

ABB servo motors

9C series

for ABB high performance machinery drives



The 9C series servo motor and the ABB high performance machinery drive ACSM1 provide a compact and powerful package for machine building and other applications requiring high precision.

The 9C series servo motors are designed for applications where high performance and precise positioning is required. A new winding method enables the motor to produce high torque from a compact frame. The low rotor inertia of the 9C series motors gives excellent performance for high dynamic applications.

The motors are available with absolute encoder and resolver feedbacks. The most common motor types and ready-made power and feedback cables in different lengths are stock items, offering quick and reliable delivery.

Features and benefits

- Compact and energy efficient motor with concentrated windings
- Wide range of motors and options

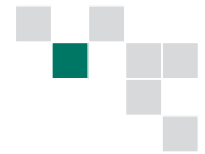
- Short delivery time for stock items
- Multiple connection methods
- Available with absolute encoder and resolver feedbacks
- Excellent torque/dimensions ratio
- Very low rotor inertia
- Optional integrated brake with high dynamic characteristics
- Shaft with keyway – motor delivered with half and full key
- Ready-made power and feedback cables
- Easy selection of motor and drive combination with the DriveSize sizing tool

ABB high performance machinery drives

ABB high performance machinery drives provide speed, torque and motion control for demanding applications. They can control induction, synchronous and asynchronous servo and high torque motors with a variety of feedback devices. The compact hardware and various control arrangements ensure optimum solutions for many different needs.



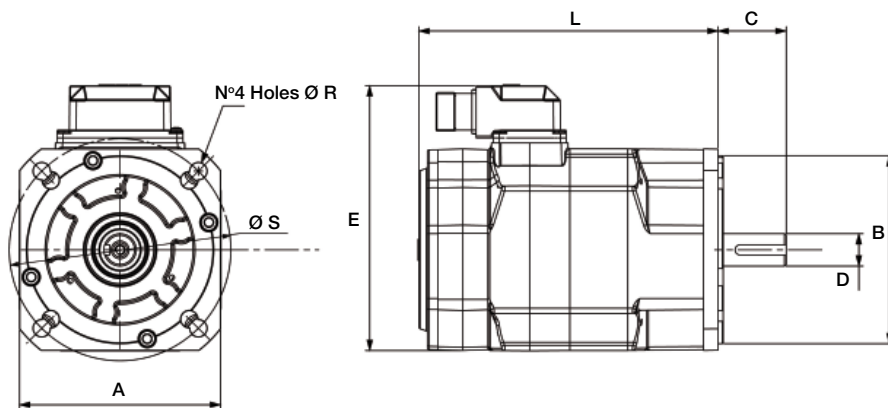
Types, ratings and dimensions



9C series	Availability of motor ¹⁾	T_{cs} ²⁾	T_{rat} ³⁾	T_{pk} ⁴⁾	n_{rat} ⁵⁾	I_{cs} ⁶⁾	I_{rat} ⁷⁾	I_{pk} ⁸⁾	P_{rat} ⁹⁾	J_M ¹⁰⁾	$J_M + brake$ ¹¹⁾
400 V power supply		[Nm]	[Nm]	[Nm]	[r/min]	[A]	[A]	[A]	[kW]	[kgcm ²]	[kgcm ²]
9C1.1.30...M	■	1.4	1.3	4.1	3000	1.3	1.4	4.5	0.41	0.57	0.62
9C1.2.30...M	□	2.3	2	6.9	3000	1.8	1.7	6.1	0.63	1.04	1.09
9C1.3.30...M	■	3.2	2.8	9.6	3000	2.7	2.5	9	0.88	1.51	1.56
9C1.4.30...M	□	4.2	3.5	12.6	3000	3.3	2.9	11.1	1.1	1.99	2.04
9C4.1.30...M	■	4.3	3.9	12.9	3000	3	2.8	9.8	1.23	4	4.7
9C4.2.30...M	■	7.5	6.1	22.5	3000	5	4.3	16.7	1.92	7.6	8.3
9C4.3.30...M	□	9.4	6.9	28.2	3000	6	4.6	19.9	2.17	11.1	11.8
9C4.4.30...M	■	12	7.5	36	3000	8.2	5.4	27.3	2.36	14.7	15.4
9C5.2.30...M	■	12.3	9	36.9	3000	9	6.9	30	2.83	21.8	23.6
9C5.3.30...M	■	18.4	12.4	55.2	3000	12.1	8.6	40.3	3.9	31.6	33.4
9C5.4.30...M	□	23.5	14	70.5	3000	15.1	9.4	50.2	4.4	41.4	43.2
9C5.6.30...M	■	30	18	90	3000	19.2	12.1	64.1	5.65	61	62.8

- ¹⁾ ■ : Made-to-stock motor
- ¹⁾ □ : Made-to-order motor
- ²⁾ T_{cs} : Continuous stall torque
- ³⁾ T_{rat} : Rated torque
- ⁴⁾ T_{pk} : Intermittent peak torque
- ⁵⁾ n_{rat} : Rated speed
- ⁶⁾ I_{cs} : Continuous stall current
- ⁷⁾ I_{rat} : Rated current
- ⁸⁾ I_{pk} : Intermittent peak current
- ⁹⁾ P_{rat} : Rated power
- ¹⁰⁾ J_M : Moment of inertia
- ¹¹⁾ $J_M + brake$: Moment of inertia, motor with holding brake

Motor type	A ¹⁾	B ²⁾	C ³⁾	D ⁴⁾	E ⁵⁾	R ⁶⁾	S ⁷⁾	L resolver ⁸⁾	L encoder ⁹⁾	L res + brake ¹⁰⁾	L enc + brake ¹¹⁾
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
9C1.1.30...M	90	80	30	14	115.5	7	100	142	171	171	200
9C1.2.30...M	90	80	30	14	115.5	7	100	176	205	205	234
9C1.3.30...M	90	80	30	14	115.5	7	100	210	239	239	268
9C1.4.30...M	90	80	30	14	115.5	7	100	244	273	273	302
9C4.1.30...M	118	95	40	19	155	10	115	146	175.5	175.5	205
9C4.2.30...M	118	95	40	19	155	10	115	180	209.5	209.5	239
9C4.3.30...M	118	95	40	19	155	10	115	214	243.5	243.5	273
9C4.4.30...M	118	95	40	19	155	10	115	248	277.5	273	307
9C5.2.30...M	148	130	50	24	186	12	165	261	295	329	397
9C5.3.30...M	148	130	50	24	186	12	165	261	295	329	397
9C5.4.30...M	148	130	58	32	186	12	165	261	295	329	397
9C5.6.30...M	148	130	58	32	186	12	165	261	295	329	397



- ¹⁾ A: Flange size
- ²⁾ B: Collar diameter
- ³⁾ C: Shaft length
- ⁴⁾ D: Shaft diameter
- ⁵⁾ E: Total height with terminal box
- ⁶⁾ R: Fixing hole
- ⁷⁾ S: Pitch Circle Diameter (PCD)
- ⁸⁾ L resolver: Length with resolver
- ⁹⁾ L encoder: Length with encoder
- ¹⁰⁾ L res + brake: Length with resolver and brake
- ¹¹⁾ L enc + brake: Length with encoder and brake



ABB Oy
 Drives
 P. O. Box 184
 FI - 00381 Helsinki, Finland
 Telephone +358 10 22 11
 Fax +358 10 22 2287
 Internet www.abb.com/drives

For more information see technical catalogue ABB servo motors, 9C series (3AUA0000030840), and technical catalogue ABB high performance machinery drives, ACSM1 (3AFE68675073).