



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	325 V DC 230 V AC
Mounting support	Flange
Motor flange size	85 mm
Length	141 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
Feedback type	Single turn encoder
Speed feedback resolution	10000 points/turn
Holding brake	Without
Shaft end	Untapped
Second shaft	With 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 ²
Resolution	200, 400, 500, 1000, 2000, 4000, 5000, 10000 steps number of full steps per revolution 1.8 °, 0.9 °, 0.72 °, 0.36 °, 0.18 °, 0.09 °, 0.072 °, 0.036 ° step angle 1000 points/turn
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	50 N (second shaft end) 100 N (first shaft end)
Maximum axial force Fa	30 N (force pressure) 175 N (tensile force)
Service life in hours	20000 h (bearing)

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Angular acceleration	200000 rad/s ²
Product weight	3.2 kg

Environment

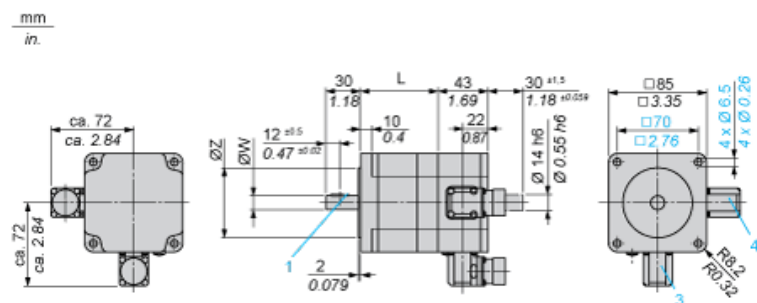
Standards	EN 50347 IEC 60072-1
Type of cooling	Natural convection
Ambient air temperature for operation	-25...40 °C
Ambient air temperature for storage	-25...70 °C
Operating altitude	<= 1000 m without power derating
Relative humidity	15...85 % without condensation
Vibration resistance	A conforming to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

Offer Sustainability

Sustainable offer status	Green Premium product
RoHS (date code: YYWW)	Compliant - since 0623 - Schneider Electric declaration of conformity
REACH	Reference not containing SVHC above the threshold
Product environmental profile	Available Download Product Environmental
Product end of life instructions	Need no specific recycling operations

Dimensions

3-Phase Stepper Motor in Connector Version



3 : Motor connection 6 poles

4 : Motor connection (optional) 12 poles

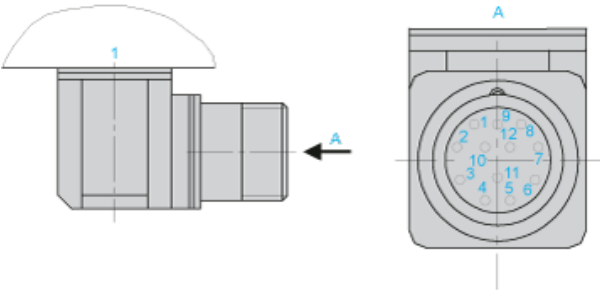
Dimensions in mm

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

Wiring Diagram of Encoder Plug on BRS3••

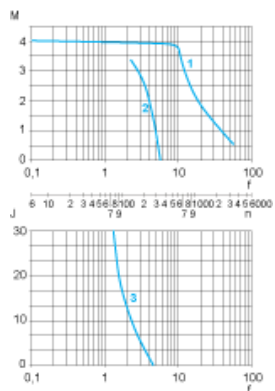


1 : Motor housing

Pin	Designation
1	A
2	A negated
3	B
4	B negated
5	C, I
6	C negated, I negated
7	5 V _{GND}
8	+ 5
9	-SENSE
10	+SENSE
11	Temperature sensor
12	Not connected

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