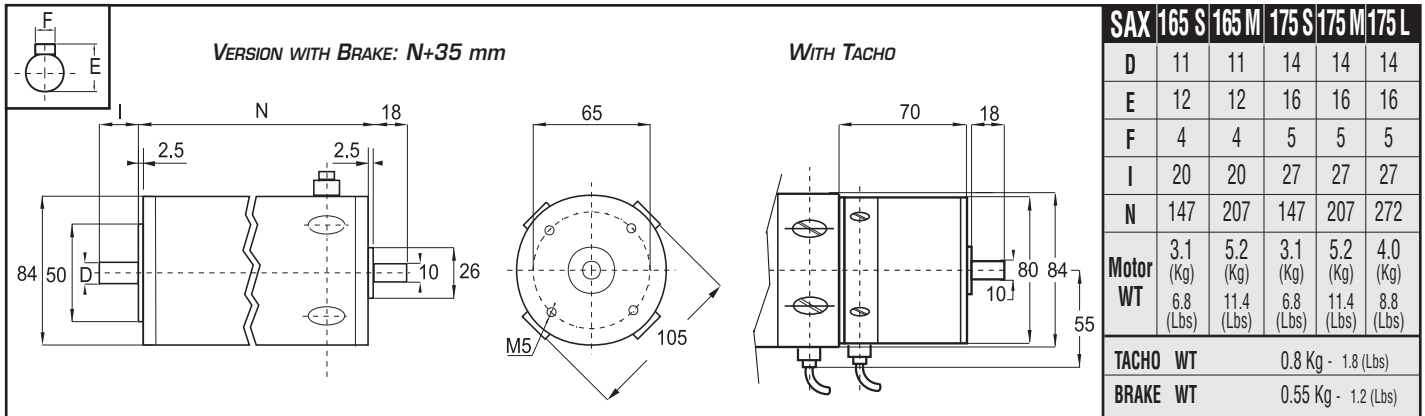
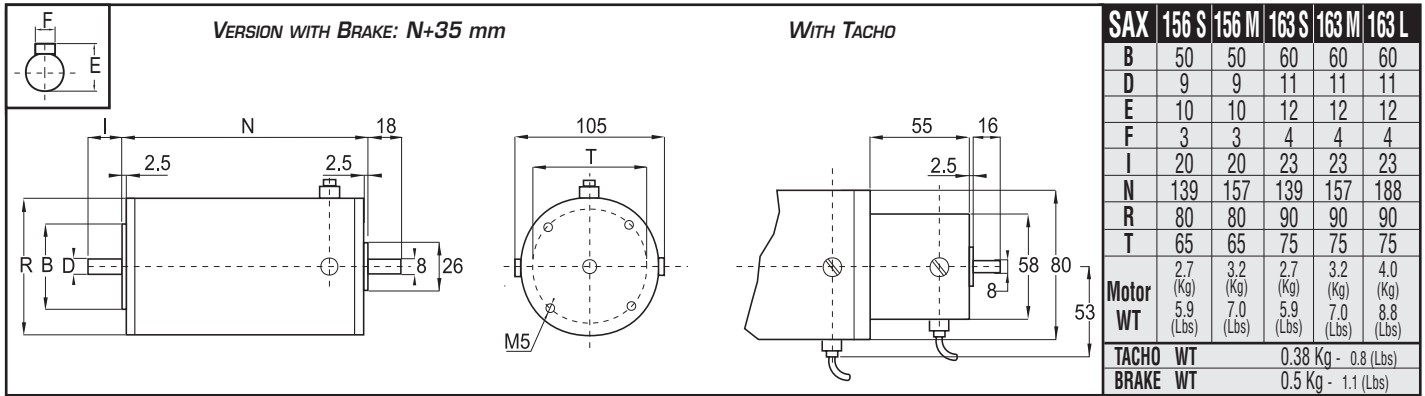
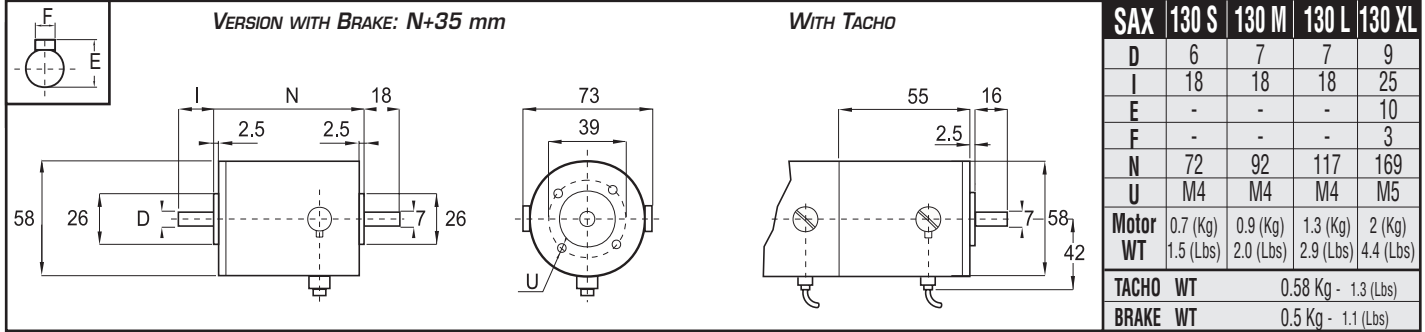
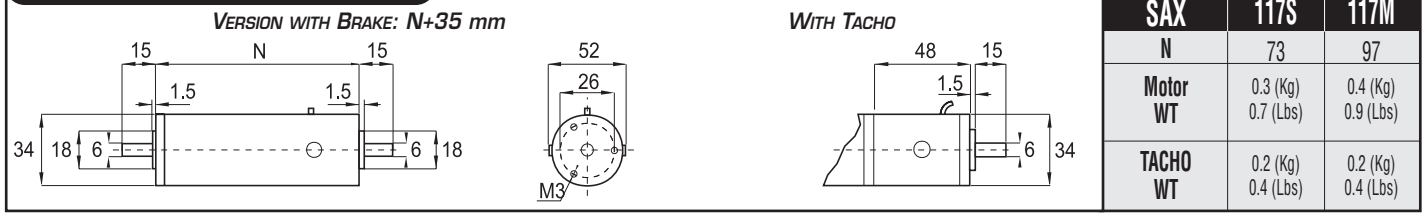
Part number D.S./09.00/Sax100/01

★ 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



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



Specifications subject to change without notice. This document has been carefully checked. However, Axor does not assume any liability for errors or inaccuracies.

© COPYRIGHT 2000 AXOR INDUSTRIES. All rights reserved. Printed in Italy. 09/00



AXOR IND.

via Cà Sordis 6/g - 36054 Montebello Vic.no - Vicenza - Italy

phone: (8 l. n.a.) (+39) 0444 440441 - (+39) 0444 440988

fax: (+39) 0444 440418



OFFICIAL-DEALER



SAX 350

DC SERVOMOTORS



SAX 350

Line of DC Servomotors for use with Microspeed, Microspeed Plus, Minispeed and Masterspeed Servo Amplifiers. Torque range from 0.7 to 1.8 Nm (100 to 257 oz-in).

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



STANDARD FEATURES

- ✓ Ferrite permanent magnets
- ✓ Extremely favourable cost to performance ratio
- ✓ Suitable for personalisation
- ✓ Simple installation and use
- ✓ Full torque in a wide range of speeds
- ✓ High overload capacity
- ✓ Environmental working temperature: 5÷40 °C (41÷104°F)
- ✓ Protection class IP54
- ✓ Terminal box

OPTIONS

- ✓ Tachogenerator DT10 (10V/1000Rpm-4 poles)
- ✓ Encoder fitted
- ✓ Brake
- ✓ Thermoswitch
- ✓ Special Tachogenerator DT20 (20V/1000 Rpm 4 poles)
- ✓ Encoder predisposition ø6x10 mm
- ✓ Special Flange listings available upon request
- ✓ Special encoder pre-arrangement upon request
- ✓ Oil seal shaft ring

DESCRIPTION

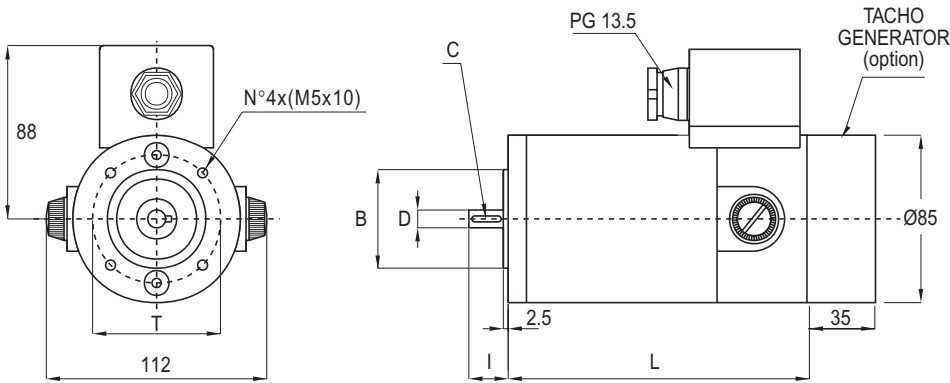
The **SAX 350 DC** servomotors with permanent magnets are traditional, easy-to-use motors that are extremely trustworthy and efficient. They have a favorable cost to performance ratio and are perfectly designed for use with the Microspeed, Minispeed and Masterspeed Servo amplifiers. These servomotors (thanks to their permanent magnets) give high level performance and are extremely reliable, with great motion regularity at low speed especially with the tacho generator version.

SERIES	SAX 350 (2 POLES)								
	S			M			L		
M₀ Stall Torque (Nm)	0.7	0.7	0.7	1.5	1.5	1.5	1.8	1.8	1.8
N_n Nominal Speed (Rpm)	3000	3000	3000	3000	3000	3000	3000	3000	3000
BEMF (Vdc)	26	42	59	41	49	60	51	61.5	78
In₀ (A)dc Stall Current (Δt=100°C)	9.2	6.8	4.3	12.8	10.2	8.4	12.3	9.9	7.9
COUPLE WITH DRIVES Microspeed Minispeed or Masterspeed	MCS 60 MS 60 MTS 60	MCS 60 MS 60 MTS 60	MCS 110 MS 140 MTS 140	MCSPPlus 60 MS 60 MTS 60	MCSPPlus 60 MS 60 MTS 60	MCS 110 MS 140 MTS 140	MCSPPlus 60 MS 60 MTS 60	MCS 110 MS 140 MTS 140	MCS 110 MS 140 MTS 140
J Rotor Inertia kgm ²	0.0003			0.0006			0.001		
J_B Brake Inertia kgm ²	0.00006								
Tacho Generator (Optional)	DT10 (10V / 1000 Rpm - 4 Poles)								
Brake (optional)	4 Nm - 24 Vdc (+5/-10%-0.85A)								

Drawings are not to scale (see quotations)

MECHANICAL DIMENSIONS

CODE 01= B14M56 (standard for Sax350 S)
CODE 03= B14M63 (standard for Sax 350 M-L)

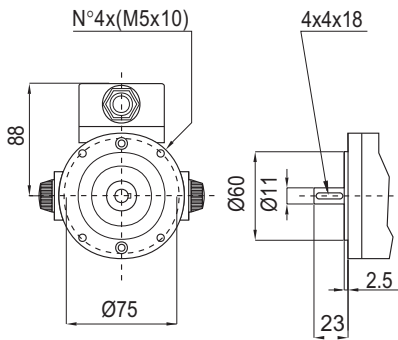


Versions with brake = L+40mm

	SAX 350	S	M	L
B (mm)	50	60	60	60
D (mm)	9	11	11	11
C (mm)	3x3x15	4x4x18	4x4x18	4x4x18
I (mm)	20	23	23	23
T (mm)	65	75	75	75
L (mm)	153	203	253	253
Motor WT_M	3 Kg 6.6 Lbs	4.2 Kg 9.3 Lbs	6 Kg 13.3 Lbs	
TACHO WT_T	0.3 Kg - 0.7 (Lbs)			
BRAKE WT_B	0.8 Kg - 1.8 (Lbs)			

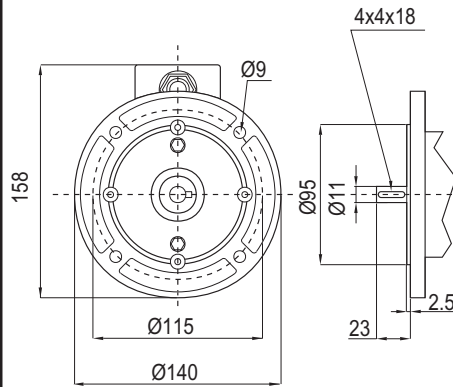
SPECIAL FLANGES & SHAFTS

CODE 03=B14M63



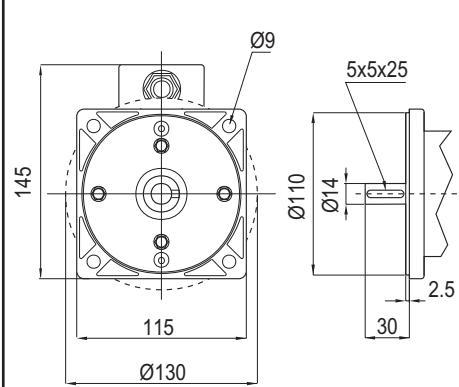
(option for SAX 350 S)

CODE 04=B5M63



(option for SAX 350 S-M-L)

CODE 02=B5M71



(option for SAX 350 L)

All dimensions are in mm To obtain the dimensions in INCHES, divide mm by 25.4

Ex: 153 mm = 6.02 Inches
25.4



ORDERING CODE

Example:

SAX - 350 - S - 3.0 / 059 - 01 - 01 - M - 00

NAME: Line of Dc Servomotors

SERIES: 350

SIZE: S, M, or L

NOMINAL SPEED:

(KRPM) Ex: 3.0 = 3000 Rpm
(See table on Reverse)

BEMF VOLTAGE:

Ex: 059 = 59 Vdc
(See table on Reverse)

CUSTOM MADE:
00 = Standard

ELECTRICAL CONNECTIONS:
M = Terminal Box (standard)

FLANGES & SHAFTS:

- 01 = B14M56 Ø9 (standard for SAX 350 S)
- 03 = B14M63 Ø11 (standard for SAX 350 M-L)
- 04 = B5M63 Ø11 (option for SAX 350 S-M-L)
- 02 = B5M71 Ø14 (option for SAX 350 L)

OPTIONS:

- 01 = Tacho DT10 (standard)
- 04 = Brake No Tacho
- 06 = Brake + Tacho DT10
- 09 = Only Motor (W/O Tacho)

Specifications subject to change without notice. This document has been carefully checked. However, Axor does not assume liability for errors or inaccuracies.

© COPYRIGHT 2001 AXOR INDUSTRIES. All rights reserved. Printed in Italy. 01/01



AXOR IND.

via Cà Sordis 6/g - 36054 Montebello Vic.no - Vicenza - Italy

phone: (8 l. n.a.) (+39) 0444 440441 - (+39) 0444 440988

fax: (+39) 0444 440418 - http: //www.axorindustries.com

e-mail: info@axorindustries.com



OFFICIAL - DEALER



SAX 500

DC SERVOMOTORS



SAX 500

Complete line of DC Servomotors for use with Minispeed, and Masterspeed Servo Amplifiers that range from 2.8 to 8 Nm (400 to 1142.9 oz.-in.)

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

STANDARD FEATURES

- ✓ Ferrite permanent magnets
- ✓ Extremely favorable cost to performance ratio
- ✓ Sizes from small to large
- ✓ Extremely suitable for personalization
- ✓ Simple installation and use
- ✓ Full torque in a wide range of speeds
- ✓ High overload capacity
- ✓ Environmental working temperature: 5÷40 °C
- ✓ Tachogenerator (10V / 1000Rpm) included as standard equipment
- ✓ Encoder Predisposition Ø 6 x 10 mm

OPTIONS

- ✓ Encoder
- ✓ Brake
- ✓ Special Tachogenerator DT20 (20V/1000 Rpm)
- ✓ Special Flange listings available upon request (see catalogue)

TORQUE RANGE



DESCRIPTION

The **SSAX 500 DC servomotors** with permanent magnets are traditional, easy-to-use, motors that are extremely trustworthy and efficient.

They have a favorable cost to performance ratio and are perfectly designed for use with the Minispeed and Masterspeed Servo Amplifiers and range from 2.8 to 8 Nm (400 to 1142.9 oz.-in.) These servomotors (thanks to their permanent magnets) give high level performance and are extremely reliable.

The maximum environmental temperature to which the Nominal performance refers is +40°C.

SERIES	SAX 500 (4 POLES)											
	SIZE	S				M				L		
M₀ Stall Torque (Nm)	2.8	2.8	2.8	3.0	5.0	5.0	5.5	5.5	7.5	8.0	8.0	8.0
N_n Nominal Speed (Rpm)	3500	3000	2000	2000	3500	3000	3000	1200	3000	3000	2000	1500
BEMF (Vdc)	110	120	95	170	115	135	165	120	107	165	140	120
In0 (A _{dc}) (Stall Current) Δt=100°C	8.6	7	5.9	3.3	16	11	10	5.5	21	15	12	10
COUPLE WITH DRIVES Minispeed or Masterspeed	140	140	140	200	140	200	200	140	140	200	200	140
J Rotor Inertia kgm ² · 10 ⁻⁴	0.002				0.003				0.005			
J_B Brake Inertia kgm ² · 10 ⁻⁴	0.00022											
Tacho Generator (Standard)	DT10 (10V / 1000 Rpm - 4 Poles)											
Brake (optional)	10 Nm - 24 Vdc (±10%) - 1.1A - 27W											

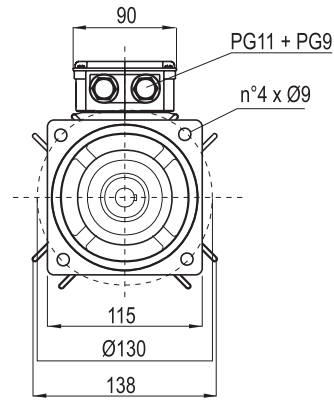
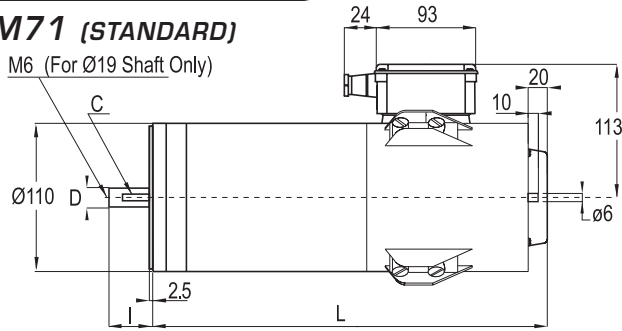
Part number D.S./09.00/SAX500/01

Drawings are not to scale (see quotations)

MECHANICAL DIMENSIONS

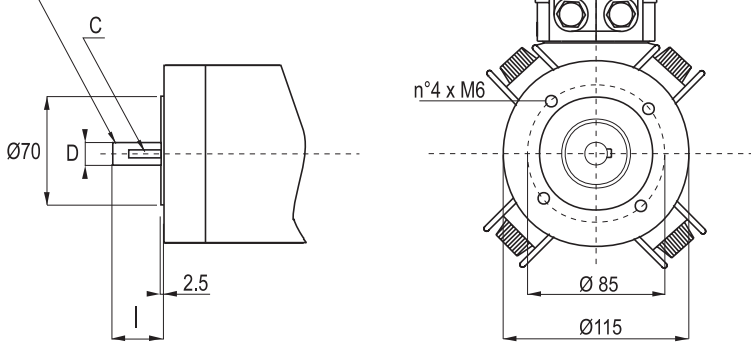
B5 M71 (STANDARD)

M6 (For Ø19 Shaft Only)



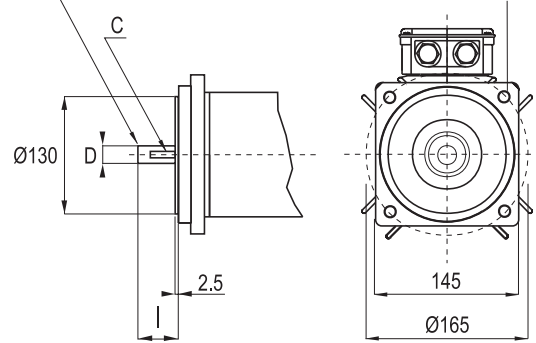
B14 M71 (OPTIONAL)

M6 (For Ø 19 shaft only)



B5 M80 (OPTIONAL)

M6 (For Ø 19 shaft only)



All dimensions are in mm

To obtain the dimensions in INCHES, divide mm by 25.4

Ex: 40 mm = 1.57 Inches
25.4

TYPE	D mm	I mm	C mm	L* mm	WT* kg / (Lbs) Motor Tacho
SAX 500S	14	30	5x5x25	311	8 / (17.7)
	19	40	6x6x30	311	8 / (17.7)
SAX 500M	19	40	6x6x30	383	12 / (26.5)
SAX 500L	14	40	6x6x30	455	17 / (37.6)

** Version with brake: L+40mm

*Version with brake: WT+1Kg (2.2 Lbs)

ORDERING CODE

Example:

SAX - 500 - S - 3.5 / 110 - 18 - 01 - M - 00

NAME: Line of Dc Servomotors

SERIES: 500

SIZE: S, M, or L

NOMINAL SPEED:

(KRPM) Ex: 3.5=3500 Rpm
(See table on Reverse)

BEMF VOLTAGE:

Ex: 110=110 Vdc
(See table on Reverse)



CUSTOM MADE:
00 = Standard

ELECTRICAL CONNECTIONS:
M = Terminal Box (standard)

OPTIONS:

- 01 = Tacho DT10 (standard)
- 04 = Brake No Tacho
- 06 = Brake + Tacho DT10
- 09 = Only Motor (W/O Tacho)

FLANGES & SHAFTS:

- 18 = B5M71 Ø19 (standard)
- 02 = B5M71 Ø14 (standard)
- 19 = B14M71 Ø19 (optional)
- 06 = B14M71 Ø14 (optional)
- 05 = B5M80 Ø19 (optional)
- 24 = B5M80 Ø14 (optional)

OFFICIAL - DEALER

