

# BRH1102P20F2A

AC servo motors BRH - 9 N.m - 6000 rpm -  
untapped shaft - with brake - IP56

## Main

|                             |                                                                                                                                                                                                                                                                                                                                  |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product or component type   | Motion servo motors                                                                                                                                                                                                                                                                                                              |
| Component name              | BRH                                                                                                                                                                                                                                                                                                                              |
| Continuous stall torque     | 9 N.m                                                                                                                                                                                                                                                                                                                            |
| Peak stall torque           | 16.7 N.m for LXM05AD34N4<br>16.7 N.m for LXM05BD34N4<br>16.7 N.m for LXM05CD34N4<br>18.4 N.m for LXM05AD28M2<br>18.4 N.m for LXM05BD28M2<br>18.4 N.m for LXM05CD28M2<br>26 N.m for LXM05AD42M3X<br>26 N.m for LXM05BD42M3X<br>26 N.m for LXM05CD42M3X                                                                            |
| Nominal output power        | 1250 W for LXM05BD28M2<br>1250 W for LXM05BD42M3X<br>1250 W for LXM05CD28M2<br>1250 W for LXM05CD42M3X<br>1250 W for LXM05AD28M2<br>1250 W for LXM05AD42M3X<br>2150 W for LXM05CD34N4<br>2150 W for LXM05AD34N4<br>2150 W for LXM05BD34N4                                                                                        |
| Nominal speed               | 1500 rpm for LXM05AD28M2<br>1500 rpm for LXM05AD42M3X<br>1500 rpm for LXM05BD28M2<br>1500 rpm for LXM05BD42M3X<br>1500 rpm for LXM05CD28M2<br>1500 rpm for LXM05CD42M3X<br>4500 rpm for LXM05AD34N4<br>4500 rpm for LXM05BD34N4<br>4500 rpm for LXM05CD34N4                                                                      |
| Maximum mechanical speed    | 6000 rpm                                                                                                                                                                                                                                                                                                                         |
| Product compatibility       | LXM05AD28M2 at 230 V single phase<br>LXM05AD34N4 at 400/480 V 3 phases<br>LXM05AD42M3X at 230 V 3 phases<br>LXM05BD28M2 at 230 V single phase<br>LXM05BD34N4 at 400/480 V 3 phases<br>LXM05BD42M3X at 230 V 3 phases<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 | 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                  | 4.58 N.m for LXM05AD34N4<br>4.58 N.m for LXM05BD34N4<br>4.58 N.m for LXM05CD34N4<br>7.83 N.m for LXM05AD28M2<br>7.83 N.m for LXM05AD42M3X<br>7.83 N.m for LXM05BD28M2<br>7.83 N.m for LXM05BD42M3X<br>7.83 N.m for LXM05CD28M2<br>7.83 N.m for LXM05CD42M3X |
| Maximum current Irms            | 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<br>30 A for LXM05AD42M3X<br>30 A for LXM05BD42M3X<br>30 A for LXM05CD42M3X                                     |
| Torque constant                 | 0.96 N.m/A rms at 120 °C                                                                                                                                                                                                                                    |
| Back emf constant               | 62.1 V rms/krpm at 120 °C                                                                                                                                                                                                                                   |
| Rotor inertia                   | 8.8 kg.cm <sup>2</sup> without brake<br>10.1 kg.cm <sup>2</sup> with brake                                                                                                                                                                                  |
| Stator resistance               | 0.7 Ohm                                                                                                                                                                                                                                                     |
| Stator inductance               | 4.9 mH                                                                                                                                                                                                                                                      |
| Stator electrical time constant | 7.1 ms                                                                                                                                                                                                                                                      |
| Maximum radial force Fr         | 731 N at 6000 rpm<br>762 N at 5000 rpm<br>800 N at 4000 rpm<br>811 N at 3000 rpm<br>824 N at 2000 rpm<br>848 N at 1000 rpm                                                                                                                                  |
| Maximum axial force Fa          | 0.2 x Fr                                                                                                                                                                                                                                                    |
| Product weight                  | 7.7 kg                                                                                                                                                                                                                                                      |

## Environment

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