

# BRH0853M12A1A

AC servo motors BRH - 9 N.m - 6000 rpm -  
keyed shaft - without brake - IP41

## Main

|                             |                                                                                                                                                                                                                                                                                                                                  |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product or component type   | Motion servo motors                                                                                                                                                                                                                                                                                                              |
| Component name              | BRH                                                                                                                                                                                                                                                                                                                              |
| Continuous stall torque     | 4.2 N.m                                                                                                                                                                                                                                                                                                                          |
| Peak stall torque           | 7.73 N.m for LXM05AD17M3X<br>7.73 N.m for LXM05BD17M3X<br>7.73 N.m for LXM05CD17M3X<br>12 N.m for LXM05AD34N4<br>12 N.m for LXM05BD34N4<br>12 N.m for LXM05CD34N4<br>13 N.m for LXM05AD28M2<br>13 N.m for LXM05BD28M2<br>13 N.m for LXM05CD28M2                                                                                  |
| Nominal output power        | 970 W for LXM05BD28M2<br>970 W for LXM05CD17M3X<br>970 W for LXM05CD28M2<br>970 W for LXM05AD17M3X<br>970 W for LXM05AD28M2<br>970 W for LXM05BD17M3X<br>1250 W for LXM05BD34N4<br>1250 W for LXM05CD34N4<br>1250 W for LXM05AD34N4                                                                                              |
| Nominal speed               | 3000 rpm for LXM05AD17M3X<br>3000 rpm for LXM05AD28M2<br>3000 rpm for LXM05BD17M3X<br>3000 rpm for LXM05BD28M2<br>3000 rpm for LXM05CD17M3X<br>3000 rpm for LXM05CD28M2<br>6000 rpm for LXM05AD34N4<br>6000 rpm for LXM05BD34N4<br>6000 rpm for LXM05CD34N4                                                                      |
| Maximum mechanical speed    | 6000 rpm                                                                                                                                                                                                                                                                                                                         |
| Product compatibility       | LXM05AD17M3X at 230 V 3 phases<br>LXM05AD28M2 at 230 V single phase<br>LXM05AD34N4 at 400/480 V 3 phases<br>LXM05BD17M3X at 230 V 3 phases<br>LXM05BD28M2 at 230 V single phase<br>LXM05BD34N4 at 400/480 V 3 phases<br>LXM05CD17M3X at 230 V 3 phases<br>LXM05CD28M2 at 230 V single phase<br>LXM05CD34N4 at 400/480 V 3 phases |
| Shaft end                   | Keyed                                                                                                                                                                                                                                                                                                                            |
| IP degree of protection     | IP41                                                                                                                                                                                                                                                                                                                             |
| Encoder type                | Multiturn SinCos Hiperface                                                                                                                                                                                                                                                                                                       |
| Encoder feedback resolution | 131072 points/turn x 4096 turns                                                                                                                                                                                                                                                                                                  |
| Holding brake               | Without                                                                                                                                                                                                                                                                                                                          |
| Mounting support            | International standard flange                                                                                                                                                                                                                                                                                                    |
| Electrical connection       | Straight connectors                                                                                                                                                                                                                                                                                                              |
| Number of poles             | 10                                                                                                                                                                                                                                                                                                                               |

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## Complementary

|                                  |                                                                                                                                                                                                                                              |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Range compatibility              | Lexium 05                                                                                                                                                                                                                                    |
| Switching frequency              | 8 kHz                                                                                                                                                                                                                                        |
| Nominal torque                   | 2 N.m for LXM05AD34N4<br>2 N.m for LXM05BD34N4<br>2 N.m for LXM05CD34N4<br>3.1 N.m for LXM05AD17M3X<br>3.1 N.m for LXM05AD28M2<br>3.1 N.m for LXM05BD17M3X<br>3.1 N.m for LXM05BD28M2<br>3.1 N.m for LXM05CD17M3X<br>3.1 N.m for LXM05CD28M2 |
| Maximum current I <sub>rms</sub> | 11 A for LXM05AD17M3X<br>11 A for LXM05BD17M3X<br>11 A for LXM05CD17M3X<br>18 A for LXM05AD34N4<br>18 A for LXM05BD34N4<br>18 A for LXM05CD34N4<br>20 A for LXM05AD28M2<br>20 A for LXM05BD28M2<br>20 A for LXM05CD28M2                      |
| Torque constant                  | 0.72 N.m/A rms at 120 °C                                                                                                                                                                                                                     |
| Back emf constant                | 46.8 V rms/krpm at 120 °C                                                                                                                                                                                                                    |
| Rotor inertia                    | 2.9 kg.cm <sup>2</sup> without brake<br>3.49 kg.cm <sup>2</sup> with brake                                                                                                                                                                   |
| Stator resistance                | 1.4 Ohm                                                                                                                                                                                                                                      |
| Stator inductance                | 5.5 mH                                                                                                                                                                                                                                       |
| Stator electrical time constant  | 4.1 ms                                                                                                                                                                                                                                       |
| 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                                                                                                                   |
| Maximum axial force Fa           | 0.2 x Fr                                                                                                                                                                                                                                     |
| Product weight                   | 4.4 kg                                                                                                                                                                                                                                       |

## Environment

|                          |                   |
|--------------------------|-------------------|
| RoHS EUR conformity date | 4Q2009            |
| RoHS EUR status          | Will be compliant |