

# Product datasheet

Specifications



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

BRH0853P12F2A

⚠ Discontinued on: 8 Jul 2022

⚠ Discontinued

EAN Code: 3389118303478

### 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<br>13.6 N.m for LXM05BD42M3X<br>13.6 N.m for LXM05CD42M3X<br>9.7 N.m for LXM05AD28F1<br>9.7 N.m for LXM05AD28M2<br>9.7 N.m for LXM05BD28F1<br>9.7 N.m for LXM05BD28M2<br>9.7 N.m for LXM05CD28F1<br>9.7 N.m for LXM05CD28M2                                                                            |
| Nominal output power      | 1200 W for LXM05AD28M2<br>1200 W for LXM05BD28M2<br>1200 W for LXM05CD28M2<br>1250 W for LXM05AD42M3X<br>1250 W for LXM05BD42M3X<br>1250 W for LXM05CD42M3X<br>570 W for LXM05AD28F1<br>570 W for LXM05BD28F1<br>570 W for LXM05CD28F1                                                                                           |
| Nominal speed             | 1500 rpm for LXM05AD28F1<br>1500 rpm for LXM05BD28F1<br>1500 rpm for LXM05CD28F1<br>4500 rpm for LXM05AD28M2<br>4500 rpm for LXM05BD28M2<br>4500 rpm for LXM05CD28M2<br>6000 rpm for LXM05AD42M3X<br>6000 rpm for LXM05BD42M3X<br>6000 rpm for LXM05CD42M3X                                                                      |
| Maximum mechanical speed  | 6000 rpm                                                                                                                                                                                                                                                                                                                         |
| Product compatibility     | LXM05AD28F1 at 115 V single phase<br>LXM05AD28M2 at 230 V single phase<br>LXM05AD42M3X at 230 V 3 phases<br>LXM05BD28F1 at 115 V single phase<br>LXM05BD28M2 at 230 V single phase<br>LXM05BD42M3X at 230 V 3 phases<br>LXM05CD28F1 at 115 V single phase<br>LXM05CD28M2 at 230 V single phase<br>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                                                                                                                                                                                                                                                                                                    |

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

|                         |                                                                                                                                                                                                                                                             |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Electrical connection   | Rotatable right-angled connectors                                                                                                                                                                                                                           |
| Nominal torque          | 2.55 N.m for LXM05AD28M2<br>2.55 N.m for LXM05AD42M3X<br>2.55 N.m for LXM05BD28M2<br>2.55 N.m for LXM05BD42M3X<br>2.55 N.m for LXM05CD28M2<br>2.55 N.m for LXM05CD42M3X<br>3.65 N.m for LXM05AD28F1<br>3.65 N.m for LXM05BD28F1<br>3.65 N.m for LXM05CD28F1 |
| Number of poles         | 10                                                                                                                                                                                                                                                          |
| Maximum radial force Fr | 220 N at 6000 rpm<br>223 N at 5000 rpm<br>230 N at 4000 rpm<br>237 N at 3000 rpm<br>244 N at 2000 rpm<br>287 N at 1000 rpm                                                                                                                                  |

## Complementary

|                                 |                                                                                                                                                                                                                         |
|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Range compatibility             | Lexium 05                                                                                                                                                                                                               |
| Switching frequency             | 8 kHz                                                                                                                                                                                                                   |
| Maximum current Irms            | 20 A for LXM05AD28F1<br>20 A for LXM05AD28M2<br>20 A for LXM05BD28F1<br>20 A for LXM05BD28M2<br>20 A for LXM05CD28F1<br>20 A for LXM05CD28M2<br>30 A for LXM05AD42M3X<br>30 A for LXM05BD42M3X<br>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<br>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 |
|----------------------|----|



## 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 |