

# BRH1103P22F2A

AC servo motors BRH - 12 N.m - 4500 rpm -  
untapped shaft - with brake - IP56

## Main

|                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product or component type   | Motion servo motors                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Component name              | BRH                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Continuous stall torque     | 12 N.m                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Peak stall torque           | 18.9 N.m for LXM05AD34N4<br>18.9 N.m for LXM05BD34N4<br>18.9 N.m for LXM05CD34N4<br>21 N.m for LXM05AD28M2<br>21 N.m for LXM05BD28M2<br>21 N.m for LXM05CD28M2<br>30.3 N.m for LXM05AD42M3X<br>30.3 N.m for LXM05AD57N4<br>30.3 N.m for LXM05BD42M3X<br>30.3 N.m for LXM05BD57N4<br>30.3 N.m for LXM05CD42M3X<br>30.3 N.m for LXM05CD57N4                                                                                                       |
| Nominal output power        | 1550 W for LXM05BD42M3X<br>1550 W for LXM05CD28M2<br>1550 W for LXM05CD42M3X<br>1550 W for LXM05AD28M2<br>1550 W for LXM05AD42M3X<br>1550 W for LXM05BD28M2<br>2360 W for LXM05BD57N4<br>2360 W for LXM05CD34N4<br>2360 W for LXM05CD57N4<br>2360 W for LXM05AD34N4<br>2360 W for LXM05AD57N4<br>2360 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>3000 rpm for LXM05AD34N4<br>3000 rpm for LXM05AD57N4<br>3000 rpm for LXM05BD34N4<br>3000 rpm for LXM05BD57N4<br>3000 rpm for LXM05CD34N4<br>3000 rpm for LXM05CD57N4                                                                                                 |
| Maximum mechanical speed    | 4500 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>LXM05AD57N4 at 400/480 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>LXM05BD57N4 at 400/480 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<br>LXM05CD57N4 at 400/480 V 3 phases |
| Shaft end                   | Untapped                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| IP degree of protection     | IP56                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Encoder type                | Multiturn SinCos Hiperface                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Encoder feedback resolution | 131072 points/turn x 4096 turns                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Holding brake               | With                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Mounting support            | International standard flange                                                                                                                                                                                                                                                                                                                                                                                                                   |

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|                       |                                   |
|-----------------------|-----------------------------------|
| Electrical connection | Rotatable right-angled connectors |
| Number of poles       | 10                                |

## Complementary

|                                  |                                                                                                                                                                                                                                                                                                                               |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Range compatibility              | Lexium 05                                                                                                                                                                                                                                                                                                                     |
| Switching frequency              | 8 kHz                                                                                                                                                                                                                                                                                                                         |
| Nominal torque                   | 7.5 N.m for LXM05AD34N4<br>7.5 N.m for LXM05AD57N4<br>7.5 N.m for LXM05BD34N4<br>7.5 N.m for LXM05BD57N4<br>7.5 N.m for LXM05CD34N4<br>7.5 N.m for LXM05CD57N4<br>10 N.m for LXM05AD28M2<br>10 N.m for LXM05AD42M3X<br>10 N.m for LXM05BD28M2<br>10 N.m for LXM05BD42M3X<br>10 N.m for LXM05CD28M2<br>10 N.m for LXM05CD42M3X |
| Maximum current I <sub>rms</sub> | 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 LXM05AD57N4<br>30 A for LXM05BD42M3X<br>30 A for LXM05BD57N4<br>30 A for LXM05CD42M3X<br>30 A for LXM05CD57N4                               |
| Torque constant                  | 1.06 N.m/A rms at 120 °C                                                                                                                                                                                                                                                                                                      |
| Back emf constant                | 68.5 V rms/krpm at 120 °C                                                                                                                                                                                                                                                                                                     |
| Rotor inertia                    | 13.1 kg.cm <sup>2</sup> without brake<br>14.4 kg.cm <sup>2</sup> with brake                                                                                                                                                                                                                                                   |
| Stator resistance                | 0.5 Ohm                                                                                                                                                                                                                                                                                                                       |
| Stator inductance                | 3.9 mH                                                                                                                                                                                                                                                                                                                        |
| Stator electrical time constant  | 7.2 ms                                                                                                                                                                                                                                                                                                                        |
| Maximum radial force Fr          | 857 N at 4000 rpm<br>869 N at 3000 rpm<br>883 N at 2000 rpm<br>908 N at 1000 rpm                                                                                                                                                                                                                                              |
| Maximum axial force Fa           | 0.2 x Fr                                                                                                                                                                                                                                                                                                                      |
| Product weight                   | 10.5 kg                                                                                                                                                                                                                                                                                                                       |

## Environment

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