

Product datasheet

Specifications



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

BRS397H670ABA

⚠ Discontinued on: 23 Oct 2020

⚠ 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	85 mm
Length	111 mm
Centring collar diameter	73 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	Terminal box
Holding brake	Without
Shaft end	Woodruff key
Second shaft	Without second shaft end
Shaft diameter	12 mm
Shaft length	30 mm
Nominal torque	2 N.m
Holding torque	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) 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 ²
Net weight	2.1 kg

Environment

Standards	EN 50347 IEC 60072-1
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 ² maximum A conforming to EN/IEC 60034-14
IP degree of protection	IP56 total except shaft bushing: conforming to EN/IEC 60034-5 IP41 shaft bushing without shaft seal ring: 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	10.4 cm
Package 1 Width	18 cm
Package 1 Length	36.5 cm
Package 1 Weight	2.4 kg

Contractual warranty

Warranty (in months)	18
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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

End of life manual availability

No need of specific recycling operations

WEEE Label

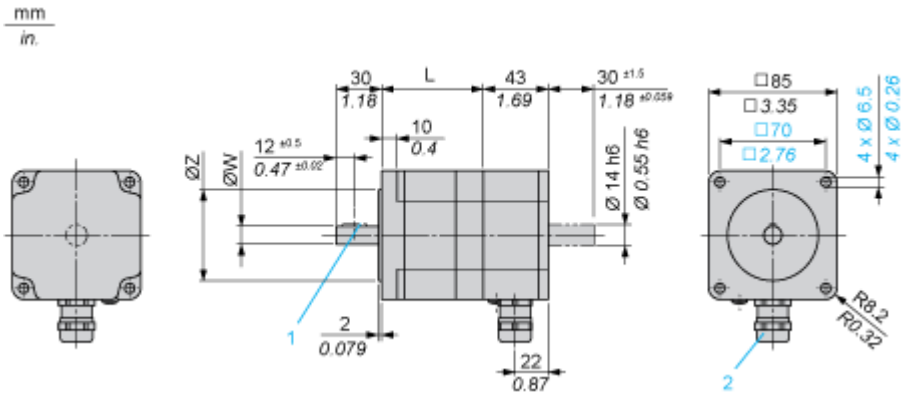


The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins

Dimensions Drawings

Dimensions

3-Phase Stepper Motor in Terminal Box Version



Dimensions in mm

L	Shaft diameter ØW	Centring collar ØZ	Woodruff key DIN 6888 (1)	Cable gland (2)
67.5 (+0.6) (-0.8)	12 h6	73 h8	4 x 6.5	ISO M20 x 1.5

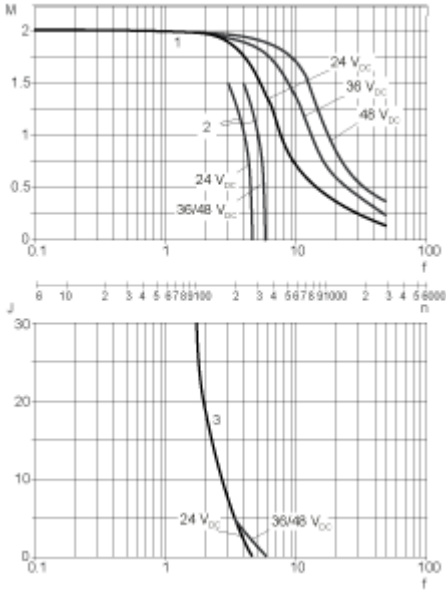
Dimensions in in.

L	Shaft diameter ØW	Centring collar ØZ	Woodruff key DIN 6888 (1)	Cable gland (2)
2.66 (+0.023) (-0.031)	0.47 h6	2.87 h8	0.16 x 0.25	ISO M20 x 1.5

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