

# BRH0851P10F1A

AC servo motors BRH - 4.2 N.m - 6000 rpm -  
keyed shaft - with brake - IP41

## Main

|                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product or component type   | Motion servo motors                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Component name              | BRH                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Continuous stall torque     | 1.86 N.m                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Peak stall torque           | 4.61 N.m for LXM05AD17F1<br>4.61 N.m for LXM05AD17M2<br>4.61 N.m for LXM05AD17M3X<br>4.61 N.m for LXM05BD17F1<br>4.61 N.m for LXM05BD17M2<br>4.61 N.m for LXM05BD17M3X<br>4.61 N.m for LXM05CD17F1<br>4.61 N.m for LXM05CD17M2<br>4.61 N.m for LXM05CD17M3X<br>5.34 N.m for LXM05AD22N4<br>5.34 N.m for LXM05BD22N4<br>5.34 N.m for LXM05CD22N4                                                                                                 |
| Nominal output power        | 280 W for LXM05BD17F1<br>280 W for LXM05CD17F1<br>280 W for LXM05AD17F1<br>730 W for LXM05BD17M2<br>730 W for LXM05BD17M3X<br>730 W for LXM05CD17M2<br>730 W for LXM05CD17M3X<br>730 W for LXM05AD17M2<br>730 W for LXM05AD17M3X<br>910 W for LXM05BD22N4<br>910 W for LXM05CD22N4<br>910 W for LXM05AD22N4                                                                                                                                     |
| Nominal speed               | 1500 rpm for LXM05AD17F1<br>1500 rpm for LXM05BD17F1<br>1500 rpm for LXM05CD17F1<br>4500 rpm for LXM05AD17M2<br>4500 rpm for LXM05AD17M3X<br>4500 rpm for LXM05BD17M2<br>4500 rpm for LXM05BD17M3X<br>4500 rpm for LXM05CD17M2<br>4500 rpm for LXM05CD17M3X<br>6000 rpm for LXM05AD22N4<br>6000 rpm for LXM05BD22N4<br>6000 rpm for LXM05CD22N4                                                                                                 |
| Maximum mechanical speed    | 6000 rpm                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Product compatibility       | LXM05AD17F1 at 115 V single phase<br>LXM05AD17M2 at 230 V single phase<br>LXM05AD17M3X at 230 V 3 phases<br>LXM05AD22N4 at 400/480 V 3 phases<br>LXM05BD17F1 at 115 V single phase<br>LXM05BD17M2 at 230 V single phase<br>LXM05BD17M3X at 230 V 3 phases<br>LXM05BD22N4 at 400/480 V 3 phases<br>LXM05CD17F1 at 115 V single phase<br>LXM05CD17M2 at 230 V single phase<br>LXM05CD17M3X at 230 V 3 phases<br>LXM05CD22N4 at 400/480 V 3 phases |
| Shaft end                   | Keyed                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| IP degree of protection     | IP41                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Encoder type                | Single turn SinCos Hiperface                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Encoder feedback resolution | 16384 points/turn                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Holding brake               | With                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Mounting support            | International standard flange                                                                                                                                                                                                                                                                                                                                                                                                                   |

The information provided in this documentation contains general descriptions and/or technical characteristics of the performance of the products contained herein. This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications. It is the duty of any such user or integrator to perform the appropriate and complete risk analysis, evaluation and testing of the products with respect to the relevant specific application or use thereof. Neither Schneider Electric Industries SAS nor any of its affiliates or subsidiaries shall be responsible or liable for misuse of the information contained herein.

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

## Complementary

|                                  |                                                                                                                                                                                                                                                                                                                                                 |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Range compatibility              | Lexium 05                                                                                                                                                                                                                                                                                                                                       |
| Switching frequency              | 8 kHz                                                                                                                                                                                                                                                                                                                                           |
| Nominal torque                   | 1.45 N.m for LXM05AD22N4<br>1.45 N.m for LXM05BD22N4<br>1.45 N.m for LXM05CD22N4<br>1.55 N.m for LXM05AD17M2<br>1.55 N.m for LXM05AD17M3X<br>1.55 N.m for LXM05BD17M2<br>1.55 N.m for LXM05BD17M3X<br>1.55 N.m for LXM05CD17M2<br>1.55 N.m for LXM05CD17M3X<br>1.76 N.m for LXM05AD17F1<br>1.76 N.m for LXM05BD17F1<br>1.76 N.m for LXM05CD17F1 |
| Maximum current I <sub>rms</sub> | 11 A for LXM05AD17F1<br>11 A for LXM05AD17M2<br>11 A for LXM05AD17M3X<br>11 A for LXM05BD17F1<br>11 A for LXM05BD17M2<br>11 A for LXM05BD17M3X<br>11 A for LXM05CD17F1<br>11 A for LXM05CD17M2<br>11 A for LXM05CD17M3X<br>14 A for LXM05AD22N4<br>14 A for LXM05BD22N4<br>14 A for LXM05CD22N4                                                 |
| Torque constant                  | 0.48 N.m/A rms at 120 °C                                                                                                                                                                                                                                                                                                                        |
| Back emf constant                | 30.5 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                | 2.1 Ohm                                                                                                                                                                                                                                                                                                                                         |
| Stator inductance                | 8 mH                                                                                                                                                                                                                                                                                                                                            |
| Stator electrical time constant  | 3.8 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 |