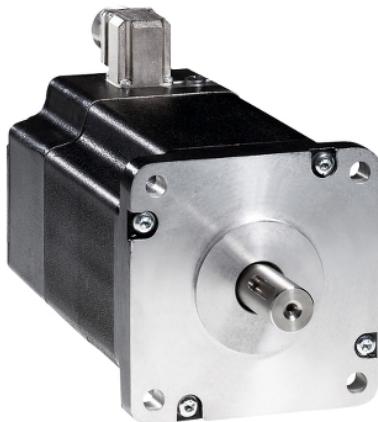


# Product data sheet

## Characteristics

# BRS3ADW850FBA

3-phase stepper motor - 19.7 Nm - shaft Ø19 mm - L=230 mm - with brake- term box



### 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	230 V AC 325 V DC
Mounting support	Flange
Motor flange size	110 mm
Length	228 mm
Centring collar diameter	56 mm

### Complementary

Centring collar depth	3 mm
Number of mounting holes	4
Mounting holes diameter	9 mm
Circle diameter of the mounting holes	125.86 mm
Electrical connection	Terminal box
Holding brake	With
Shaft end	Parallel key
Second shaft	Without second shaft end
Shaft diameter	19 mm
Shaft length	40 mm
Nominal torque	16.5 N.m
Peak stall torque	16.45 N.m
Continuous stall torque	16.45 N.m
Holding torque	19.7 N.m
Rotor inertia	16 kg.cm <sup>2</sup>
Resolution	1.8 °, 0.9 °, 0.72 °, 0.36 °, 0.18 °, 0.09 °, 0.072 °, 0.036 ° step angle 200, 400, 500, 1000, 2000, 4000, 5000, 10000 steps number of full steps per revolution
Accuracy error	+/- 6 arc min
Maximum starting frequency	4.7 kHz
[In] rated current	4.75 A
Resistance	1.9 Ohm (winding)
Time constant	22 ms
Maximum radial force Fr	150 N (second shaft end) 300 N (first shaft end)
Maximum axial force Fa	330 N (tensile force) 60 N (force pressure)
Service life in hours	20000 h (bearing)
Angular acceleration	200000 rad/s <sup>2</sup>
Net weight	11.2 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 EN 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 A conforming to EN/IEC 60034-14
IP degree of protection	IP41 shaft bushing: conforming to EN/IEC 60034-5 IP56 total except shaft bushing: conforming to EN/IEC 60034-5
Temperature class	F winding conforming to IEC/EN 60034-1

## Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	13.0 cm
Package 1 Width	19.0 cm
Package 1 Length	39.5 cm
Package 1 Weight	13.8 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

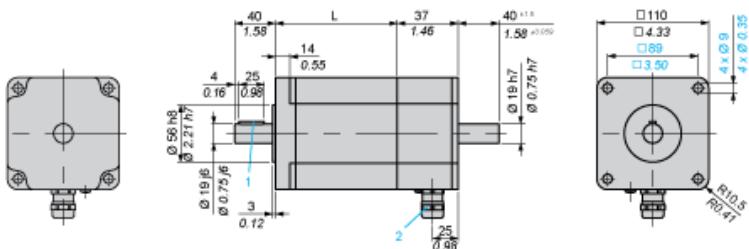
## Contractual warranty

Warranty	18 months
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## Dimensions

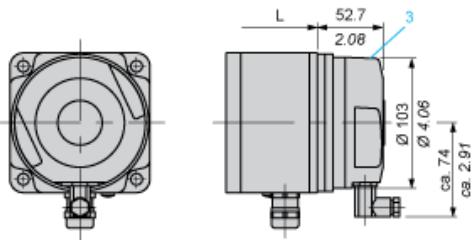
3-Phase Stepper Motor in Terminal Box Version

mm  
in.



## Holding Brake

mm  
in.



3 : Holding brake (optional)

Dimensions in mm

L	Parallel key DIN 6885 (1)	Cable gland (2)
228 ±1	6 x 6 x 25	ISO M20 x 1.5

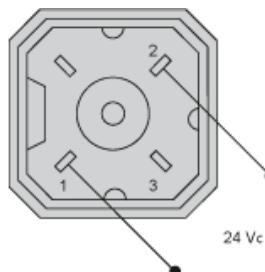
Dimensions in in.

L	Parallel key DIN 6885 (1)	Cable gland (2)
8.98 ±0.039	0.24 x 0.24 x 0.98	ISO M20 x 1.5

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Wiring Diagram of Holding Brake

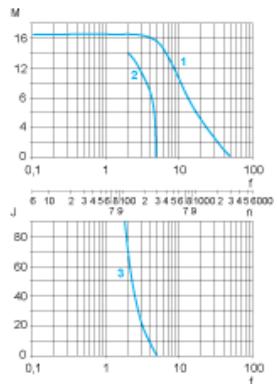
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The connector is part of the scope of delivery. Connector designation: Hirschmann type G4 A 5M

## 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