

# Product data sheet

Specifications



## AC servo motors BRH - 3.1 N.m - 6000 rpm - untapped shaft - with brake - IP41

BRH0851M01F2A

⚠ Discontinued on: Dec 20, 2010

⚠ End-of-service on: Sep 20, 2023

⚠ Discontinued

### 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 LXM05AD10M2<br>520 W for LXM05AD17M3X<br>520 W for LXM05BD10M2<br>520 W for LXM05BD17M3X<br>520 W for LXM05CD10M2<br>520 W for LXM05CD17M3X<br>910 W for LXM05AD14N4<br>910 W for LXM05BD14N4<br>910 W for LXM05CD14N4                                                                                                 |
| 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                 | Untapped                                                                                                                                                                                                                                                                                                                         |
| Ip Degree Of Protection   | IP41                                                                                                                                                                                                                                                                                                                             |
| Encoder Type              | Single turn SinCos Hiperface                                                                                                                                                                                                                                                                                                     |
| Speed Feedback Resolution | 131072 points/turn                                                                                                                                                                                                                                                                                                               |
| Holding Brake             | With                                                                                                                                                                                                                                                                                                                             |

Disclaimer: 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

|                         |                                                                                                                                                                                                                                                             |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mounting Support        | International standard flange                                                                                                                                                                                                                               |
| Electrical Connection   | Rotatable right-angled connectors                                                                                                                                                                                                                           |
| 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 |
| Number Of Poles         | 10                                                                                                                                                                                                                                                          |
| 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                                                                                                                                  |

## Complementary

|                                 |                                                                                                                                                                                                                         |
|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Range Compatibility             | Lexium 05                                                                                                                                                                                                               |
| Switching Frequency             | 8 kHz                                                                                                                                                                                                                   |
| Maximum Current Irms            | 11 A for LXM05AD17M3X<br>11 A for LXM05BD17M3X<br>11 A for LXM05CD17M3X<br>6 A for LXM05AD10M2<br>6 A for LXM05BD10M2<br>6 A for LXM05CD10M2<br>7.5 A for LXM05AD14N4<br>7.5 A for LXM05BD14N4<br>7.5 A for LXM05CD14N4 |
| Torque Constant                 | 0.6 N.m/A at 120 °C                                                                                                                                                                                                     |
| Back Emf Constant               | 37.9 V/krpm at 120 °C                                                                                                                                                                                                   |
| Rotor Inertia                   | 1.06 kg.cm² without brake<br>1.59 kg.cm² with brake                                                                                                                                                                     |
| Stator Resistance               | 3.3 Ohm                                                                                                                                                                                                                 |
| Stator Inductance               | 12.3 mH                                                                                                                                                                                                                 |
| Stator Electrical Time Constant | 3.7 ms                                                                                                                                                                                                                  |
| Maximum Axial Force Fa          | 0.2 x Fr                                                                                                                                                                                                                |
| Net Weight                      | 2.2 kg                                                                                                                                                                                                                  |

## Contractual warranty

|          |           |
|----------|-----------|
| Warranty | 18 months |
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