ABB servo motors

MS series
for ABB high performance machinery drives

The MS 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 MS series servo motors are robust and are designed for operation in harsh environmental conditions. The resolver feedback is highly reliable, even under demanding mechanical stress levels and in high ambient temperatures. The series comprises four frame sizes, each available in various lengths, totaling ten variants. Ready-made power and feedback cables are also available. The motors are delivered from stock, guaranteeing quick and reliable delivery.

Features and benefits

- Compact design with low weight; 20% smaller than conventional design
- High dynamic performance
- Brushless resolver as feedback sensor gives highly reliable and maintenance-free operation
- Complete torque range from 1 to 35.8 Nm
- Short term overload between 2.5 and 3.5 times rated torque, depending on the motor size
- Shaft with keyway – motor delivered with half and full key
- Easy selection of motor and drive combination with the DriveSize sizing tool
- Ready-made power and feedback cables
- Stocked item with fast delivery

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.

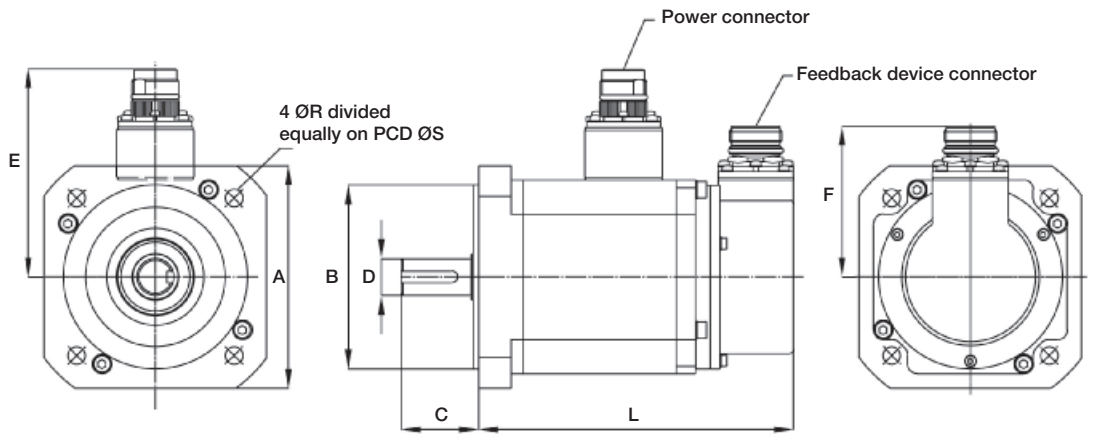
Types, ratings and dimensions

MS series servo motor, 400 V AC	T_{rat}, T_{cs} [2]	T_{pk} [3]	n_{rat} [4]	I_{rat} [5]	I_{pk} [6]	P [7]	J_M [8]	$J_{M+brake}$ [9]	T_{brake} [10]
Type code	[Nm]	[Nm]	[rpm]	[A]	[A]	[kW]	[kgm² x 10^{-4}]	[kgm² x 10^{-4}]	[Nm]
MS4612Nx[1] 008E43F10	1.1	3.82	3000	2.5	8.3	0.345	0.61	0.77	1.27
MS4614Nx[1] 008E43F10	2.0	7.16	3000	2.3	8.0	0.628	1.08	1.24	2.39
MS4813Nx[1] 008E43C10	3.3	9.90	3000	3.4	9.3	1.0	2.59	2.77	9.30
MS4815Nx[1] 008E43C10	4.8	14.30	3000	4.7	13.3	1.5	3.60	3.77	9.30
MS4817Nx[1] 008E43C10	6.8	20.40	3000	6.5	18.7	2.0	4.70	4.87	9.30
MS4836Nx[1] 008E43C10	10.5	31.50	3000	9.5	27.8	3.3	11.60	11.70	13.50
MS4839Nx[1] 008E43C10	15.5	47.70	3000	14.4	43.3	4.9	17.20	17.20	17.50
MS4884Nx[1] 008E42C10	19.1	47.70	2000	11.7	28.6	4.0	29.50	29.98	32.00
MS4887Nx[1] 008E42C10	28.6	71.50	2000	18.1	44.8	6.0	43.30	44.00	50.00
MS4889Nx[1] 008E42C10	35.8	89.50	2000	20.9	51.3	7.5	57.00	57.70	50.00

[1] x[1]: 4 = without holding brake, 9 = with holding brake
[2] T_{rat}, T_{cs}: Rated and stall torque
[3] T_{pk}: Intermittent peak torque
[4] n_{rat}: Rated speed
[5] I_{rat}: Rated current
[6] I_{pk}: Intermittent peak current
[7] P: Rated power
[8] J_M: Moment of inertia
[9] $J_{M+brake}$: Moment of inertia, motor with holding brake
[10] T_{brake}: Holding brake torque

Motor type	A [1] mm	B j6 [2] mm	C [3] mm	D k6 [4] mm	E [5] mm	F [6] mm	R [7] mm	S [8] mm	L [9] mm	L_{brake} [10] mm
MS4612	95.0	80.0	30.0	14.0	N/A	N/A	7.0	100.0	90.1	121.1
MS4614	95.0	80.0	30.0	14.0	N/A	N/A	7.0	100.0	115.7	152.3
MS4813	115.0	95.0	40.0	19.0	107.5	78.0	9.0	115.0	162.0	194.0
MS4815	115.0	95.0	40.0	19.0	107.5	78.0	9.0	115.0	180.0	212.0
MS4817	115.0	95.0	40.0	19.0	107.5	78.0	9.0	115.0	198.0	230.0
MS4836	142.0	130.0	50.0	24.0	122.5	93.1	11.0	165.0	175.5	213.5
MS4839	142.0	130.0	50.0	24.0	122.5	93.1	11.0	165.0	208.0	246.0
MS4884	190.0	180.0	60.0	32.0	147.5	93.1	14.0	215.0	182.0	231.0
MS4887	190.0	180.0	60.0	32.0	147.5	93.1	14.0	215.0	206.0	252.0
MS4889	190.0	180.0	60.0	32.0	147.5	93.1	14.0	215.0	230.0	276.0

[1] A: Flange size
[2] B j6: Collar diameter
[3] C: Shaft length
[4] D k6: Shaft diameter
[5] E: Power connector height
[6] F: Feedback connector height
[7] R: Fixing hole
[8] S: Pitch Circle Diameter (PCD)
[9] L: Length without brake
[10] L_{brake}: Length with brake



For more information see technical catalogue ABB servo motors for ABB high performance machinery drives, MS series (3AFE68955645), and technical catalogue ABB high performance machinery drives, ACSM1 (3AFE68675073)

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