

# BRH0852P21F1A

AC servo motors BRH - 5.2 N.m - 6000 rpm -  
untapped shaft - with brake - IP56

## Main

|                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product or component type   | Motion servo motors                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Component name              | BRH                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Continuous stall torque     | 3.1 N.m                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Peak stall torque           | 7.95 N.m for LXM05AD34N4<br>7.95 N.m for LXM05BD34N4<br>7.95 N.m for LXM05CD34N4<br>8.7 N.m for LXM05AD28F1<br>8.7 N.m for LXM05AD28M2<br>8.7 N.m for LXM05BD28F1<br>8.7 N.m for LXM05BD28M2<br>8.7 N.m for LXM05CD28F1<br>8.7 N.m for LXM05CD28M2<br>10.8 N.m for LXM05AD42M3X<br>10.8 N.m for LXM05BD42M3X<br>10.8 N.m for LXM05CD42M3X                                                                                                       |
| Nominal output power        | 440 W for LXM05BD28F1<br>440 W for LXM05CD28F1<br>440 W for LXM05AD28F1<br>1000 W for LXM05BD28M2<br>1000 W for LXM05BD42M3X<br>1000 W for LXM05CD28M2<br>1000 W for LXM05CD42M3X<br>1000 W for LXM05AD28M2<br>1000 W for LXM05AD42M3X<br>1150 W for LXM05BD34N4<br>1150 W for LXM05CD34N4<br>1150 W for LXM05AD34N4                                                                                                                            |
| 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 LXM05AD42M3X<br>4500 rpm for LXM05BD28M2<br>4500 rpm for LXM05BD42M3X<br>4500 rpm for LXM05CD28M2<br>4500 rpm for LXM05CD42M3X<br>6000 rpm for LXM05AD34N4<br>6000 rpm for LXM05BD34N4<br>6000 rpm for LXM05CD34N4                                                                                                 |
| Maximum mechanical speed    | 6000 rpm                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Product compatibility       | LXM05AD28F1 at 115 V single phase<br>LXM05AD28M2 at 230 V single phase<br>LXM05AD34N4 at 400/480 V 3 phases<br>LXM05AD42M3X at 230 V 3 phases<br>LXM05BD28F1 at 115 V single phase<br>LXM05BD28M2 at 230 V single phase<br>LXM05BD34N4 at 400/480 V 3 phases<br>LXM05BD42M3X at 230 V 3 phases<br>LXM05CD28F1 at 115 V single phase<br>LXM05CD28M2 at 230 V single phase<br>LXM05CD34N4 at 400/480 V 3 phases<br>LXM05CD42M3X at 230 V 3 phases |
| Shaft end                   | Untapped                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| IP degree of protection     | IP56                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Encoder type                | Single turn SinCos Hiperface                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Encoder feedback resolution | 131072 points/turn                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Holding brake               | With                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Mounting support            | International standard flange                                                                                                                                                                                                                                                                                                                                                                                                                   |

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|                       |                     |
|-----------------------|---------------------|
| Electrical connection | Straight connectors |
| Number of poles       | 10                  |

## Complementary

|                                  |                                                                                                                                                                                                                                                                                                                                              |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Range compatibility              | Lexium 05                                                                                                                                                                                                                                                                                                                                    |
| Switching frequency              | 8 kHz                                                                                                                                                                                                                                                                                                                                        |
| Nominal torque                   | 1.8 N.m for LXM05AD34N4<br>1.8 N.m for LXM05BD34N4<br>1.8 N.m for LXM05CD34N4<br>2.13 N.m for LXM05AD28M2<br>2.13 N.m for LXM05AD42M3X<br>2.13 N.m for LXM05BD28M2<br>2.13 N.m for LXM05BD42M3X<br>2.13 N.m for LXM05CD28M2<br>2.13 N.m for LXM05CD42M3X<br>2.78 N.m for LXM05AD28F1<br>2.78 N.m for LXM05BD28F1<br>2.78 N.m for LXM05CD28F1 |
| Maximum current I <sub>rms</sub> | 18 A for LXM05AD34N4<br>18 A for LXM05BD34N4<br>18 A for LXM05CD34N4<br>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>26.4 A for LXM05CD42M3X<br>26.4 A for LXM05BD42M3X<br>26.4 A for LXM05AD42M3X                                        |
| Torque constant                  | 0.47 N.m/A rms at 120 °C                                                                                                                                                                                                                                                                                                                     |
| Back emf constant                | 30.7 V rms/krpm at 120 °C                                                                                                                                                                                                                                                                                                                    |
| Rotor inertia                    | 2 kg.cm <sup>2</sup> without brake<br>2.53 kg.cm <sup>2</sup> with brake                                                                                                                                                                                                                                                                     |
| Stator resistance                | 1 Ohm                                                                                                                                                                                                                                                                                                                                        |
| Stator inductance                | 3.7 mH                                                                                                                                                                                                                                                                                                                                       |
| Stator electrical time constant  | 3.7 ms                                                                                                                                                                                                                                                                                                                                       |
| Maximum radial force Fr          | 203 N at 6000 rpm<br>207 N at 5000 rpm<br>213 N at 4000 rpm<br>219 N at 3000 rpm<br>226 N at 2000 rpm<br>265 N at 1000 rpm                                                                                                                                                                                                                   |
| Maximum axial force Fa           | 0.2 x Fr                                                                                                                                                                                                                                                                                                                                     |
| Product weight                   | 3.3 kg                                                                                                                                                                                                                                                                                                                                       |

## Environment

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