

# BRH0851M30F2A

AC servo motors BRH - 3.1 N.m - 6000 rpm -  
keyed shaft - with brake - IP56

## Main

|                             |                                                                                                                                                                                                                                                                                                                                  |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product or component type   | Motion servo motors                                                                                                                                                                                                                                                                                                              |
| Component name              | BRH                                                                                                                                                                                                                                                                                                                              |
| Continuous stall torque     | 1.86 N.m                                                                                                                                                                                                                                                                                                                         |
| Peak stall torque           | 3.4 N.m for LXM05AD10M2<br>3.4 N.m for LXM05BD10M2<br>3.4 N.m for LXM05CD10M2<br>4.05 N.m for LXM05AD14N4<br>4.05 N.m for LXM05BD14N4<br>4.05 N.m for LXM05CD14N4<br>5.27 N.m for LXM05AD17M3X<br>5.27 N.m for LXM05BD17M3X<br>5.27 N.m for LXM05CD17M3X                                                                         |
| Nominal output power        | 520 W for LXM05BD17M3X<br>520 W for LXM05CD10M2<br>520 W for LXM05CD17M3X<br>520 W for LXM05AD10M2<br>520 W for LXM05AD17M3X<br>520 W for LXM05BD10M2<br>910 W for LXM05BD14N4<br>910 W for LXM05CD14N4<br>910 W for LXM05AD14N4                                                                                                 |
| Nominal speed               | 3000 rpm for LXM05AD10M2<br>3000 rpm for LXM05AD17M3X<br>3000 rpm for LXM05BD10M2<br>3000 rpm for LXM05BD17M3X<br>3000 rpm for LXM05CD10M2<br>3000 rpm for LXM05CD17M3X<br>6000 rpm for LXM05AD14N4<br>6000 rpm for LXM05BD14N4<br>6000 rpm for LXM05CD14N4                                                                      |
| Maximum mechanical speed    | 6000 rpm                                                                                                                                                                                                                                                                                                                         |
| Product compatibility       | LXM05AD10M2 at 230 V single phase<br>LXM05AD14N4 at 400/480 V 3 phases<br>LXM05AD17M3X at 230 V 3 phases<br>LXM05BD10M2 at 230 V single phase<br>LXM05BD14N4 at 400/480 V 3 phases<br>LXM05BD17M3X at 230 V 3 phases<br>LXM05CD10M2 at 230 V single phase<br>LXM05CD14N4 at 400/480 V 3 phases<br>LXM05CD17M3X at 230 V 3 phases |
| Shaft end                   | Keyed                                                                                                                                                                                                                                                                                                                            |
| IP degree of protection     | IP56                                                                                                                                                                                                                                                                                                                             |
| Encoder type                | Single turn SinCos Hiperface                                                                                                                                                                                                                                                                                                     |
| Encoder feedback resolution | 16384 points/turn                                                                                                                                                                                                                                                                                                                |
| Holding brake               | With                                                                                                                                                                                                                                                                                                                             |
| Mounting support            | International standard flange                                                                                                                                                                                                                                                                                                    |
| Electrical connection       | Rotatable right-angled connectors                                                                                                                                                                                                                                                                                                |
| Number of poles             | 10                                                                                                                                                                                                                                                                                                                               |

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## Complementary

|                                 |                                                                                                                                                                                                                                                             |
|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Range compatibility             | Lexium 05                                                                                                                                                                                                                                                   |
| Switching frequency             | 8 kHz                                                                                                                                                                                                                                                       |
| Nominal torque                  | 1.45 N.m for LXM05AD14N4<br>1.45 N.m for LXM05BD14N4<br>1.45 N.m for LXM05CD14N4<br>1.66 N.m for LXM05AD10M2<br>1.66 N.m for LXM05AD17M3X<br>1.66 N.m for LXM05BD10M2<br>1.66 N.m for LXM05BD17M3X<br>1.66 N.m for LXM05CD10M2<br>1.66 N.m for LXM05CD17M3X |
| Maximum current Irms            | 6 A for LXM05AD10M2<br>6 A for LXM05BD10M2<br>6 A for LXM05CD10M2<br>7.5 A for LXM05CD14N4<br>7.5 A for LXM05BD14N4<br>7.5 A for LXM05AD14N4<br>11 A for LXM05AD17M3X<br>11 A for LXM05BD17M3X<br>11 A for LXM05CD17M3X                                     |
| Torque constant                 | 0.6 N.m/A rms at 120 °C                                                                                                                                                                                                                                     |
| Back emf constant               | 37.9 V rms/krpm at 120 °C                                                                                                                                                                                                                                   |
| Rotor inertia                   | 1.06 kg.cm <sup>2</sup> without brake<br>1.59 kg.cm <sup>2</sup> with brake                                                                                                                                                                                 |
| Stator resistance               | 3.3 Ohm                                                                                                                                                                                                                                                     |
| Stator inductance               | 12.3 mH                                                                                                                                                                                                                                                     |
| Stator electrical time constant | 3.7 ms                                                                                                                                                                                                                                                      |
| Maximum radial force Fr         | 173 N at 6000 rpm<br>176 N at 5000 rpm<br>181 N at 4000 rpm<br>187 N at 3000 rpm<br>193 N at 2000 rpm<br>226 N at 1000 rpm                                                                                                                                  |
| Maximum axial force Fa          | 0.2 x Fr                                                                                                                                                                                                                                                    |
| Product weight                  | 2.2 kg                                                                                                                                                                                                                                                      |

## Environment

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