

Product datasheet

Specifications



AC servo motors BRH - 4.2 N.m - 6000 rpm - keyed shaft - with brake - IP56

BRH0851P31F1A

Main

Product or component type	Motion servo motors
Component name	BRH
Continuous stall torque	1.86 N.m
Peak stall torque	4.61 N.m for LXM05AD17F1 4.61 N.m for LXM05AD17M2 4.61 N.m for LXM05AD17M3X 4.61 N.m for LXM05BD17F1 4.61 N.m for LXM05BD17M2 4.61 N.m for LXM05BD17M3X 4.61 N.m for LXM05CD17F1 4.61 N.m for LXM05CD17M2 4.61 N.m for LXM05CD17M3X 5.34 N.m for LXM05AD22N4 5.34 N.m for LXM05BD22N4 5.34 N.m for LXM05CD22N4
Nominal output power	280 W for LXM05AD17F1 280 W for LXM05BD17F1 280 W for LXM05CD17F1 730 W for LXM05AD17M2 730 W for LXM05AD17M3X 730 W for LXM05BD17M2 730 W for LXM05BD17M3X 730 W for LXM05CD17M2 730 W for LXM05CD17M3X 910 W for LXM05AD22N4 910 W for LXM05BD22N4 910 W for LXM05CD22N4
Nominal speed	1500 rpm for LXM05AD17F1 1500 rpm for LXM05BD17F1 1500 rpm for LXM05CD17F1 4500 rpm for LXM05AD17M2 4500 rpm for LXM05AD17M3X 4500 rpm for LXM05BD17M2 4500 rpm for LXM05BD17M3X 4500 rpm for LXM05CD17M2 4500 rpm for LXM05CD17M3X 6000 rpm for LXM05AD22N4 6000 rpm for LXM05BD22N4 6000 rpm for LXM05CD22N4
Maximum mechanical speed	6000 rpm
Product compatibility	LXM05AD17F1 at 115 V single phase LXM05AD17M2 at 230 V single phase LXM05AD17M3X at 230 V 3 phases LXM05AD22N4 at 400/480 V 3 phases LXM05BD17F1 at 115 V single phase LXM05BD17M2 at 230 V single phase LXM05BD17M3X at 230 V 3 phases LXM05BD22N4 at 400/480 V 3 phases LXM05CD17F1 at 115 V single phase LXM05CD17M2 at 230 V single phase LXM05CD17M3X at 230 V 3 phases LXM05CD22N4 at 400/480 V 3 phases
Shaft end	Keyed

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

IP degree of protection	IP56
Encoder type	Single turn SinCos Hiperface
Speed feedback resolution	131072 points/turn
Holding brake	With
Mounting support	International standard flange
Electrical connection	Straight connectors
Nominal torque	1.45 N.m for LXM05AD22N4 1.45 N.m for LXM05BD22N4 1.45 N.m for LXM05CD22N4 1.55 N.m for LXM05AD17M2 1.55 N.m for LXM05AD17M3X 1.55 N.m for LXM05BD17M2 1.55 N.m for LXM05BD17M3X 1.55 N.m for LXM05CD17M2 1.55 N.m for LXM05CD17M3X 1.76 N.m for LXM05AD17F1 1.76 N.m for LXM05BD17F1 1.76 N.m for LXM05CD17F1
Number of poles	10
Maximum radial force Fr	173 N at 6000 rpm 176 N at 5000 rpm 181 N at 4000 rpm 187 N at 3000 rpm 193 N at 2000 rpm 226 N at 1000 rpm

Complementary

Range compatibility	Lexium 05
Switching frequency	8 kHz
Maximum current Irms	11 A for LXM05AD17F1 11 A for LXM05AD17M2 11 A for LXM05AD17M3X 11 A for LXM05BD17F1 11 A for LXM05BD17M2 11 A for LXM05BD17M3X 11 A for LXM05CD17F1 11 A for LXM05CD17M2 11 A for LXM05CD17M3X 14 A for LXM05AD22N4 14 A for LXM05BD22N4 14 A for LXM05CD22N4
Torque constant	0.48 N.m/A at 120 °C
Back emf constant	30.5 V/krpm at 120 °C
Rotor inertia	1.06 kg.cm² without brake 1.59 kg.cm² with brake
Stator resistance	2.1 Ohm
Stator inductance	8 mH
Stator electrical time constant	3.8 ms
Maximum axial force Fa	0.2 x Fr
Net weight	2.2 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