



**Super
SAX**

(SSAX)

**BRUSHLESS
SERVOMOTOR**



P. N. : D.S. / 23.11.18 / SSAX / 08

SERIES			SSAX 55			SSAX 75			SSAX 100				SSAX 140						
SIZE			S	M	L	XS	S	M	L	S	M	L	XL	XS	S	M	L	XL	XXL
Mo stall Torque (t=100°C) (Nm)			0.35	0.8	1.2	1.1	1.6	2.7	3.8	3.2	5.2	7.5	8.5	9.5	13.5	17.8	22	26	30
Mpk Peak Stall Torque (Nm)			1.4	3.2	4.8	4.5	6.4	10.8	15.2	12.8	21	30	34	38	55	72	90	105	120
380 VAc	Stall Ac Current	Io (Arms)	0.7	1.4	1.5	1.1	1.5	1.8	2.6	2.2	3.4	4.8	5.5	6.3	8.7	11.5	14	16.5	19
Drive's main voltage	Rated speed	Nn (Rpm)	6000	6000	5000	4000	4000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
	Torque constant	Kt (Nm/Arms)	0.5	0.57	0.8	1	1.07	1.5	1.46	1.46	1.53	1.57	1.55	1.5	1.56	1.55	1.58	1.58	1.58
220 VAc	Stall Ac Current	Io (Arms)	0.7	1.4	2.1	1.4	2	3.3	4.5	3.7	5.9	8	9.3	11	15	19.8	16	-	-
Drive's main voltage	Rated speed	Nn (Rpm)	4000	4000	4000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	2000	-	-
	Torque constant	Kt (Nm/Arms)	0.5	0.57	0.57	0.79	0.8	0.82	0.85	0.87	0.89	0.94	0.92	0.86	0.9	0.9	1.36	-	-
J Rotor Inertia (std) (Kgm ²) 10 ⁻⁴			0.08	0.16	0.24	0.4	0.6	1	1.4	1.8	2.8	3.8	4.2	9.5	13.5	18	22	27	31
JH Higher Rotor Inertia (opt) (Kgm ²) 10 ⁻⁴			-	-	-	3.5	3.7	4.1	-	12	13	14	14.5	42	46	51	55	60	-
Jb Brake Inertia (Kgm ²) 10 ⁻⁴			-			0.122			0.37				1.15			4.0			
BRAKE stall torque (t=100°C - 24 Vdc +6%-10%)			N.A.			4.5 Nm (0.5 Apc)			9 Nm (0.8 Apc)				18 Nm (1 Apc)			36 Nm (1.1 Apc)			
MODULE			2	4	6	2	3	5	7	3	5	7	8	2	3	4	5	6	7

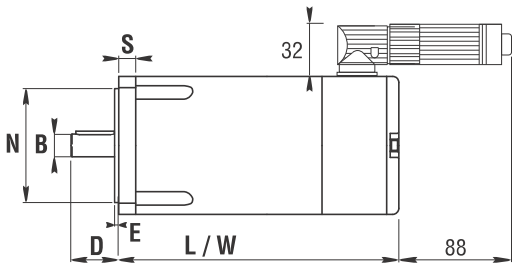
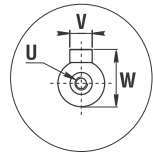
STANDARD FEATURES

- ◆ 6 Poles Sinusoidal B.E.M.F.
- ◆ Low rotor inertia with excellent torque/inertia ratio
- ◆ Torque ranges from 0.35 to 30 Nm
- ◆ Permanent rare earth magnets (NdFeB)
- ◆ Very low torque fluctuations at minimum speed
- ◆ High overload capacity (4 x stall torque)
- ◆ Protection rating IP54
- ◆ Two different Nominal Voltages (220 and 380 VAc)
- ◆ Operating temperature 0 - 40°C
- ◆ Feedback:
 - Commutation Encoder

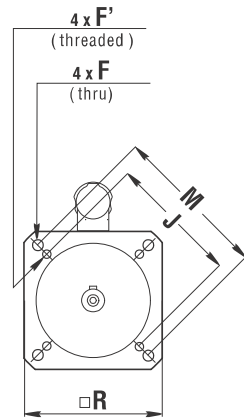
OPTIONS

- ◆ Holding brake (not for SSAX 55)
- ◆ Protection rating: IP65
- ◆ Special flanges and shafts available upon request
- ◆ Special windings upon request
- ◆ **JH** Higher Rotor Inertia
- ◆ **S**: Thermal Switch N.C. as thermal protection
- ◆ Feedback:
 - Mack® Serial Encoder
 - Mack® Commutation Encoder
 - Resolver
 - Absolute Multiturn Encoder (for SSAX 75 only)





L1/W1 = with brake or JH High Inertia
L2/W2 = with brake + JH High Inertia

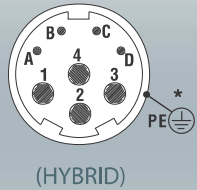


REF	L	L1	L2	Bh7	D	Vh9	W	U	Nh6	M	F	J	F'	E	S	R	W	W1	W2	
SERIES	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg	kg	kg	
55 S	129	-	-	9	20	3x14	10.2	M3	40	63	5.5	-	-	2.5	10	55	1.1	-	-	
55 M	154	-	-														1.4	-	-	
55 L	179	-	-														1.7	-	-	
75 XS	144	184	-	11	23	4x18	12.5	M4	60	90	5.5	75	M5	X	2.5	12.5	75	2.1	2.65	-
75 S	159	199	229															2.5	3.5	4.3
75 M	189	229	259															3.4	4.1	4.8
75 L	219	259	-	14	30	5x25	16	M6	95	115	9	-	-	3	12.5	100	4.2	4.7	-	
100 S	185	220	255	4.8	6	7.2														
100 M	220	255	290	6	7.2	8.4														
100 L	255	290	-	19	40	6x32	21.5	M8	130	165	11	-	-	3.5	16	140	7.2	8	-	
100 XL	272	307	-	7.8	8.5	-														
140 XS	190	240	265	7	9.5	12														
140 S	215	265	290	24	50	8x40	27	M8	130	165	11	-	-	3.5	16	140	9.8	12.3	15	
140 M	240	290	315														12.6	15	17.5	
140 L	265	315	340														15.4	18.5	21.5	
140 XL	290	340	365	21	50	8x40	27	M8	130	165	11	-	-	3.5	16	140	18.2	21.3	24.5	
140 XXL	315	365	-														21	24	-	

SCH SCREW CONNECTOR

Power + MKCS Serial Encoder

- 1 = U MOTOR
- 4 = V MOTOR
- 3 = W MOTOR
- 2 = GND ⊕ PE
- C = BRAKE (+)
- D = BRAKE (-)
- A = +SE
- B = -SE

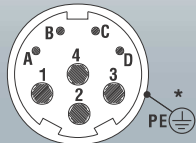


(HYBRID)

SC SCREW CONNECTORS

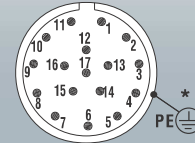
Power

- 1 = U MOTOR
- 4 = V MOTOR
- 3 = W MOTOR
- 2 = GND ⊕ PE
- C = BRAKE (+)
- D = BRAKE (-)
- A - B = N.C.



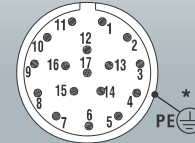
Absolute Encoder

- 3 = +5 Vs
- 4 = 0 Vs
- 7 = DATA (+)
- 8 = DATA (-)
- 2 = PTC
- 17 = PTC
- 5 = CLOCK (+)
- 6 = CLOCK (-)
- 1 - 9 - 10 - 11 - 12 - 13 - 14 - 15 - 16 = N.C.



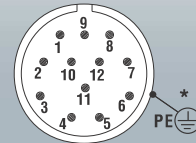
Commutation Encoder

- 1 = N.C.
- 3 = +5 Vs
- 4 = 0 Vs
- 5 = CHA
- 6 = CHA (-)
- 7 = CHB
- 8 = CHB (-)
- 9 = CHZ
- 10 = CHZ (-)
- 11 = HALL A
- 12 = HALL A (-)
- 13 = HALL B (-)
- 14 = HALL B
- 15 = HALL C
- 16 = HALL C (-)
- 17 = PTC
- 2 = PTC



Resolver

- 4 = COS (+)
- 8 = COS (-)
- 3 = SEN (+)
- 7 = SEN (-)
- 5 = EXC (+)
- 9 = EXC (-)
- 2 = PTC
- 6 = PTC
- 1 - 10 - 11 - 12 = N.C.



* = All shields (internal and external) wired to connector housing.

SSAX 75 M 30/380

SERIES:
55, 75, 100, 140

SIZE:
XS, S, M, L, XL, XXL

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

SUPPLY DRIVE VOLTAGE:
(see table on reverse)

MOUNTING FLANGE: 000 = std
001-499 = IEC metric dimension
501-999 = Axor's internal code

HOLES: D = B5 with thru holes (std)
C = B14 with threaded holes (opt)

SPECIAL FLANGES & SHAFTS OPTIONAL	B _{h7}	D	V _{h9}	W	U	N _{h6}	M	F	J	F'	E	S	R	□
065D09X (for SSAX55 all sizes)	9	20	3x14	10.2	M3x8	50	65	5.5	-	-	2.5	10	55	
100D11X (for SSAX75 all sizes)	11	23	4x18	12.5	M4x10	80	100	6.6	-	-	3	12.5	85	
100D14X (for SSAX75 all sizes)	14	30	5x25	16	M4x10	80	100	6.6	-	-	3	12.5	85	
130D14X (for 75 all sizes)	14	30	5x25	16	M4x10	110	130	9	-	-	3.5	12.5	110	
100C19X (for SSAX100 all sizes)	19	40	6x32	21.5	M6x16	80	-	-	100	M6x8	3	12.5	100	

SHAFT KEY:
x = with (std), w = w/out (opt)

SHAFT DIAMETER: 00 = std
01 - 49 = IEC metric diameter
51 - 99 = Axor's internal code

TH. PROTECTION:
P = PTC (std)
S = Th. Switch N.C. (opt)
N = w/out (opt)

HOLDING BRAKE:
0 = w/out (std)
1 = with (opt)
(not available for SSAX55)

FEEDBACK:
T053 = 2048 P/rev Comm. Enc. (30° ph.) (std)
MKES1 = Mack® Serial Enc. 13 bit DSL (opt)
MKES3 = Mack® Serial Enc. 17 bit DSL (opt)
MKEC1 = Mack® Comm. Enc. 2048 P/rev (30° ph.) (opt)
R020 = 2 p resolver (0° ph.) (opt)
H01 = EQ1130 Abs. Enc. Endat 2.1 (for SSAX75 only) (opt)
T050 = 2048 P/rev Comm. Enc. (0° ph.) (opt)

CONNECTOR ORIENTATIONS:
R = Rear exit (std for 55-75)
F = Front exit (std for 100-140)
T = Top exit (opt)

SPEC:
Sxx = (std)

GEARBOX:
X = w/out (std)
R = with (opt)

ROTOR INERTIA:
X = (std)
H = High Inertia (opt)

PROTECTION RATING:
1 = IP54 (std)
2 = IP65 (opt)