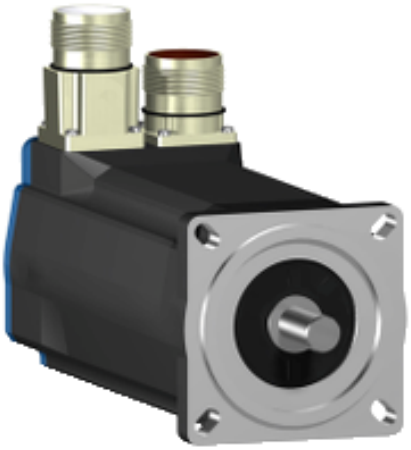
Product data sheet
Characteristics

BSH0703P12A2A
servo motor BSH, Lexium 05, 1.1N.m, 3000rpm, 70mm, keyed shaft, Sincos multi turn, without brake, IP50



Main

Device short name	BSH
Product or component type	Servo motor
Maximum mechanical speed	8000 Rpm
Continuous stall torque	2.83 N.M for LXM15LD21M3, 230 V, single phase 1.1 N.M for LXM15LU60N4, 480 V, three phase 1.1 N.M for LXM15LU60N4, 400 V, three phase 1.5 N.M for LXM15LU60N4, 230 V, three phase 2.23 N.M for LXM15LD13M3, 230 V, three phase 2.4 N.M for LXM15LD10N4, 230 V, three phase 2.4 N.M for LXM15LD10N4, 400 V, three phase 2.4 N.M for LXM15LD10N4, 480 V, three phase 2.83 N.M for LXM15LD17N4, 230 V, three phase 2.83 N.M for LXM15LD17N4, 400 V, three phase 2.83 N.M for LXM15LD17N4, 480 V, three phase 2.83 N.M for LXM15LD21M3, 230 V, three phase 2.8 N.M for LXM05AD17M2, 200...240 V, single phase 2.8 N.M for LXM05AD17M3X, 200...240 V, three phase 2.8 N.M for LXM05AD22N4, 380...480 V, three phase 2.8 N.M for LXM05AD28M2, 200...240 V, single phase 2.8 N.M for LXM05BD17M2, 200...240 V, single phase 2.8 N.M for LXM05BD17M3X at 6 A, 200...240 V, three phase 2.8 N.M for LXM05BD22N4 at 6 A, 380...480 V, three phase 2.8 N.M for LXM05BD28M2, 200...240 V, single phase 2.8 N.M for LXM05CD17M2, 200...240 V, single phase 2.8 N.M for LXM05CD17M3X, 200...240 V, three phase 2.8 N.M for LXM05CD22N4, 380...480 V, three phase 2.8 N.M for LXM05CD28M2, 200...240 V, single phase 3.1 N.M for LXM32.D18N4 at 6 A, 400 V, three phase 3.1 N.M for LXM32.D18N4 at 6 A, 480 V, three phase
Peak stall torque	5.99 N.M for LXM15LD21M3, 230 V, single phase 7.16 N.M for LXM05AD17M2, 200...240 V, single phase 10.3 N.M for LXM05AD28M2, 200...240 V, single phase 7.16 N.M for LXM05BD17M2, 200...240 V, single phase 10.3 N.M for LXM05BD28M2, 200...240 V, single phase 7.16 N.M for LXM05CD17M2, 200...240 V, single phase 10.3 N.M for LXM05CD28M2, 200...240 V, single phase 3.3 N.M for LXM15LU60N4, 480 V, three phase 3.3 N.M for LXM15LU60N4, 400 V, three phase 3.3 N.M for LXM15LU60N4, 230 V, three phase 6 N.M for LXM15LD13M3, 230 V, three phase 5.3 N.M for LXM15LD10N4, 230 V, three phase 5.3 N.M for LXM15LD10N4, 400 V, three phase 5.3 N.M for LXM15LD10N4, 480 V, three phase 7.71 N.M for LXM15LD17N4, 230 V, three phase 7.71 N.M for LXM15LD17N4, 400 V, three phase 7.71 N.M for LXM15LD17N4, 480 V, three phase 9.28 N.M for LXM15LD21M3 at 6 A, 230 V, three phase 7.16 N.M for LXM05AD17M3X at 6 A, 200...240 V, three phase 8.75 N.M for LXM05AD22N4, 380...480 V, three phase 7.16 N.M for LXM05BD17M3X, 200...240 V, three phase 8.75 N.M for LXM05BD22N4, 380...480 V, three phase 7.16 N.M for LXM05CD17M3X, 200...240 V, three phase 8.75 N.M for LXM05CD22N4, 380...480 V, three phase 11.3 N.M for LXM32.D18N4 at 6 A, 400 V, three phase 11.3 N.M for LXM32.D18N4 at 6 A, 480 V, three phase

Nominal output power	750 W for LXM05AD17M2, 200...240 V, single phase 750 W for LXM05AD28M2, 200...240 V, single phase 750 W for LXM05BD17M2, 200...240 V, single phase 750 W for LXM05BD28M2, 200...240 V, single phase 750 W for LXM05CD17M2, 200...240 V, single phase 750 W for LXM05CD28M2, 200...240 V, single phase 750 W for LXM15LD21M3, 230 V, single phase 1250 W for LXM15LD10N4, 400 V, three phase 1300 W for LXM15LD17N4, 400 V, three phase 1400 W for LXM15LD17N4, 480 V, three phase 1500 W for LXM15LD10N4, 480 V, three phase 350 W for LXM15LU60N4, 230 V, three phase 700 W for LXM15LD13M3, 230 V, three phase 700 W for LXM15LU60N4, 400 V, three phase 750 W for LXM05AD17M3X, 200...240 V, three phase 750 W for LXM05AD22N4, 380...480 V, three phase 750 W for LXM05BD17M3X, 200...240 V, three phase 750 W for LXM05BD22N4 at 6 A, 380...480 V, three phase 750 W for LXM05CD17M3X at 6 A, 200...240 V, three phase 750 W for LXM05CD22N4, 380...480 V, three phase 750 W for LXM15LD10N4, 230 V, three phase 750 W for LXM15LD17N4, 230 V, three phase 750 W for LXM15LD21M3, 230 V, three phase 950 W for LXM15LU60N4, 480 V, three phase 1300 W for LXM32.D18N4 at 6 A, 400 V, three phase 1300 W for LXM32.D18N4 at 6 A, 480 V, three phase
Nominal torque	2.4 N.M for LXM05AD17M2, 200...240 V, single phase 2.4 N.M for LXM05AD28M2, 200...240 V, single phase 2.4 N.M for LXM05BD17M2, 200...240 V, single phase 2.4 N.M for LXM05BD28M2, 200...240 V, single phase 2.4 N.M for LXM05CD17M2, 200...240 V, single phase 2.4 N.M for LXM05CD28M2, 200...240 V, single phase 2.4 N.M for LXM15LD21M3, 230 V, single phase 1.12 N.M for LXM15LU60N4, 230 V, three phase 1.12 N.M for LXM15LU60N4, 400 V, three phase 1.12 N.M for LXM15LU60N4, 480 V, three phase 1.8 N.M for LXM15LD10N4, 480 V, three phase 1.96 N.M for LXM15LD17N4, 480 V, three phase 2 N.M for LXM15LD10N4, 400 V, three phase 2 N.M for LXM15LD17N4, 400 V, three phase 2.23 N.M for LXM15LD13M3, 230 V, three phase 2.4 N.M for LXM05AD17M3X, 200...240 V, three phase 2.4 N.M for LXM05AD22N4, 380...480 V, three phase 2.4 N.M for LXM05BD17M3X at 6 A, 200...240 V, three phase 2.4 N.M for LXM05BD22N4 at 6 A, 380...480 V, three phase 2.4 N.M for LXM05CD17M3X, 200...240 V, three phase 2.4 N.M for LXM05CD22N4, 380...480 V, three phase 2.4 N.M for LXM15LD10N4, 230 V, three phase 2.4 N.M for LXM15LD17N4, 230 V, three phase 2.4 N.M for LXM15LD21M3, 230 V, three phase 2.44 N.M for LXM32.D18N4 at 6 A, 400 V, three phase 2.44 N.M for LXM32.D18N4 at 6 A, 480 V, three phase
Nominal speed	3000 rpm for LXM15LD13M3, 230 V, three phase 3000 rpm for LXM05AD17M2, 200...240 V, single phase 3000 rpm for LXM05BD17M2, 200...240 V, single phase 3000 rpm for LXM05CD17M2, 200...240 V, single phase 3000 rpm for LXM05AD17M3X, 200...240 V, three phase 3000 rpm for LXM05BD17M3X, 200...240 V, three phase 3000 rpm for LXM05CD17M3X, 200...240 V, three phase 3000 rpm for LXM15LU60N4, 230 V, three phase 8000 rpm for LXM15LD10N4, 480 V, three phase 8000 rpm for LXM15LU60N4, 480 V, three phase 3000 rpm for LXM15LD10N4, 230 V, three phase 6000 rpm for LXM15LD10N4, 400 V, three phase 3000 rpm for LXM05AD28M2, 200...240 V, single phase 3000 rpm for LXM05BD28M2, 200...240 V, single phase 3000 rpm for LXM05CD28M2, 200...240 V, single phase 3000 rpm for LXM15LD21M3, 230 V, single phase 3000 rpm for LXM05AD22N4, 380...480 V, three phase 3000 rpm for LXM05BD22N4 at 6 A, 380...480 V, three phase 3000 rpm for LXM05CD22N4 at 6 A, 380...480 V, three phase 3000 rpm for LXM15LD17N4, 230 V, three phase 3000 rpm for LXM15LD21M3, 230 V, three phase 6000 rpm for LXM15LD17N4, 400 V, three phase 6000 rpm for LXM15LU60N4, 400 V, three phase 7000 rpm for LXM15LD17N4, 480 V, three phase 5000 rpm for LXM32.D18N4 at 6 A, 400 V, three phase 5000 rpm for LXM32.D18N4 at 6 A, 480 V, three phase

Product compatibility	LXM05AD17M2 at 200...240 V single phase LXM05AD28M2 at 200...240 V single phase LXM05BD17M2 at 200...240 V single phase LXM05BD28M2 at 200...240 V single phase LXM05CD17M2 at 200...240 V single phase LXM05CD28M2 at 200...240 V single phase LXM15LD21M3 at 230 V single phase LXM15LU60N4 at 230 V three phase LXM15LD13M3 at 230 V three phase LXM15LU60N4 at 400 V three phase LXM15LU60N4 at 480 V three phase LXM15LD10N4 at 400 V three phase LXM05AD17M3X at 200...240 V three phase LXM05BD17M3X at 200...240 V three phase LXM05CD17M3X at 200...240 V three phase LXM15LD10N4 at 230 V three phase LXM15LD10N4 at 480 V three phase LXM15LD21M3 at 230 V three phase LXM15LD17N4 at 230 V three phase LXM05AD22N4 at 380...480 V three phase LXM05BD22N4 at 380...480 V three phase LXM05CD22N4 at 380...480 V three phase LXM15LD17N4 at 400 V three phase LXM15LD17N4 at 480 V three phase LXM32.D18N4 at 400 V three phase LXM32.D18N4 at 480 V three phase
Shaft end	Keyed
IP degree of protection	IP50 standard
Speed feedback resolution	131072 points/turn x 4096 turns
Holding brake	Without
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
Network number of phases	Three phase
Continuous stall current	4.1 A
Continuous power	1.7 W
Maximum current Irms	15.2 A for LXM15LD13M3 15.2 A for LXM15LD21M3 15.2 A for LXM15LD17N4 15.2 A for LXM15LU60N4 15.2 A for LXM15LD10N4 17 A for LXM05AD17M2 17 A for LXM05AD28M2 17 A for LXM05AD17M3X 17 A for LXM05AD22N4 17 A for LXM05BD17M2 17 A for LXM05BD28M2 17 A for LXM05BD17M3X 17 A for LXM05BD22N4 17 A for LXM05CD17M2 17 A for LXM05CD28M2 17 A for LXM05CD17M3X 17 A for LXM05CD22N4 17 A for LXM32.D18N4
Maximum permanent current	17 A
Switching frequency	8 kHz
Second shaft	Without second shaft end
Shaft diameter	14 Mm
Shaft length	30 Mm
Key width	20 Mm
Feedback type	Multiturn SinCos Hiperface
Motor flange size	70 Mm
Number of motor stacks	3
Torque constant	0.78 N.M/A at 120 °C

Back emf constant	49 V/Krpm at 120 °C
Number of motor poles	3.0
Rotor inertia	0.58 Kg.Cm²
Stator resistance	2.7 Ohm at 20 °C
Stator inductance	7.3 MH at 20 °C
Stator electrical time constant	4.82 Ms at 20 °C
Maximum radial force Fr	400 N at 6000 rpm 430 N at 5000 rpm 460 N at 4000 rpm 510 N at 3000 rpm 580 N at 2000 rpm 730 N at 1000 rpm
Maximum axial force Fa	0.2 x Fr
Type of cooling	Natural convection
Length	220 Mm
Centring collar diameter	60 Mm
Centring collar depth	2.5 Mm
Number of mounting holes	4
Mounting holes diameter	5.5 Mm
Circle diameter of the mounting holes	82 Mm
Net weight	3.62 Kg
Sizing reference	BSH0703P
Network number of phases	3
Accuracy error [angular]	1.4 °
Temperature copper hot	120 °C
Temperature magnet hot	100 °C
Temperature magnet rt	20 °C
Output current 3s peak	17.0 A
Inertia	0.0 Kg.Cm² of brake 0.58 Kg.Cm² of motor

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	12.3 Cm
Package 1 Width	12.8 Cm
Package 1 Length	37.7 Cm
Package 1 Weight	3.6 Kg

Offer Sustainability

Total lifecycle Carbon footprint	1 643 kg CO2 eq.
Carbon footprint of the manufacturing phase [A1 to A3]	15.7603931204
Carbon footprint of the manufacturing phase [A1 to A3]	16 kg CO2 eq.
Carbon footprint of the distribution phase [A4]	0.4644619165
Carbon footprint of the distribution phase [A4]	0.5 kg CO2 eq.
Carbon footprint of the installation phase [A5]	0.0319365111
Carbon footprint of the installation phase [A5]	0 kg CO2 eq.
Carbon footprint of the use phase [B2, B3, B4, B6]	1626.6358999038
Carbon footprint of the use phase [B2, B3, B4, B6]	1 627 kg CO2 eq.
Mercury free	Yes
Sustainable packaging	No
Carbon footprint of the end-of-life phase [C1 to C4]	0.3392314496
Carbon footprint of the end-of-life phase [C1 to C4]	0.3 kg CO2 eq.
Total lifecycle Carbon footprint	1643
Packaging made with recycled cardboard	Yes
Packaging without single use plastic	No
SCIP Number	8c11b0c9-e501-4810-83eb-05fc6605ede4

REACh Regulation	Reference contains Substances of Very High Concern above the threshold
EU RoHS Directive	Compliant By Exemption
California proposition 65	WARNING: This product can expose you to chemicals including: Lead and lead compounds, which
PVC free	Yes
End of life manual availability	No need of specific recycling operations
Take-back	No
WEEE Label	The product must be disposed on European Union markets following specific waste collection and

Contractual warranty

Warranty (in months)	18

Product Life Status : Commercialised