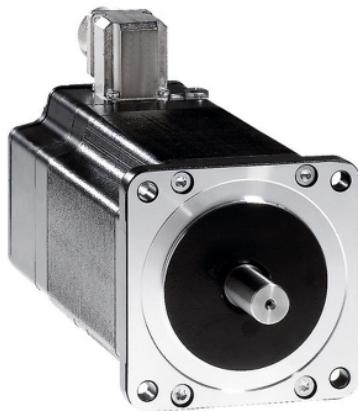


# Product data sheet

## Characteristics

# BRS39AH360AAA

3-phase stepper motor - 4.8 Nm - shaft  $\tilde{A}$  12 mm - L = 98 mm - w/o brake - wire



### Main

|                           |                       |
|---------------------------|-----------------------|
| Range compatibility       | Lexium SD3            |
| Product or component type | Motion control motor  |
| Device short name         | BRS3                  |
| Maximum mechanical speed  | 3000 rpm              |
| Motor type                | 3-phase stepper motor |
| Number of motor poles     | 6                     |
| Supply voltage limits     | 34 V AC<br>48 V DC    |
| Mounting support          | Flange                |
| Motor flange size         | 85 mm                 |
| Length                    | 98 mm                 |
| Centring collar diameter  | 60 mm                 |

### Complementary

|                                       |   |
|---------------------------------------|---|
| Centring collar depth                 | 2 mm  |
| Number of mounting holes              | 4   |
| Mounting holes diameter               | 6.5 mm  |
| Circle diameter of the mounting holes | 98.99 mm  |
| Electrical connection                 | Wires   |
| Holding brake                         | Without   |
| Shaft end                             | Smooth shaft  |
| Second shaft                          | Without second shaft end  |
| Shaft diameter                        | 12 mm   |
| Shaft length                          | 30 mm   |
| Nominal torque                        | 4 N.m   |
| Holding torque                        | 4.8 N.m   |
| Rotor inertia                         | 2.2 kg.cm <sup>2</sup>  |
| Resolution                            | 1.8 °, 0.9 °, 0.72 °, 0.36 °, 0.18 °, 0.09 °, 0.072 °, 0.036 ° step angle<br>200, 400, 500, 1000, 2000, 4000, 5000, 10000 steps number of full steps per revolution |
| Accuracy error                        | +/- 6 arc min   |
| Maximum starting frequency            | 5.3 kHz   |
| [In] rated current                    | 5.8 A   |
| Resistance                            | 0.55 Ohm (winding)  |
| Time constant                         | 9 ms  |
| Maximum radial force Fr               | 110 N (first shaft end)<br>75 N (second shaft end)  |
| Maximum axial force Fa                | 175 N (tensile force)<br>30 N (force pressure)  |
| Service life in hours                 | 20000 h (bearing)   |
| Angular acceleration                  | 200000 rad/s <sup>2</sup>   |
| Net weight                            | 3.2 kg  |

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.

## Environment

|                                       |   |
|---------------------------------------|---|
| Standards                             | IEC 60072-1<br>IEC 50347  |
| Type of cooling                       | Natural convection  |
| Ambient air temperature for operation | -25...40 °C   |
| Ambient air temperature for storage   | -25...70 °C   |
| Operating altitude                    | <= 1000 m without power derating  |
| Relative humidity                     | 15...85 % without condensation  |
| Vibration resistance                  | 20 m/s <sup>2</sup> maximum<br>A conforming to IEC 60034-14   |
| IP degree of protection               | IP56 total except shaft bushing: conforming to IEC 60034-5<br>IP41 shaft bushing without shaft seal ring: conforming to IEC 60034-5 |
| Temperature class                     | F winding conforming to IEC 60034-1   |

## Packing Units

|                              |           |
|------------------------------|-----------|
| Unit Type of Package 1       | PCE       |
| Number of Units in Package 1 | 1         |
| Package 1 Height             | 19.5 cm   |
| Package 1 Width              | 21.5 cm   |
| Package 1 Length             | 40.5 cm   |
| Package 1 Weight             | 3.831 kg  |
| Unit Type of Package 2       | P06       |
| Number of Units in Package 2 | 12        |
| Package 2 Height             | 77.0 cm   |
| Package 2 Width              | 80.0 cm   |
| Package 2 Length             | 60.0 cm   |
| Package 2 Weight             | 54.472 kg |

## Offer Sustainability

|                            |   |
|----------------------------|---|
| Sustainable offer status   | Green Premium product   |
| REACH Regulation           |  <a href="#">REACH Declaration</a>             |
| EU RoHS Directive          | Pro-active compliance (Product out of EU RoHS legal scope)  |
| Mercury free               | Yes   |
| China RoHS Regulation      |  <a href="#">China RoHS Declaration</a>        |
| RoHS exemption information |  Yes   |
| Environmental Disclosure   |  <a href="#">Product Environmental Profile</a> |
| Circularity Profile        | No need of specific recycling operations  |
| WEEE                       | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins       |
| PVC free                   | Yes   |

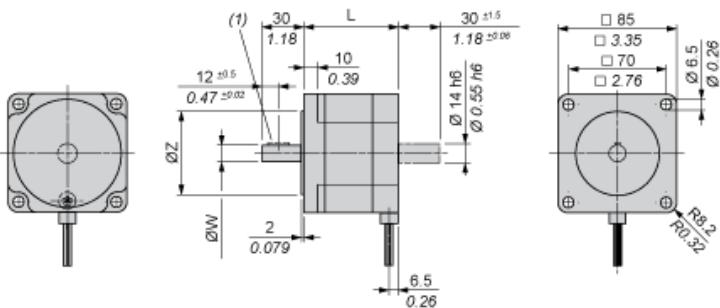
## Contractual warranty

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

## Dimensions

### 3-Phase Stepper Motor in Wires Version

mm  
m.



Dimensions in mm

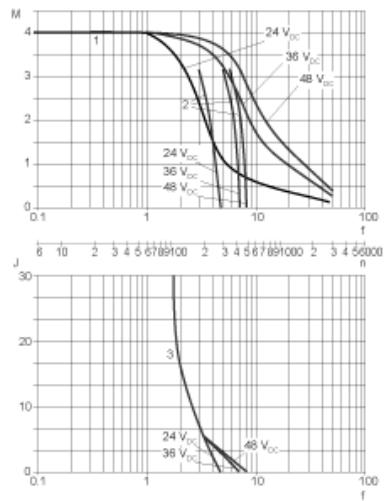
| L                  | Shaft diameter ØW | Centring collar ØZ | Woodruff key DIN 6888 (1) |
|--------------------|-------------------|--------------------|---------------------------|
| 97.5 (+0.6) (-0.8) | 12 h6             | 60 h8              | 4 x 6.5                   |

Dimensions in in.

| L                      | Shaft diameter ØW | Centring collar ØZ | Woodruff key DIN 6888 (1) |
|------------------------|-------------------|--------------------|---------------------------|
| 3.84 (+0.023) (-0.031) | 0.47 h6           | 2.36 h8            | 0.16 x 0.25               |

## Torque Characteristics

Measurement at 1000 Steps/Revolution, Nominal Voltage DC Bus  $U_N$  and Phase Current  $I_N$



M : Torque in Nm

n : Speed in rpm

f : Frequency in kHz

J : Rotor inertia in kg.cm<sup>2</sup>

1 : Pull-out torque

2 : Pull-in torque

3 : Maximum load inertia