

Product datasheet

Specifications



AC servo motors BRH - 12 N.m - 4500 rpm - keyed shaft - with brake - IP41

BRH0853P12F1A

Main

Product or component type	Motion servo motors
Component name	BRH
Continuous stall torque	4.2 N.m
Peak stall torque	13.6 N.m for LXM05AD42M3X 13.6 N.m for LXM05BD42M3X 13.6 N.m for LXM05CD42M3X 9.7 N.m for LXM05AD28F1 9.7 N.m for LXM05AD28M2 9.7 N.m for LXM05BD28F1 9.7 N.m for LXM05BD28M2 9.7 N.m for LXM05CD28F1 9.7 N.m for LXM05CD28M2
Nominal output power	1200 W for LXM05AD28M2 1200 W for LXM05BD28M2 1200 W for LXM05CD28M2 1250 W for LXM05AD42M3X 1250 W for LXM05BD42M3X 1250 W for LXM05CD42M3X 570 W for LXM05AD28F1 570 W for LXM05BD28F1 570 W for LXM05CD28F1
Nominal speed	1500 rpm for LXM05AD28F1 1500 rpm for LXM05BD28F1 1500 rpm for LXM05CD28F1 4500 rpm for LXM05AD28M2 4500 rpm for LXM05BD28M2 4500 rpm for LXM05CD28M2 6000 rpm for LXM05AD42M3X 6000 rpm for LXM05BD42M3X 6000 rpm for LXM05CD42M3X
Maximum mechanical speed	6000 rpm
Product compatibility	LXM05AD28F1 at 115 V single phase LXM05AD28M2 at 230 V single phase LXM05AD42M3X at 230 V 3 phases LXM05BD28F1 at 115 V single phase LXM05BD28M2 at 230 V single phase LXM05BD42M3X at 230 V 3 phases LXM05CD28F1 at 115 V single phase LXM05CD28M2 at 230 V single phase LXM05CD42M3X at 230 V 3 phases
Shaft end	Keyed
IP degree of protection	IP41
Encoder type	Multiturn SinCos Hiperface
Speed feedback resolution	131072 points/turn x 4096 turns
Holding brake	With
Mounting support	International standard flange
Electrical connection	Straight connectors

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications

Nominal torque	2.55 N.m for LXM05AD28M2 2.55 N.m for LXM05AD42M3X 2.55 N.m for LXM05BD28M2 2.55 N.m for LXM05BD42M3X 2.55 N.m for LXM05CD28M2 2.55 N.m for LXM05CD42M3X 3.65 N.m for LXM05AD28F1 3.65 N.m for LXM05BD28F1 3.65 N.m for LXM05CD28F1
Number of poles	10
Maximum radial force Fr	220 N at 6000 rpm 223 N at 5000 rpm 230 N at 4000 rpm 237 N at 3000 rpm 244 N at 2000 rpm 287 N at 1000 rpm

Complementary

Range compatibility	Lexium 05
Switching frequency	8 kHz
Maximum current Irms	20 A for LXM05AD28F1 20 A for LXM05AD28M2 20 A for LXM05BD28F1 20 A for LXM05BD28M2 20 A for LXM05CD28F1 20 A for LXM05CD28M2 30 A for LXM05AD42M3X 30 A for LXM05BD42M3X 30 A for LXM05CD42M3X
Torque constant	0.51 N.m/A at 120 °C
Back emf constant	33 V/krpm at 120 °C
Rotor inertia	2.96 kg.cm² without brake 3.49 kg.cm² with brake
Stator resistance	0.7 Ohm
Stator inductance	2.7 mH
Stator electrical time constant	4 ms
Maximum axial force Fa	0.2 x Fr
Net weight	4.4 kg

Contractual warranty

Warranty (in months)	18
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Environmental Data

Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing “Use Better, Use Longer, Use Again” campaign to extend product lifetimes and recyclability.

[Environmental Data explained >](#)

[How we assess product sustainability >](#)

Use Longer

Lifetime extension	
Repair	No