## Product data sheet Characteristics

## BSH0703T02F1A

AC servo motor BSH - 2.8 Nm - 8000 rpm - untapped shaft - with brake - IP50

Main	
Product or component type	AC servo motors
Component name	BSH
Continuous stall torque	2.8 N.m for LXM05AD28F1 at 110120 V single phase 2.8 N.m for LXM05AD28M2 at 200240 V single phase
	2.8 N.m for LXM05AD42M3X at 200240 V 3 phases
	2.8 N.m for LXM05BD28F1 at 110120 V single phase
	2.8 N.m for LXM05BD28M2 at 200240 V single phase
	2.8 N.m for LXM05BD42M3X at 200240 V 3 phases
	2.8 N.m for LXM05CD28F1 at 110120 V single phase
	2.8 N.m for LXM05CD28M2 at 200240 V single phase
	2.8 N.m for LXM05CD42M3X at 200240 V 3 phases
	2.83 N.m for LXM15LD28M3 at 230 V 3 phases
Peak stall torque	7.38 N.m for LXM15LD28M3 at 230 V 3 phases 7.38 N.m for LXM05AD28F1 at 110120 V single phase
	7.38 N.m for LXM05AD28M2 at 200240 V single phase
	7.38 N.m for LXM05BD28F1 at 110120 V single phase
	7.38 N.m for LXM05BD28M2 at 200240 V single phase
	7.38 N.m for LXM05CD28F1 at 110120 V single phase
	7.38 N.m for LXM05CD28M2 at 200240 V single phase
	10.25 N.m for LXM05AD42M3X at 200240 V 3 phases
	10.25 N.m for LXM05BD42M3X at 200240 V 3 phases
	10.25 N.m for LXM05CD42M3X at 200240 V 3 phases
Nominal output power	750 W for LXM05AD28F1 at 110120 V single phase
	750 W for LXM05AD28M2 at 200240 V single phase
	750 W for LXM05AD42M3X at 200240 V 3 phases 750 W for LXM05BD28F1 at 110120 V single phase
	750 W for LXM05BD28M2 at 200240 V single
	phase 750 W for LXM05BD42M3X at 200240 V 3 phases 750 W for LXM05CD28F1 at 110120 V single phase
	750 W for LXM05CD28M2 at 200240 V single phase
	750 W for LXM05CD42M3X at 200240 V 3 phases 1250 W for LXM15LD28M3 at 230 V 3 phases

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Nominal speed	3000 rpm for LXM05AD28F1 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 LXM05BD28F1 at 110120 V single
	phase 3000 rpm for LXM05BD28M2 at 200240 V single phase
	3000 rpm for LXM05BD42M3X at 200240 V 3 phases
	3000 rpm for LXM05CD28F1 at 110120 V single phase
	3000 rpm for LXM05CD28M2 at 200240 V single phase
	3000 rpm for LXM05CD42M3X at 200240 V 3 phases
	6000 rpm for LXM15LD28M3 at 230 V 3 phases
Maximum mechanical speed	8000 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 LXM05CD28M2 at 200240 V single phase LXM05CD42M3X at 200240 V 3 phases LXM15LD28M3 at 230 V 3 phases
Shaft end	Untapped
IP degree of protection	IP50
Encoder type	Absolute multiturn SinCos Hiperface
Encoder feedback res- olution	131072 points/turn x 4096 turns
Holding brake	With
	With International standard flange
Holding brake	

## Complementary Range compatibility

Range compatibility	Lexium 05
	Lexium 15
Nominal torque	2 N.m for LXM15LD28M3 at 230 V 3 phases
	2.4 N.m for LXM05AD28F1 at 110120 V single phase
	2.4 N.m for LXM05AD28M2 at 200240 V single phase
	2.4 N.m for LXM05AD42M3X at 200240 V 3 phases
	2.4 N.m for LXM05BD28F1 at 110120 V single phase
	2.4 N.m for LXM05BD28M2 at 200240 V single phase
	2.4 N.m for LXM05BD42M3X at 200240 V 3 phases
	2.4 N.m for LXM05CD28F1 at 110120 V single phase
	2.4 N.m for LXM05CD28M2 at 200240 V single phase
	2.4 N.m for LXM05CD42M3X at 200240 V 3 phases
Maximum current Irms	29.2 A for LXM05AD28F1
	29.2 A for LXM05AD28M2
	29.2 A for LXM05AD42M3X
	29.2 A for LXM05BD28F1
	29.2 A for LXM05BD28M2
	29.2 A for LXM05BD42M3X
	29.2 A for LXM05CD28F1
	29.2 A for LXM05CD28M2
	29.2 A for LXM05CD42M3X
	30.9 A for LXM15LD28M3
Switching frequency	8 kHz for LEX05
Torque constant	0.42 N.m/A rms at 120 °C
Back electromagnetical force (emf) constant	29 V rms/krpm at 120 °C
Rotor inertia	0.81 kg.cm² with brake
Stator resistance	0.9 Ohm at 20 °C
	0.91 Ohm at 20 °C



Stator inductance	4.4 mH at 20 °C	
	5 mH at 20 °C	
Stator electrical time constant	4.84 ms at 20 °C	
	5.55 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	
Product weight	3.62 kg	

## Environment

RoHS EUR conformity date	0850
RoHS EUR status	Compliant

