

ABB PRODUCT PAIRING

ABB servo motors and drives

Sustainable solution and matched performance



ABB’s BSM B-series servo motors provide medium inertia. Achieve even higher efficiencies by pairing them with ACS880 drives and advanced motor controls.

ABB solution:

Combine ABB servo motors and drives for optimal performance.



Motor features:

- Sustainable ferrite non-rare earth magnet material
- Higher rotor inertia – for matching heavier machine inertial loads
- Optional forced air cooling – to extend torque capability for additional motor performance
- Rugged design for rugged environments – quality in the design
- Windings potted for additional voltage protection and improved heat transfer
- cURus/CE certified quality designs

Drive features:

- Direct torque control (DTC) for precise speed and torque control
- Support for various motor types
- Extensive selection of drives, including regenerative and ultra-low harmonic variants
- Global product approvals, e.g. CE, UL, cUL, CSA, marine certifications, ATEX
- Worldwide service and support

BSM B-Series + ACS880

Matched solution for demanding applications ranging from simple standalone (single-axis) to complex networks (multi-axis).



Note: ACS880-01 drives can be ordered with +N5700 positioning control programs for simple positioning systems

ACS880 parameter number	Description	BSM80B-133	Example: BSM80B-133 value
99.03	Motor type	Asynchronous induction=0 Synchronous PM=1	1
99.04	Motor control mode	DTC=0 Scalar=1	0
99.06	Motor nom. current	amps	4.6 (1)
99.07	Motor nom. voltage	VAC	84 (2)
99.08	Motor nom. frequency	Hz	133.3 (3)
99.09	Motor nom. speed	RPM	4000 (4)
99.10	Motor nom. power	kW	0.57 (5)
99.13	ID run request	Yes=1 No=0	1

* ID run must be performed every time any of the motor parameters (99.04, 9906...99.12) have been changed.

Matched performance selection guide

BSM B-series and ACS880 (wall-mounted single drives)

Drive catalog number example: ACS880-01-06A6-2

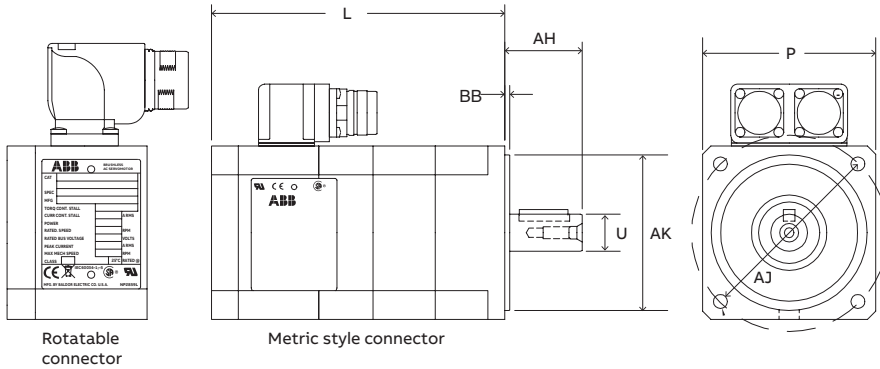
Cont. stall torque	Cont. stall current	Current (nom) (1)	Power (nom) (5)	BEMF @ speed (nom) VAC (2)	Speed (nom) (4) RPM	FREQ (nom) (3) Hz	Servo catalog number	Drive catalog number ACS880-01-	Power cable* w/J-box	Power cable* w/connector
1.63	5.52	4.6	0.57	84.0	4000	133.33	BSM80B-133xx	06A6-2	N/A	CBLxxxSP-12
1.63	3.78	2.78	0.75	183.6	6000	200	BSM80B-150xx	04A6-2	N/A	CBLxxxSP-12
1.63	2.59	2.17	0.57	178.8	4000	133.33	BSM80B-175xx	04A6-2	N/A	CBLxxxSP-12
2.2	6.74	6.51	0.89	93.0	4000	133.33	BSM80B-233xx	07A5-2	N/A	CBLxxxSP-12
2.2	4.78	4.45	1.29	196.2	6000	200	BSM80B-250xx	06A6-2	N/A	CBLxxxSP-12
2.2	3.38	3.27	0.89	184.8	4000	133.33	BSM80B-275xx	04A6-2	N/A	CBLxxxSP-12
3.08	10.2	8.49	1.07	85.6	4000	133.33	BSM80B-333xx	10A6-2	N/A	CBLxxxSP-12
3.08	7	5.52	1.52	187.2	6000	200	BSM80B-350xx	07A5-2	N/A	CBLxxxSP-12
3.08	5.2	4.34	1.07	167.4	4000	133.33	BSM80B-375xx	06A6-2	N/A	CBLxxxSP-12
2.35	3.7	3.2	0.85	180.0	4000	266.67	BSM90B-175xx	04A6-2	CBLxxxRP-12	CBLxxxSP-12
2.35	1.9	1.7	0.44	168.0	2000	133.33	BSM90B-1150xx	04A6-2	CBLxxxRP-12	CBLxxxSP-12
2.35	1.4	1.38	0.29	139.6	1200	80	BSM90B-1250xx	04A6-2	CBLxxxRP-12	CBLxxxSP-12
4.8	8.46	7.2	1.71	171.5	4000	266.67	BSM90B-275xx	10A6-2	CBLxxxRP-12	CBLxxxSP-12
4.8	4.4	4.07	0.93	164.7	2000	133.33	BSM90B-2150xx	04A6-2	CBLxxxRP-12	CBLxxxSP-12
4.8	2.48	2.39	0.58	176.1	1200	80	BSM90B-2250xx	04A6-2	CBLxxxRP-12	CBLxxxSP-12
6.5	11.1	8.07	1.98	166.4	4000	266.67	BSM90B-375xx	16A8-2	CBLxxxRP-12	CBLxxxSP-12
6.5	5.3	4.59	1.18	174.2	2000	133.33	BSM90B-3150xx	06A6-2	CBLxxxRP-12	CBLxxxSP-12
6.5	3	2.76	0.75	183.1	1200	80	BSM90B-3250xx	04A6-2	CBLxxxRP-12	CBLxxxSP-12
5.93	9.8	9.23	2.34	172.16	4000	266.67	BSM100B-175xx	10A6-2	CBLxxxRP-12	CBLxxxSP-12
5.93	4.96	4.78	1.21	178.3	2000	133.33	BSM100B-1150xx	06A6-2	CBLxxxRP-12	CBLxxxSP-12
5.93	3.1	3.03	0.76	165.4	1200	80	BSM100B-1250xx	04A6-2	CBLxxxRP-12	CBLxxxSP-12
12	18.57	14.59	3.95	183.8	4000	266.67	BSM100B-275xx	24A3-2	CBLxxxRP-20	CBLxxxSP-20
12	9.16	8.46	2.32	186.4	2000	133.33	BSM100B-2150xx	10A6-2	CBLxxxRP-12	CBLxxxSP-12
12	6.08	5.32	1.32	168.5	1200	80	BSM100B-2250xx	06A6-2	CBLxxxRP-12	CBLxxxSP-12
17	26.48	17.74	4.77	182.6	4000	266.67	BSM100B-375xx	031A-2	CBLxxxRP-35	N/A
17	14.06	11.73	2.97	171.9	2000	133.33	BSM100B-3150xx	16A8-2	CBLxxxRP-20	CBLxxxSP-20
17	8.23	7.36	1.91	176.2	1200	80	BSM100B-3250xx	10A6-2	CBLxxxRP-12	CBLxxxSP-12
20	35.66	20.82	4.89	159.6	4000	266.67	BSM100B-475xx	046A-2	CBLxxxRP-35	N/A
20	15.8	12.52	3.32	180.0	2000	133.33	BSM100B-4150xx	16A8-2	CBLxxxRP-20	CBLxxxSP-20
20	9.64	8.17	2.13	177.1	1200	80	BSM100B-4250xx	10A6-2	CBLxxxRP-12	CBLxxxSP-12

* Feedback cables will also be required and should be selected based on feedback type.

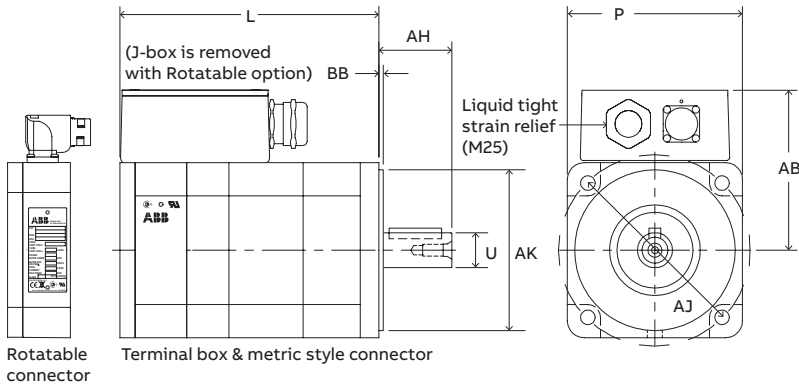
BSM B-series dimensions

IEC mounting

BSM 80 series



BSM 90/100 series



Motor code	P	L	AB	U	AH	KEY	AJ	AK	BB
80B-1	3.5 (89)	7.18 (183)	2.9 (75)	0.74 (19j6)	1.5 (40)	6x6x24	0.28 (7.0)	3.1 (80j6)	0.118 (3.0)
80B-2	3.5 (89)	8.68 (220)	2.9 (75)	0.74 (19j6)	1.5 (40)	6x6x24	thru hole	3.1 (80j6)	0.118 (3.0)
80B-3	3.5 (89)	10.18 (258)	2.9 (75)	0.74 (19j6)	1.5 (40)	6x6x24	3.9 (100) B.C.	3.1 (80j6)	0.118 (3.0)
90B-1	4.7 (120)	7.11 (181)	4.3 (109)	0.94 (24j6)	1.9 (50)	8x7x36	0.39 (10)	4.3 (110j6)	0.138 (3.5)
90B-2	4.7 (120)	9.36 (238)	4.3 (109)	0.94 (24j6)	1.9 (50)	8x7x36	thru hole	4.3 (110j6)	0.138 (3.5)
90B-3	4.7 (120)	11.61 (295)	4.3 (109)	0.94 (24j6)	1.9 (50)	8x7x36	5.1 (130) B.C.	4.3 (110j6)	0.138 (3.5)
100B-1	5.7 (146)	7.75 (197)	4.9 (124)	1.1 (28j6)	2.3 (60)	8x7x50		5.1 (130j6)	0.138 (3.5)
100B-2	5.7 (146)	10.75 (273)	4.9 (124)	1.1 (28j6)	2.3 (60)	8x7x50	0.47 (12)	5.1 (130j6)	0.138 (3.5)
100B-3	5.7 (146)	13.75 (349)	4.9 (124)	1.1 (28j6)	2.3 (60)	8x7x50	thru hole	5.1 (130j6)	0.138 (3.5)
100B-4	5.7 (146)	15 (381)	4.9 (124)	1.1 (28j6)	2.3 (60)	8x7x50	6.5 (165) B.C.	5.1 (130j6)	0.138 (3.5)

Dimensions in inch (mm)

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