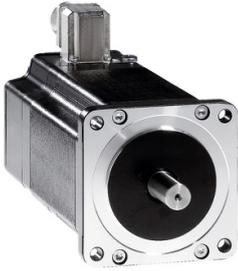# Product datasheet

Specifications

3-phase stepper motor - 4.8 Nm - shaft Ø 12 mm - L = 98 mm - w/o brake - wire

BRS39AH360AAA

⚠ Discontinued on: 9 Feb 2023

⚠ **Discontinued**

EAN Code: 3606485150321

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	98 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	Wires
Holding brake	Without
Shaft end	Smooth shaft
Second shaft	Without second shaft end
Shaft diameter	12 mm
Shaft length	30 mm
nominal torque	4 N.m
Holding torque	4.8 N.m
Rotor inertia	2.2 kg.cm²
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

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Maximum starting frequency	5.3 kHz
[In] rated current	5.8 A
Resistance	0.55 Ohm (winding)
Time constant	9 ms
Maximum radial force Fr	110 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/s²
Net weight	3.2 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/s² maximum A conforming to 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 conforming to IEC 60034-1

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	19.500 cm
Package 1 Width	21.500 cm
Package 1 Length	40.000 cm
Package 1 Weight	3.826 kg
Unit Type of Package 2	P06
Number of Units in Package 2	12
Package 2 Height	77.000 cm
Package 2 Width	80.000 cm
Package 2 Length	60.000 cm
Package 2 Weight	54.472 kg

Contractual warranty

Warranty	18 months

🌐 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

Carbon footprint (kg.eq.CO2 per CR, Total Life cycle)	**1287**
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 Again

↻ Repack and remanufacture

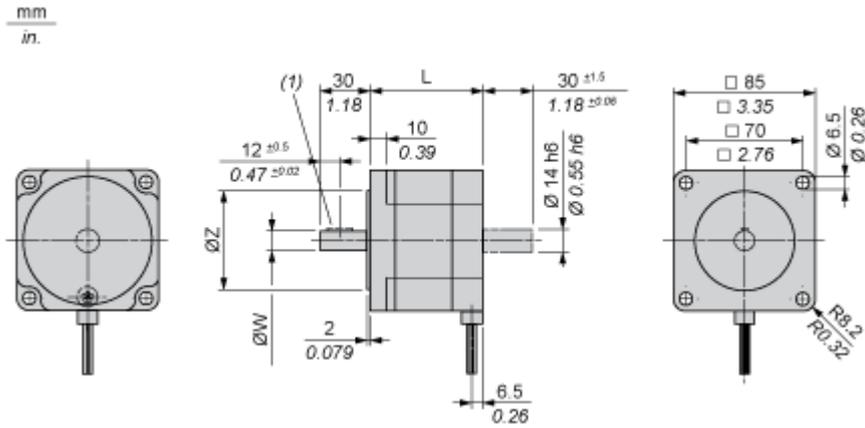|	
Circularity Profile	**No need of specific recycling operations**
Take-back	**No**
WEEE	🗑 **The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins**

Dimensions Drawings

Dimensions

3-Phase Stepper Motor in Wires Version

$\frac{mm}{in.}$

Dimensions in mm

L	Shaft diameter ØW	Centring collar ØZ	Woodruff key DIN 6888 (1)
97.5 (+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)
3.84 (+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
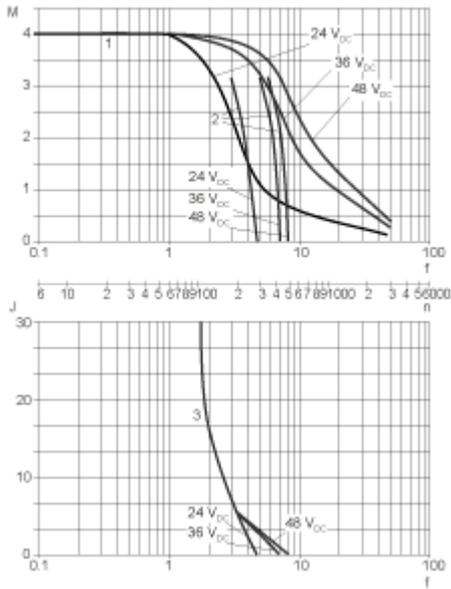
M : Torque in Nm

n : Speed in rpm

f : Frequency in kHz

J : Rotor inertia in kg.cm^2

1 : Pull-out torque

2 : Pull-in torque

3 : Maximum load inertia