

Product datasheet

Specifications



3-phase stepper motor - 6.78Nm -
shaft Ø 14 mm - L=128 mm - w
brake - term box

BRS39BW460FBA

EAN Code: 3389119224017

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	85 mm
Length	217 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	Terminal box
Holding brake	With
Shaft end	Untapped
Second shaft	Without second shaft end
Shaft diameter	14 mm
Shaft length	30 mm
Nominal torque	6 N.m
Peak stall torque	5.78 N.m
Continuous stall torque	5.78 N.m
Holding torque	6.78 N.m
Rotor inertia	3.3 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	5.3 kHz
[In] rated current	2.25 A
Resistance	6.5 Ohm (winding)
Time constant	10 ms
Maximum radial force Fr	110 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	4.3 kg

Environment

Standards	IEC 60072-1 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 ² maximum A conforming to IEC 60034-14
IP degree of protection	IP41 shaft bushing: conforming to IEC 60034-5 IP56 total except shaft bushing: 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	22.5 cm
Package 1 Width	19.0 cm
Package 1 Length	40.0 cm
Package 1 Weight	8.056 kg
Unit Type of Package 2	S06
Number of Units in Package 2	12
Package 2 Height	73.5 cm
Package 2 Width	60.0 cm
Package 2 Length	80.0 cm
Package 2 Weight	105.172 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 >](#)



Environmental footprint

Total lifecycle Carbon footprint 1842

Environmental Disclosure [Product Environmental Profile](#)

Use Better



Materials and Substances

Packaging made with recycled cardboard Yes

Packaging without single use plastic No

[EU RoHS Directive](#) Pro-active compliance (Product out of EU RoHS legal scope)

REACH Regulation [REACH Declaration](#)

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

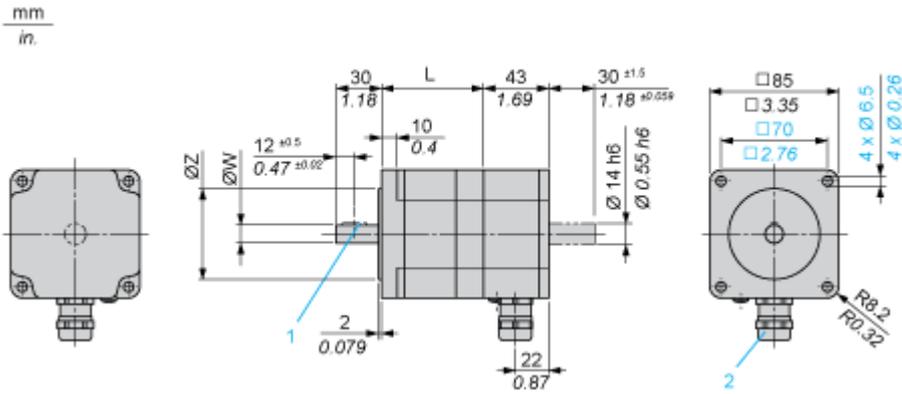
Take-back No

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

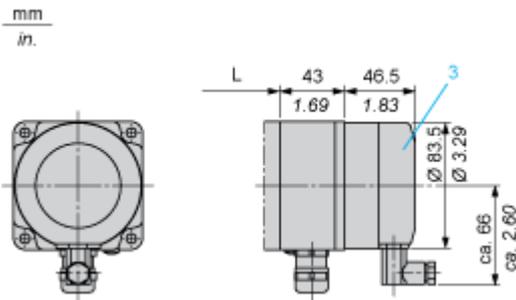
Dimensions Drawings

Dimensions

3-Phase Stepper Motor in Terminal Box Version



Holding Brake



3 : Holding brake (optional)

Dimensions in mm

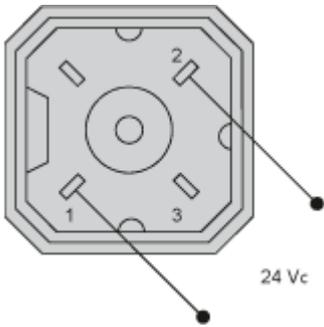
L	Shaft diameter ØW	Centring collar ØZ	Woodruff key DIN 6888 (1)	Cable gland (2)
127.5 (+0.6) (-0.8)	14 h6	60 h8	5 x 6.5	ISO M20 x 1.5

Dimensions in in.

L	Shaft diameter ØW	Centring collar ØZ	Woodruff key DIN 6888 (1)	Cable gland (2)
5.02 (+0.023) (-0.031)	0.55 h6	2.36 h8	0.20 x 0.25	ISO M20 x 1.5

Connections and Schema

Wiring Diagram of Holding Brake

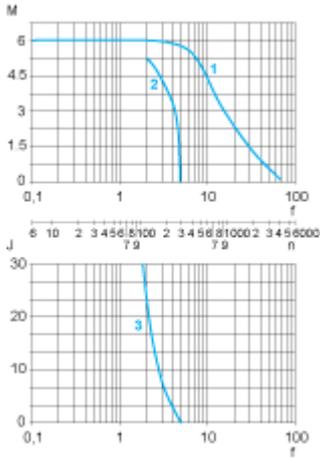


The connector is part of the scope of delivery. Connector designation: Hirschmann type G4 A 5M

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