

## 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	187 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	Connector
Holding brake	With
Shaft end	Untapped
Second shaft	Without second shaft end
Shaft diameter	12 mm
Shaft length	30 mm
Nominal torque	4 N.m
Peak stall torque	3.82 N.m
Continuous stall torque	3.82 N.m
Holding torque	4.52 N.m
Rotor inertia	2.2 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	2 A
Resistance	5.8 Ohm (winding)
Time constant	9 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	3.2 kg

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## 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 <sup>2</sup> 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 cm
Package 1 Length	40 cm
Package 1 Weight	5.624 kg
Unit Type of Package 2	S06
Number of Units in Package 2	12
Package 2 Height	73.5 cm
Package 2 Width	60 cm
Package 2 Length	80 cm
Package 2 Weight	74.536 kg
Unit Type of Package 3	P06
Number of Units in Package 3	12
Package 3 Height	77 cm
Package 3 Width	80 cm
Package 3 Length	60 cm
Package 3 Weight	75.988 kg

## Offer Sustainability

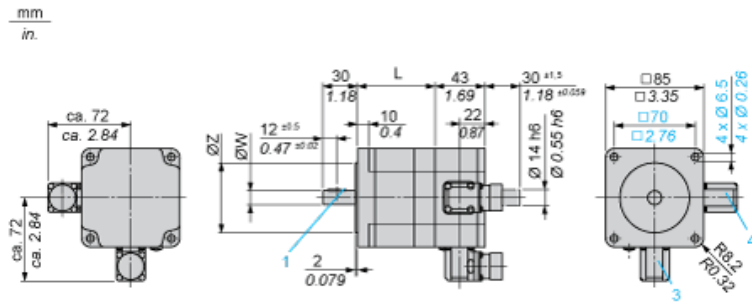
Sustainable offer status	Green Premium product
REACH Regulation	<a href="#">REACH Declaration</a>
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope)
Mercury free	Yes
China RoHS Regulation	<a href="#">China RoHS Declaration</a>
RoHS exemption information	<a href="#">Yes</a>
Environmental Disclosure	<a href="#">Product Environmental Profile</a>
Circularity Profile	No need of specific recycling operations
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins
PVC free	Yes

## Contractual warranty

Warranty	18 months
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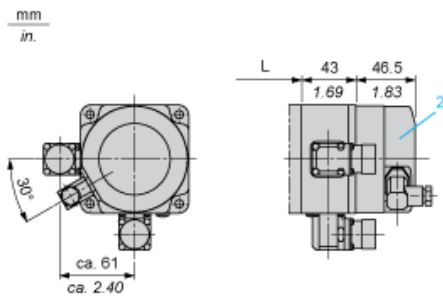
Dimensions

3-Phase Stepper Motor in Connector Version



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

Holding Brake



- 2 : Holding brake (optional)

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

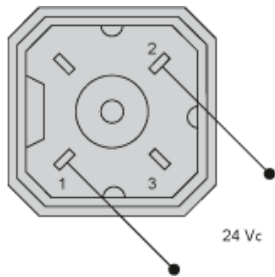
Dimensions in in.

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

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Wiring Diagram of Holding Brake

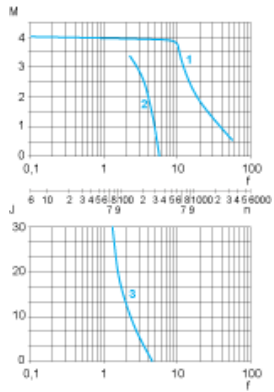
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The connector is part of the scope of delivery. Connector designation: Hirschmann type G4 A 5M

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<sup>2</sup>
- 1 : Pull-out torque
- 2 : Pull-in torque
- 3 : Maximum load inertia