

# Product datasheet

Specifications



## 3-phase stepper motor - 2.26Nm - shaft Ø 12mm - L=68 mm - w/o brake - conn

BRS397WB70ACA

⚠ Discontinued on: 31 Dec 2020

⚠ Discontinued

### Main

Range compatibility	Lexium SD3
Product or component type	Motion control motor
Motor type	3-phase stepper motor
Mounting support	85 mm flange
Length	111 mm
Centring collar diameter	73 mm

### Complementary

Electrical connection	Connector
Holding brake	Without
Shaft end	Smooth shaft
Second shaft	Without second shaft end
Shaft diameter	12 mm
Nominal torque	2 N.m
Holding torque	2.26 N.m
Rotor inertia	1.1 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	5.3 kHz
[In] rated current	1.75 A
Resistance	6.5 Ohm (winding)
Time constant	7 ms
Maximum radial force Fr	100 N (first shaft end) 50 N (second shaft end)
Maximum axial force Fa	175 N (tensile force) 30 N (force pressure)
Service life in hours	20000 h (bearing)
Angular acceleration	200000 rad/s <sup>2</sup>
Net weight	2.1 kg

### Environment

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



## Environmental Data

Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing “Use Better, Use Longer, Use Again” campaign to extend product lifetimes and recyclability.

[Environmental Data explained >](#)

[How we assess product sustainability >](#)

### Use Longer



#### Lifetime extension

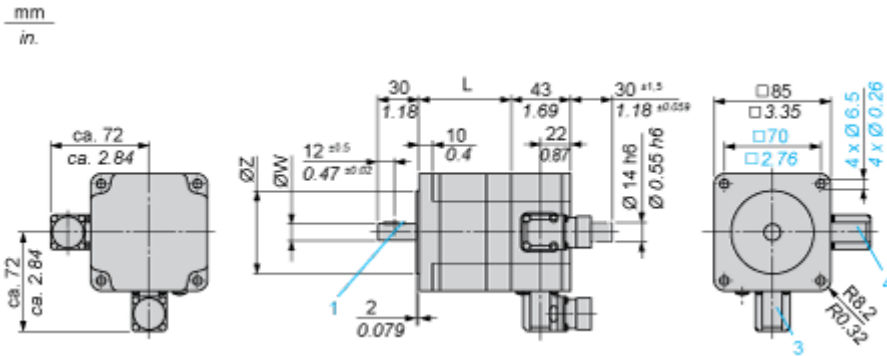
Repair

No

Dimensions Drawings

Dimensions

3-Phase Stepper Motor in Connector Version



- 3 : Motor connection 6 poles
- 4 : Motor connection (optional) 12 poles

Dimensions in mm

L	Shaft diameter ØW	Centring collar ØZ	Woodruff key DIN 6888 (1)
67.5 (+0.6) (-0.8)	12 h6	73 h8	4 x 6.5

Dimensions in in.

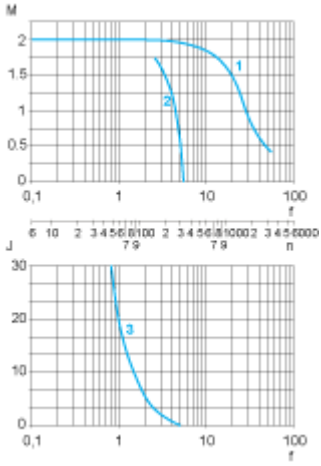
L	Shaft diameter ØW	Centring collar ØZ	Woodruff key DIN 6888 (1)
2.66 (+0.023) (-0.031)	0.47 h6	2.87 h8	0.16 x 0.25

Performance Curves

Torque Characteristics

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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