Product datasheet
Characteristics

BSH1002T12F2A

Main

Product or component type	Servo motor
Device short name	BSH
Maximum mechanical speed	6000 rpm
Continuous stall torque	48.67 lbf.in (5.5 N.m) LXM15LD28M3 at 230 V three phase 48.67 lbf.in (5.5 N.m) LXM05AD42M3X at 200...240 V three phase 48.67 lbf.in (5.5 N.m) LXM05BD42M3X at 200...240 V three phase 48.67 lbf.in (5.5 N.m) LXM05CD42M3X at 200...240 V three phase 51.33 lbf.in (5.8 N.m) LXM32.D30M2 10 A at 230 V single phase
Peak stall torque	102.57 lbf.in (11.59 N.m) LXM15LD28M3 at 230 V three phase 141.59 lbf.in (16 N.m) LXM05AD42M3X at 200...240 V three phase 141.59 lbf.in (16 N.m) LXM05BD42M3X at 200...240 V three phase 141.59 lbf.in (16 N.m) LXM05CD42M3X at 200...240 V three phase 145.13 lbf.in (16.4 N.m) LXM32.D30M2 10 A at 230 V single phase
Nominal output power	1400 W LXM05AD42M3X at 200...240 V three phase 1400 W LXM05BD42M3X at 200...240 V three phase 1400 W LXM05CD42M3X at 200...240 V three phase 1700 W LXM15LD28M3 at 230 V three phase 1500 W LXM32.D30M2 10 A at 230 V single phase
Nominal torque	35.4 lbf.in (4 N.m) LXM15LD28M3 at 230 V three phase 38.94 lbf.in (4.4 N.m) LXM05AD42M3X at 200...240 V three phase 38.94 lbf.in (4.4 N.m) LXM05BD42M3X at 200...240 V three phase 38.94 lbf.in (4.4 N.m) LXM05CD42M3X at 200...240 V three phase 32.74 lbf.in (3.7 N.m) LXM32.D30M2 10 A at 230 V single phase
Nominal speed	3000 rpm LXM05AD42M3X at 200...240 V three phase 3000 rpm LXM05BD42M3X at 200...240 V three phase 3000 rpm LXM05CD42M3X at 200...240 V three phase 4000 rpm LXM15LD28M3 at 230 V three phase 4000 rpm LXM32.D30M2 10 A at 230 V single phase
Product compatibility	LXM32.D30M2 at 230 V single phase LXM05AD42M3X at 200...240 V three phase LXM05BD42M3X at 200...240 V three phase LXM05CD42M3X at 200...240 V three phase LXM15LD28M3 at 230 V three phase
Shaft end	Keyed
IP degree of protection	IP50 (standard)
Speed feedback resolution	131072 points/turn x 4096 turns
Holding brake	With
Mounting support	International standard flange
Electrical connection	Rotatable right-angled connectors

Complementary

Range compatibility	Lexium 05 Lexium 15 Lexium 32
[Us] rated supply voltage	480 V
Phase	Three phase
Continuous stall current	9.9 A
Continuous power	2.51 W
Maximum current Irms	31.2 A LXM15LD28M3 35.4 A LXM05AD42M3X 35.4 A LXM05BD42M3X 35.4 A LXM05CD42M3X 30 A LXM32.D30M2
Maximum permanent current	35.4 A
Switching frequency	8 kHz
Second shaft	Without second shaft end
Shaft diameter	0.75 in (19 mm)
Shaft length	1.57 in (40 mm)
Key width	1.18 in (30 mm)
Feedback type	Multiturn SinCos Hiperface
Holding torque	79.65 lbf.in (9 N.m) (holding brake)
Motor flange size	3.94 in (100 mm)
Number of motor stacks	2
Torque constant	0.59 N.m/A at 248 °F (120 °C)
Back emf constant	37 V/krpm at 248 °F (120 °C)
Number of motor poles	8
Rotor inertia	2.928 kg.cm²
Stator resistance	0.56 Ohm at 68 °F (20 °C)
Stator inductance	3 mH at 68 °F (20 °C)
Stator electrical time constant	5.36 ms at 68 °F (20 °C)
Maximum radial force Fr	620 N at 4000 rpm 690 N at 3000 rpm 790 N at 2000 rpm 990 N at 1000 rpm
Maximum axial force Fa	0.2 x Fr
Brake pull-in power	18 W
Type of cooling	Natural convection
Length	9.27 in (235.5 mm)
Centring collar diameter	3.74 in (95 mm)
Centring collar depth	0.14 in (3.5 mm)
Number of mounting holes	4
Mounting holes diameter	0.35 in (9 mm)
Circle diameter of the mounting holes	4.53 in (115 mm)
Product weight	13.89 lb(US) (6.3 kg)

Environment

Offer Sustainability

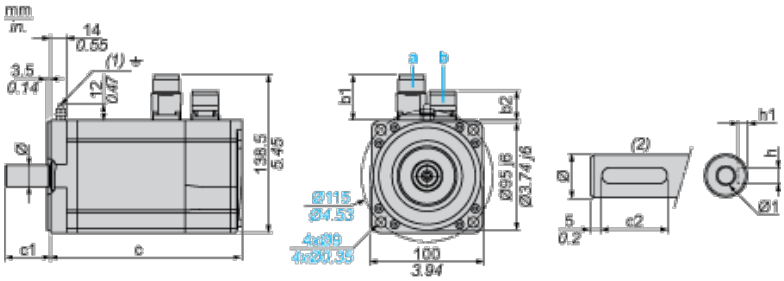
Green Premium product	Green Premium product
Compliant - since 0850 - Schneider Electric declaration of conformity	Compliant - since 0850 - Schneider Electric declaration of conformity
Reference not containing SVHC above the threshold	Reference not containing SVHC above the threshold
Available	Available
Need no specific recycling operations	Need no specific recycling operations

Contractual warranty

Warranty period	18 months

Servo Motors Dimensions

Example with Straight Connectors



a: Power supply for servo motor brake

b: Power supply for servo motor encoder

(1) M4 screw

(2) Shaft end, keyed slot (optional)

Dimensions in mm

Straight connectors		Rotatable angled connectors		c (without brake)	c (with brake)	c1	c2	h	h1	Ø	Ø1 for screws
b1	b2	b1	b2								
39.5	25.5	39.5	39.5	205	236	40	30	6 N9	$3.5^{+0.1}_{0}$	19 k6	M6 x 16

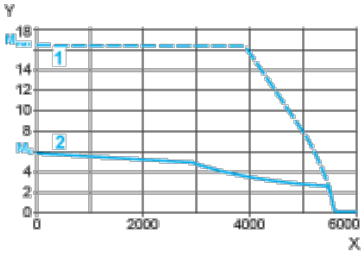
Dimensions in in.

Straight connectors		Rotatable angled connectors		c (without brake)	c (with brake)	c1	c2	h	h1	Ø	Ø1 for screws
b1	b2	b1	b2								
1.55	1.00	1.55	1.55	8.07	9.29	1.57	1.18	0.24 N9	$0.14^{+0.1}_{0}$	0.75 k6	M6 x 0.63

230 V Single-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32•D30M2 servo drive



X Speed in rpm

Y Torque in Nm

1 Peak torque

2 Continuous torque