

Product data sheet

Specifications



3-phase stepper motor - 2.26 Nm - shaft $\tilde{\sim}$ 12 mm - L = 68 mm - w/o brake - wire

BRS397H660AAB

⚠ Discontinued on: Aug 7, 2023

⚠ Discontinued

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 48 V DC
Mounting support	Flange
Motor flange size	3.3 in (85 mm)
Length	2.7 in (68 mm)
Centring collar diameter	2.4 in (60 mm)

Complementary

Centring collar depth	0.08 in (2 mm)
Number of mounting holes	4
Mounting holes diameter	0.3 in (6.5 mm)
Circle diameter of the mounting holes	3.90 in (98.99 mm)
Electrical connection	Wires
Holding brake	Without
Shaft end	Woodruff key
Second shaft	With second shaft end
Shaft diameter	0.5 in (12 mm)
Shaft length	1.2 in (30 mm)
Nominal torque	17.7 lbf.in (2 N.m)
Holding torque	20.003 lbf.in (2.26 N.m)
Rotor inertia	1.1 kg.cm ²
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 kHz

[In] rated current	5.8 A
Resistance	0.35 Ohm winding)
Time constant	7 ms
Maximum radial force Fr	100 N first shaft end) 75 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 ²
Net weight	4.6 lb(US) (2.1 kg)

Environment

Standards	IEC 50347 IEC 60072-1
Type of cooling	Natural convection
Ambient air temperature for operation	-13...104 °F (-25...40 °C)
Ambient air temperature for storage	-13...158 °F (-25...70 °C)
Operating altitude	<= 1000 m without power derating
Relative humidity	15...85 % without condensation
Vibration resistance	20 m/s ² maximum A IEC 60034-14
IP degree of protection	IP56 total except shaft bushing: conforming to IEC 60034-5 IP41 shaft bushing without shaft seal ring: conforming to IEC 60034-5
Temperature class	F winding IEC 60034-1

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	7.677 in (19.500 cm)
Package 1 Width	8.661 in (22.000 cm)
Package 1 Length	15.748 in (40.000 cm)
Package 1 Weight	6.094 lb(US) (2.764 kg)
Unit Type of Package 2	P12
Number of Units in Package 2	4
Package 2 Height	17.717 in (45.000 cm)
Package 2 Width	31.496 in (80.000 cm)
Package 2 Length	47.244 in (120.000 cm)
Package 2 Weight	56.562 lb(US) (25.656 kg)

Contractual warranty

Warranty (in months)	18
-----------------------------	----



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 Better



Materials and Substances

EU RoHS Directive

[Compliant By Exemption](#)

PVC free

Yes

Use Longer



Lifetime extension

Repair

No

Use Again



Repack and remanufacture

Circularity Profile

No need of specific recycling operations

WEEE Label

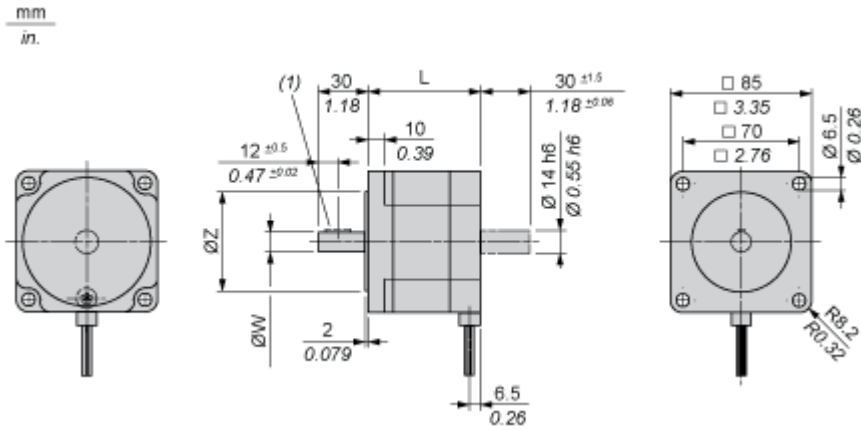


The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins

Dimensions Drawings

Dimensions

3-Phase Stepper Motor in Wires Version



Dimensions in mm

L	Shaft diameter ØW	Centring collar ØZ	Woodruff key DIN 6888 (1)
67.5 (+0.6) (-0.8)	12 h6	60 h8	4 x 6.5

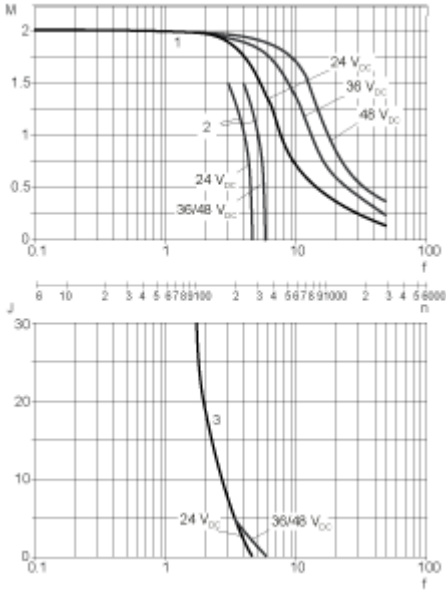
Dimensions in in.

L	Shaft diameter ØW	Centring collar ØZ	Woodruff key DIN 6888 (1)
2.66 (+0.023) (-0.031)	0.47 h6	2.36 h8	0.16 x 0.25

Performance Curves

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.cm²

1 : Pull-out torque

2 : Pull-in torque

3 : Maximum load inertia