

BSD Series



ABB

New BSD Series A complete range,

ABB Sace S.p.A. presents its new BSD servo system, a compact, high-performance and easy product.

The BSD servo drive meets the needs of engineers, looking for high-performance, easy and reliable products, and buyers, who have lower and lower budgets to make their products competitive in today's selective market.

ABB: A "made in Europe" brand, worldwide identified as a synonymous of reliability, quality and security. New BSD servo system by ABB Sace: the perfect partner for any of your application needs.



- Range from 100 watt to 2 Kw
- Supply: 220 Vac
- Compact servo system and high performances
- Analog speed command +/- 10 Volt
- Analog torque command +/- 10 Volt
- Pulse train command up to 1 Mhz
- Serial encoders from 131.072 pulses/turn (standard)
- Anti-vibration filter (patent pending)
- Auto-tuning
- Automatic off-set adjustment
- Notch filters
- Configurable simulated encoder output
- Software windows: BSD Configurator.



reliable and easy to use; guaranteed by ABB.



New serial encoders from 131.072 pulses/turn (standard)
Maximum accuracy, high performances and rotation linearity even at minimum speed.



BSD Configurator
Easy and straightforward software for servo drive control with digitizing oscilloscope function.



Anti-vibration filter
A complex algorithm (patent pending) which reduces vibrations to the minimum.



Special input for torque control
To make electric screwdrivers, unwinders, test machines, etc.

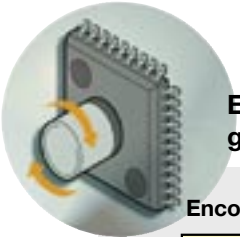


Autotuning
Easy and automatic tuning of the drive. A piece of cake!



Integrated brake chopper

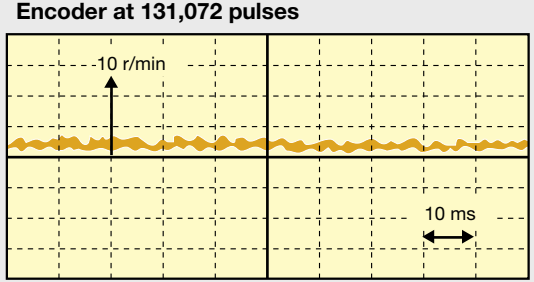
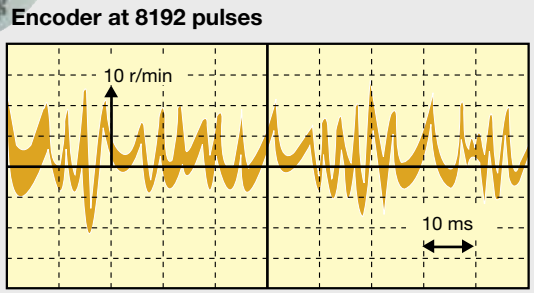
- Jog Function through keyboard: useful to test the wiring and mechanical coupling
- Notch filter for the elimination of resonances.
- Side by side mounting: no mandatory space between the drives (size1)
- Possible pulse train command: technology shift from step-by-step to brushless motor
- Power and electronic supplies are separated
- Compliant with CE, UL, cUL and Rhos



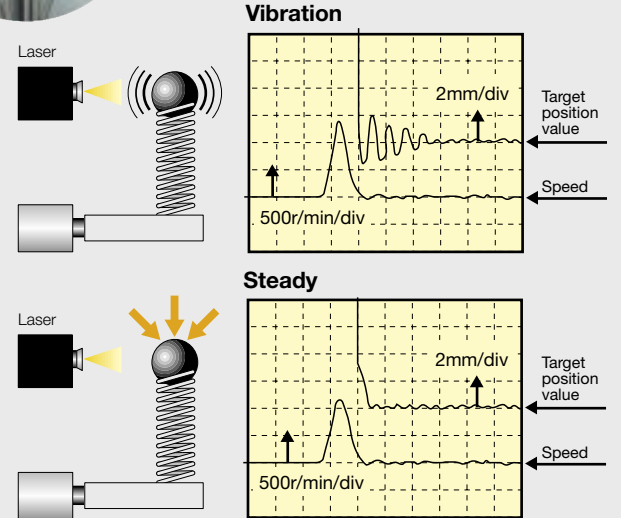
Encoder from 131,072 pulses/turn: great accuracy



Vibrations are reduced by means of the inbuilt filter



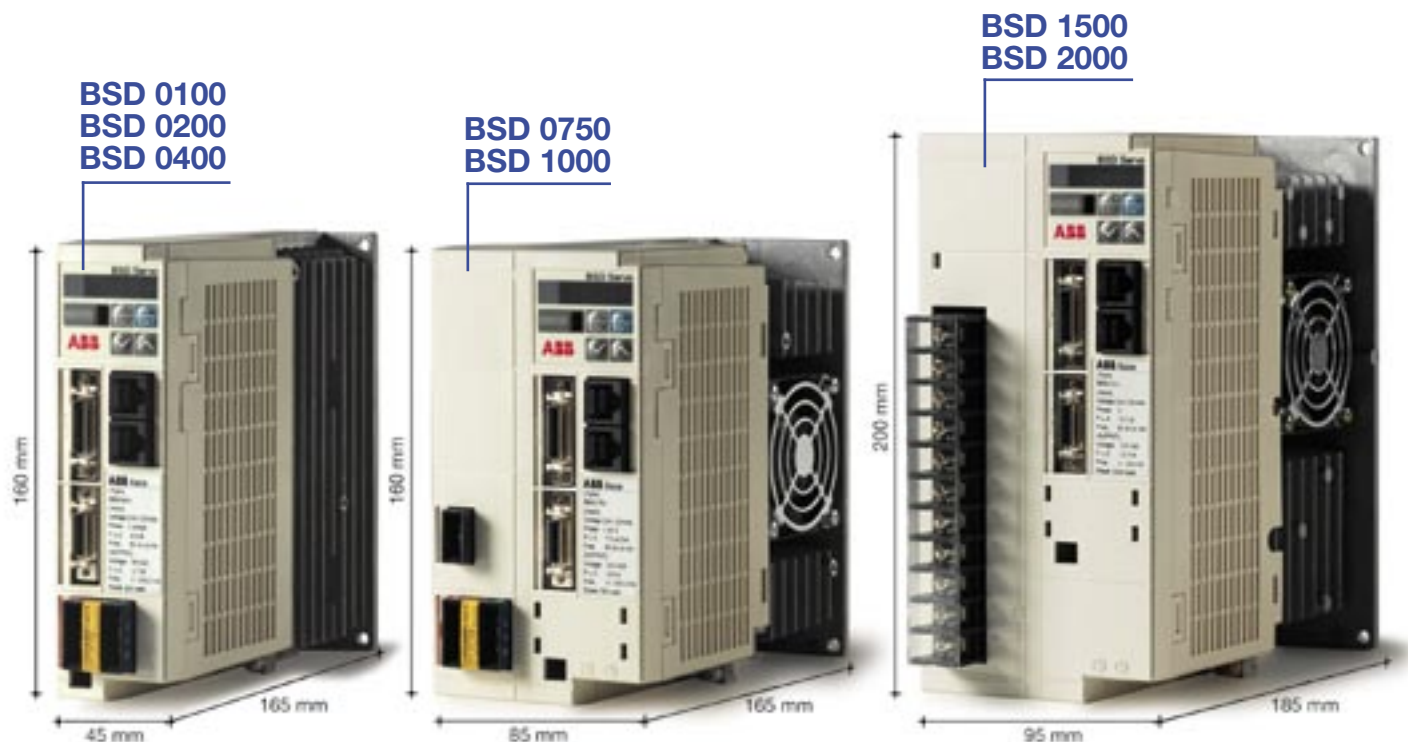
Motor control is now improved thanks to the more than 131,000 pulses generated by the new-generation serial encoder. Accuracy in positioning and interpolation are outstanding.



Please note that the positioning takes far less time in relation to the target position value. In many cases this means a higher productivity of the machinery.

Positioning is faster because the axis do not swing during the stop phase. This also improves the interpolation phase because axis and machine structure are more stable.

New BSD Series A complete range,



Drive BSD General Specifications

Code		BSD0100	BSD0200	BSD0400	BSD0750	BSD1000	BSD1500	BSD2000
Power [W]		100	200	400	750	1000	1500	2000
Weight [Kg]		1			1,5	2,5		
Power supply	Method	Single-phase			Single-phase/ 3-phase	3-phase		
	Tension	from 170 to 253 [Vac] (3-phase) - from 180 to 253 [Vac] (single-phase)						
	Frequency	50 / 60 [Hz]						
Electronic supply	Method	Single-phase						
	Tension	from 170 to 253 [Vac]						
	Frequency	50 / 60 [Hz]						
Control method		IGBT PWM sinusoidal						
Feedback		Serial encoder in 17 bits - 131.072 actual pulses						
Digital input functions		(1) Servo drive ON (2) Positive Overrun (3) Negative Overrun (4) Emergency stop (5) P - Action (6) Freewheel stop (7) Notch filter selection 1 (8) Notch filter selection 2 (9) Control system change (10) External resistor overheating (11) Alarm reset						
Digital output functions		(1) Servo drive ready (2) Positioning process completed (3) Servo drive in alarm state for external contact [A] (4) Servo drive in alarm state for external contact [B] (5) Dynamic braking in progress (6) Overrun Security Action (7) Servo drive stopped for emergency (8) Deviation zero (9) Speed Zero (10) Achieved Current limit (11) Brake Timing						
Simulated encoder	Selectable range	Free configuration of output pulses from 16 to 32768 pulses/turn						
	Signal type	(1) 5 Volt TTL line drive fase A - Fase B e fase Z - (2) 24 Vdc open collector fase Z						
Analog speed command	Control range	From 1 to 5000						
	Command signal	Analog command with reference +/- 10 Volt : maximum value at 10 volt can be set by a specific parameter						
	Preselectable speed	3 preselectable speeds can be set, operated by digital inputs						
Analog control command	Command signal	Analog command with reference +/- 10 Volt : maximum value at 10 volt can be set by a specific parameter						
	Toque limit CW / CCW	A clockwise torque limit and a counterclockwise torque limit can be set by a specific parameter						
Pulse train command	Command max. frequency	1Mhz 5volt ttl line drive , 200 khz 24 volt open collector						
	Signal form	Rs 422 line drive and 24 volt open collector						
	Command type	(1) step and direction , (2) CW direction and CCW direction, (3) 2 channels shifted 90° in phase						
Product compliances	Standards	Compliant with UL /cUL (UL508c) and CE (Low voltage directive EN50178)						

*Complete cables available either for fixed or mobile wiring.

reliable and easy to use; guaranteed by ABB.

BSM Series servomotors for BSD Series servodrives

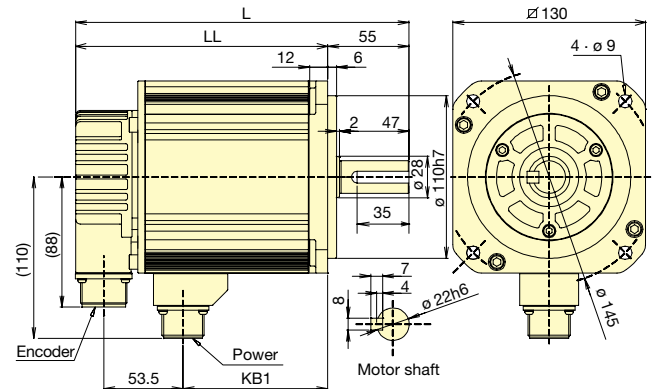
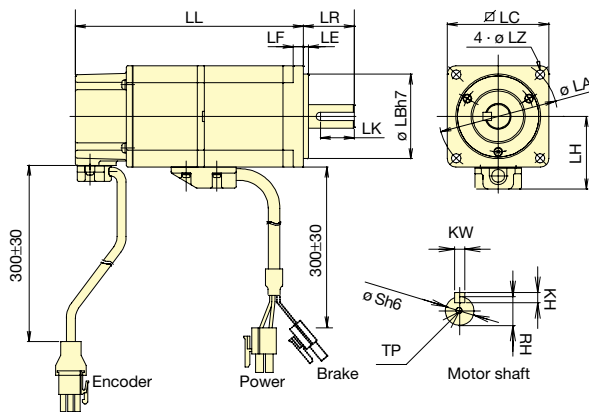
Technical specifications for servomotors BSM without brake

Motor type	Low inertia 3000 Rpm				Medium inertia 2000 Rpm		
	BSM0100CN00	BSM0200CN00	BSM0400CN00	BSM0750CN00	BSM1000CN01	BSM1500CN01	BSM2000CN01
Power [Watt]	100	200	400	750	1000	1500	2000
Rated torque [Nm]	0,32	0,64	1,27	2,39	4,77	7,16	9,55
Max. torque [Nm]	0,96	1,91	3,82	7,17	14,3	21,5	28,6
Rated speed [r/min]	3000				2000		
Max speed [r/min]	5000				3000		
Torque [Kg*cm ²]	0,037	0,13	0,24	0,85	15,14	22,33	29,51
Rated current [A]	0,85	1,5	2,7	4,8	6,4	10	12,3
Max current [A]	2,55	4,5	8,1	14,4	19,2	30	36,9
Motor shaft	Equipped with key						
Feedback	Incremental Serial Encoder from 131.072 pulses/tour - 17 bits						
Vibration resistance	5 g = 49 m/s ²						
Weight [Kg]	0,55	1,2	1,8	3,4	7,5	9,8	12

Technical specifications for BSM servomotors with brake

Motor type	Low inertia 3000 Rpm				Medium inertia 2000 Rpm		
	BSM0100CB00	BSM0200CB00	BSM0400CB00	BSM0750CB00	BSM1000CB01	BSM1500CB01	BSM2000CB01
Braking torque [Nm]	0,34	1,27		2,45	17		
Torque [Kg*cm ²]	0,04	0,34	0,45	1,2	17,2	24,4	31,6
Excitation voltage[V]	24 Vdc						
Attraction time [ms]	35	40		60	120		
Release time [ms]	10	20		25	30		
Brake power [Watt]	6,1	7,3		8,5	14		
Weight [Kg]	0,7	1,7	2,3	4,2	10,5	12,8	15

BSM servomotor overall dimensions



BSM Servomotors ≤ 750 Watt

Power	100 watt	200 watt	400 watt	750 watt
Motor type without brake	BSM0100CN00	BSM0200CN00	BSM0400CN00	BSM0750CN00
Motor type with brake	BSM0100CB00	BSM0200CB00	BSM0400CB00	BSM0750CB00
Feedback	Serial encoder at 131.072 pulses / turn			
LL without brake	96	96,5	124,5	140
LL with brake	130,5	134,5	162,5	176
LR	25	30	30	40
S	8	11	14	19
LA	46	70	70	90
LB	30	50	50	70
LC	40	60	60	80
LE	2,5	3	3	3
LF	5	6	6	8
LH	33	43	43	53
LZ	4,3	5,5	5,5	7
LW	14	20	20	30
KW	2	4	5	6
KH	2	4	5	6
RH	6,2	8,5	11	15,5
TP	M2,5 - H5	M4 - H8	M5 - H8	M5 - H10

BSM Servomotors ≥ 1000 Watt

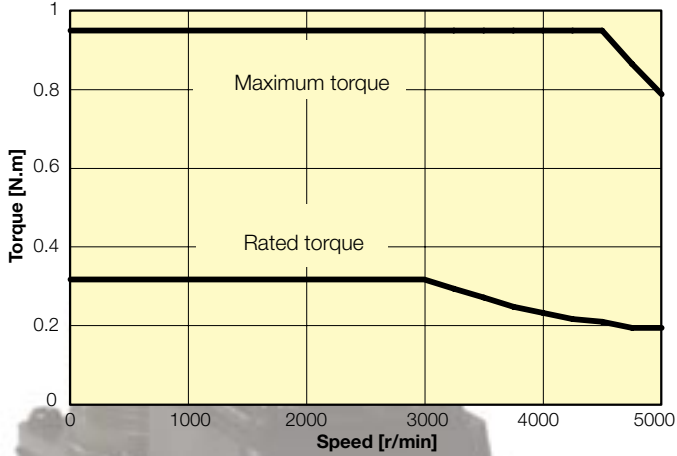
Brake	Power	Type	(L)	(LL)	(KB1)	Weight [kg]
Without brake	1kW	BSM1000CN01	200	145	72,5	7,5
	1.5kW	BSM1500CN01	225	170	97,5	9,8
	2kW	BSM2000CN01	250	195	122,5	12
With brake	1kW	BSM1000BN01	242,5	187,5	77	9,7
	1.5kW	BSM1500BN01	267,5	212,5	102	12
	2kW	BSM2000BN01	292,5	237,5	127	14,2

Measurements are expressed in millimetres

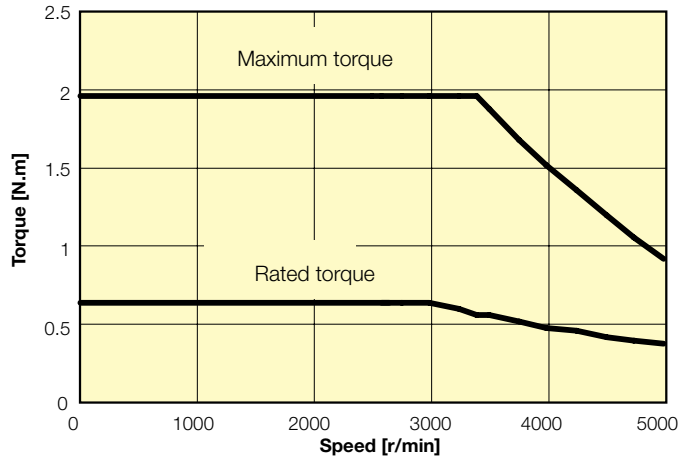
New BSD Series A complete range,

Low-inertia motor curves (3000 Rpm)

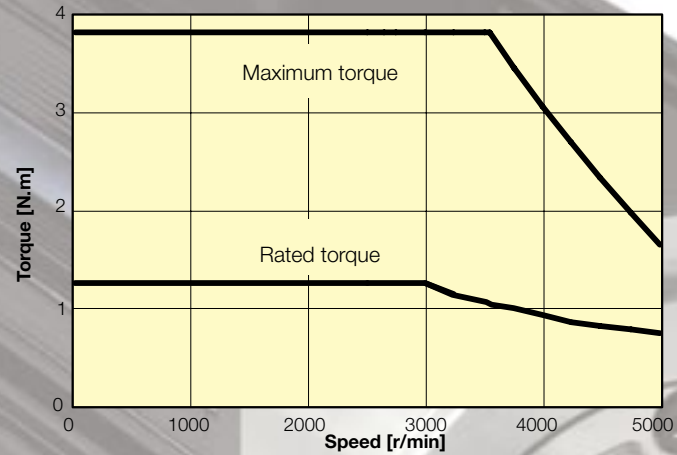
BSM0100... (100 W)



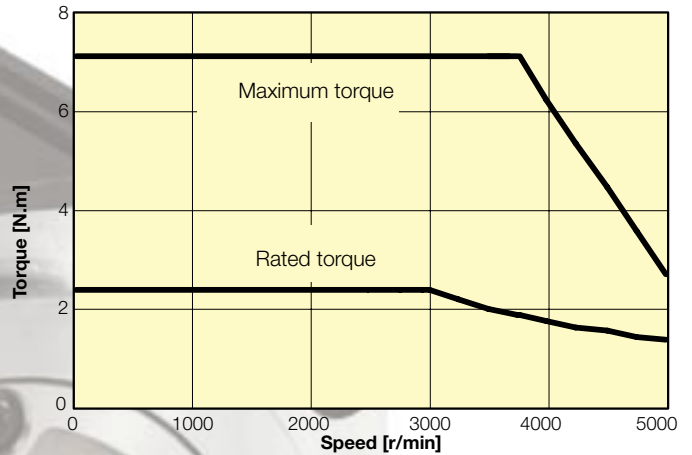
BSM0200... (200 W)



BSM0400... (400 W)



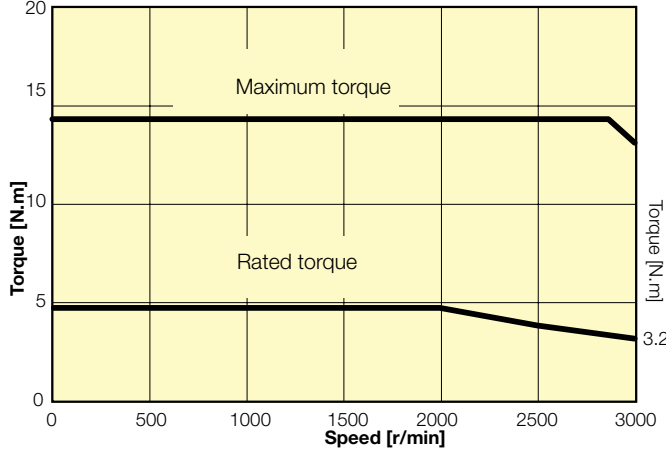
BSM0750... (750 W)



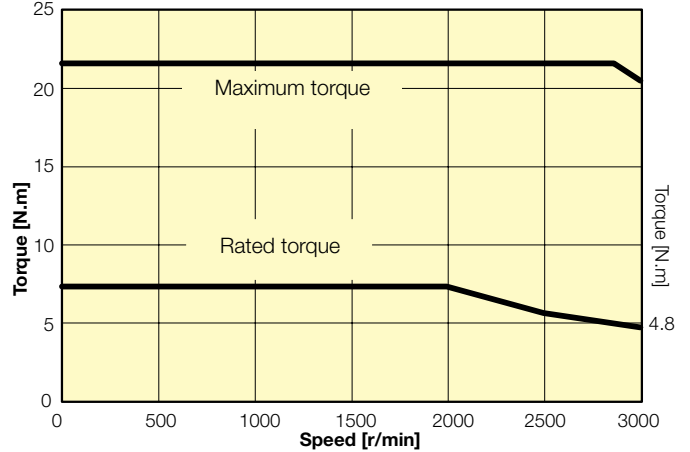
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Medium-inertia motor curves (2000 Rpm)

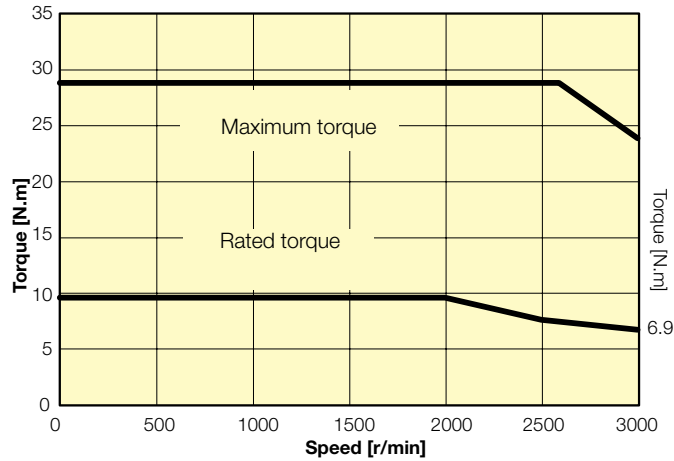
BSM1000... (1.0 kW)



BSM1500... (1.5 kW)



BSM2000... (2.0 kW)



Matches for BSD series servodrives and BSM Servomotors

Power [W]	Servodrive	Servodrive Without brake	Servodrive With brake
100	BSD0100	BSM0100CN00	BSM0100CB00
200	BSD0200	BSM0200CN00	BSM0200CB00
400	BSD0400	BSM0400CN00	BSM0400CB00
750	BSD0750	BSM0750CN00	BSM0750CB00
1000	BSD1000	BSM1000CN01	BSM1000CB01
1500	BSD1500	BSM1500CN01	BSM1500CB01
2000	BSD2000	BSM2000CN01	BSM2000CB01



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In consideration of modifications to Standards and materials, the characteristics and overall dimensions indicated in this catalogue may be considered binding only following confirmation by ABB SACE

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