## Product data sheet Characteristics

## BSH1001T12A2A

AC servo motor BSH - 3.39 Nm - 6000 rpm - key shaft - without brake - IP50

Main	
Product or component type	AC servo motors
Component name	BSH
Continuous stall torque	3.39 N.m for LXM15LD28M3 at 230 V 3 phases 3.4 N.m for LXM05AD28F1 at 110120 V single phase
	3.4 N.m for LXM05AD28M2 at 200240 V single phase
	3.4 N.m for LXM05AD42M3X at 200240 V 3 phases
	3.4 N.m for LXM05BD28F1 at 110120 V single phase
	3.4 N.m for LXM05BD28M2 at 200240 V single phase
	3.4 N.m for LXM05BD42M3X at 200240 V 3 phases
	3.4 N.m for LXM05CD28F1 at 110120 V single phase
	3.4 N.m for LXM05CD28M2 at 200240 V single phase
	3.4 N.m for LXM05CD42M3X at 200240 V 3 phases
Peak stall torque	8.5 N.m for LXM15LD28M3 at 230 V 3 phases 8.5 N.m for LXM05AD28F1 at 110120 V single
	phase 8.5 N.m for LXM05AD28M2 at 200240 V single phase
	8.5 N.m for LXM05AD42M3X at 200240 V 3 phases
	8.5 N.m for LXM05BD28F1 at 110120 V single phase
	8.5 N.m for LXM05BD28M2 at 200240 V single phase
	8.5 N.m for LXM05BD42M3X at 200240 V 3 phases
	8.5 N.m for LXM05CD28F1 at 110120 V single phase
	8.5 N.m for LXM05CD28M2 at 200240 V single phase 8.5 N.m for LXM05CD42M3X at 200240 V 3 phas-
	es
Nominal output power	500 W for LXM05AD28F1 at 110120 V single phase
	500 W for LXM05BD28F1 at 110120 V single phase
	500 W for LXM05CD28F1 at 110120 V single phase 900 W for LXM05AD28M2 at 200240 V single
	phase 900 W for LXM05AD42M3X at 200240 V 3 phases
	900 W for LXM05BD28M2 at 200240 V single phase
	900 W for LXM05BD42M3X at 200240 V 3 phases 900 W for LXM05CD28M2 at 200240 V single
	phase 900 W for LXM05CD42M3X at 200240 V 3 phases 1150 W for LXM15LD28M3 at 230 V 3 phases

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Nominal speed	1500 rpm for LXM05AD28F1 at 110120 V single
	phase 1500 rpm for LXM05BD28F1 at 110120 V single
	phase
	1500 rpm for LXM05CD28F1 at 110120 V single phase
	3000 rpm for LXM05AD28M2 at 200240 V single
	phase
	3000 rpm for LXM05AD42M3X at 200240 V 3 phases
	3000 rpm for LXM05BD28M2 at 200240 V single
	phase 3000 rpm for LXM05BD42M3X at 200240 V 3
	phases
	3000 rpm for LXM05CD28M2 at 200240 V single
	phase 3000 rpm for LXM05CD42M3X at 200240 V 3
	phases
	4000 rpm for LXM15LD28M3 at 230 V 3 phases
Maximum mechanical speed	6000 rpm
Product compatibility	LXM05AD28F1 at 110120 V single phase
	LXM05AD28M2 at 200240 V single phase LXM05AD42M3X at 200240 V 3 phases
	LXM05BD28F1 at 110120 V single phase
	LXM05BD28M2 at 200240 V single phase
	LXM05BD42M3X at 200240 V 3 phases
	LXM05CD28F1 at 110120 V single phase
	LXM05CD28M2 at 200240 V single phase LXM05CD42M3X at 200240 V 3 phases
	LXM15LD28M3 at 230 V 3 phases
Shaft end	Keyed
IP degree of protection	IP50
Encoder type	Absolute multiturn SinCos Hiperface
Encoder feedback resolution	131072 points/turn x 4096 turns
Holding brake	Without
Mounting support	International standard flange
Electrical connection	Rotatable right-angled connectors
Number of poles	8

## Complementary

Range compatibility	Lexium 05 Lexium 15
Nominal torque	2.75 N.m for LXM15LD28M3 at 230 V 3 phases
	2.9 N.m for LXM05AD28M2 at 200240 V single phase
	2.9 N.m for LXM05AD42M3X at 200240 V 3 phases
	2.9 N.m for LXM05BD28M2 at 200240 V single phase
	2.9 N.m for LXM05BD42M3X at 200240 V 3 phases
	2.9 N.m for LXM05CD28M2 at 200240 V single phase
	2.9 N.m for LXM05CD42M3X at 200240 V 3 phases
	3.16 N.m for LXM05AD28F1 at 110120 V single phase
	3.16 N.m for LXM05BD28F1 at 110120 V single phase
	3.16 N.m for LXM05CD28F1 at 110120 V single phase
Maximum current Irms	23 A for LXM15LD28M3
	25.1 A for LXM05AD28F1
	25.1 A for LXM05AD28M2
	25.1 A for LXM05AD42M3X
	25.1 A for LXM05BD28F1
	25.1 A for LXM05BD28M2
	25.1 A for LXM05BD42M3X
	25.1 A for LXM05CD28F1
	25.1 A for LXM05CD28M2
	25.1 A for LXM05CD42M3X
Switching frequency	8 kHz for LEX05
Torque constant	0.45 N.m/A rms at 120 °C
	0.51 N.m/A rms at 120 °C
Back electromagnetical force (emf) constant	28 V rms/krpm at 120 °C
	29 V rms/krpm at 120 °C
Rotor inertia	1.4 kg.cm² without brake



Stator resistance	0.87 Ohm at 20 °C	
	0.9 Ohm at 20 °C	
Stator inductance	4 mH at 20 °C	
	4.3 mH at 20 °C	
Stator electrical time constant	4.6 ms at 20 °C	
	4.78 ms at 20 °C	
Maximum radial force Fr	530 N at 5000 rpm	
	570 N at 4000 rpm	
	630 N at 3000 rpm	
	720 N at 2000 rpm	
	900 N at 1000 rpm	
Maximum axial force Fa	0.2 x Fr	
Product weight	4.2 kg	

## Environment

RoHS EUR conformity date	0850
RoHS EUR status	Compliant

