



## 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	48 V DC 34 V DC
Mounting support	Flange
Motor flange size	57.2 mm
Length	157 mm
Centring collar diameter	38 mm

## Complementary

Centring collar depth	1.6 mm
Number of mounting holes	4
Mounting holes diameter	5.2 mm
Circle diameter of the mounting holes	66.6 mm
Electrical connection	Connector
Feedback type	Single turn encoder
Speed feedback resolution	10000 points/turn
Holding brake	With
Shaft end	Smooth shaft
Second shaft	Without second shaft end
Shaft diameter	8 mm
Shaft length	21 mm
Nominal torque	1.5 N.m
Holding torque	1.7 N.m
Rotor inertia	0.38 kg.cm <sup>2</sup>
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
Accuracy error	+/- 6 arc min
Maximum starting frequency	6 kHz
[In] rated current	5.8 A
Resistance	0.7 Ohm (winding)
Time constant	4.6 ms
Maximum radial force Fr	50 N (first shaft end) 25 N (second shaft end)
Maximum axial force Fa	8.4 N (force pressure) 100 N (tensile force)
Service life in hours	20000 h (bearing)
Brake pull-in power	8 W
Angular acceleration	200000 rad/s <sup>2</sup>
Product weight	2 kg

## Environment

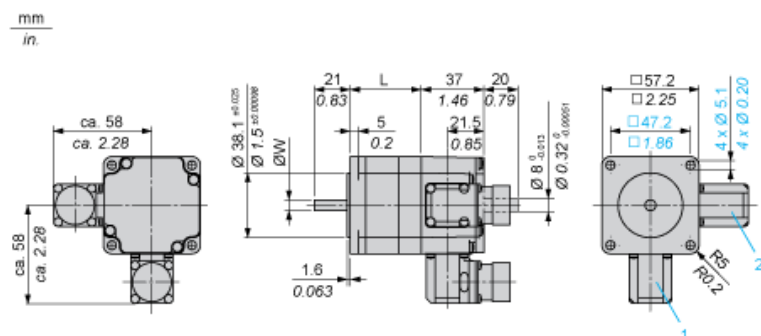
Standards	EN 50347 IEC 60072-1
Type of cooling	Natural convection
Ambient air temperature for operation	-25...40 °C
Ambient air temperature for storage	-25...70 °C
Operating altitude	<= 1000 m without power derating
Relative humidity	15...85 % without condensation
Vibration resistance	A conforming to EN/IEC 60034-14 20 m/s <sup>2</sup> maximum
IP degree of protection	IP41 for shaft bushing without shaft seal ring conforming to EN/IEC 60034-5 IP56 for total except 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 - <a href="#">Schneider Electric declaration of conformity</a>
REACH	Reference not containing SVHC above the threshold
Product environmental profile	Available <a href="#">Download Product Environmental</a>
Product end of life instructions	Need no specific recycling operations

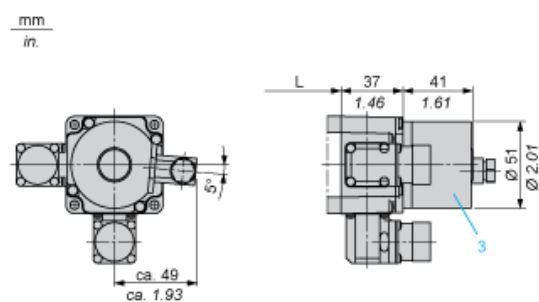
## Dimensions

### 3-Phase Stepper Motor in Connector Version



- 1 : Plug connection encoder (optional) 12 poles  
2 : Plug connection motor 6 poles

### Holding Brake



- 3 : Holding brake (optional)

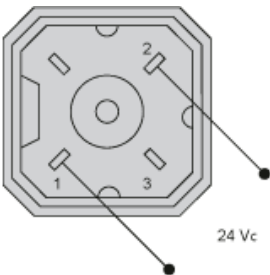
Dimensions in mm

L	Shaft diameter ØW
79 ±0.5	8 ±0.013

Dimensions in in.

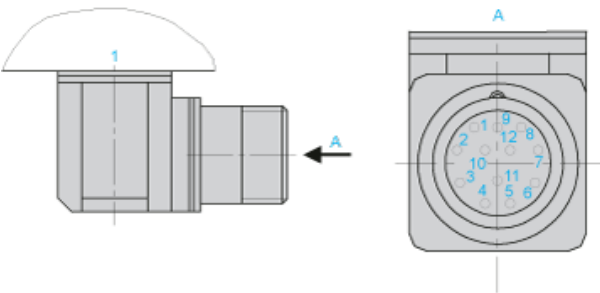
L	Shaft diameter ØW
3.11 ±0.020	0.31 ±0.00051

Wiring Diagram of Holding Brake



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

Wiring Diagram of Encoder Plug on BRS3••

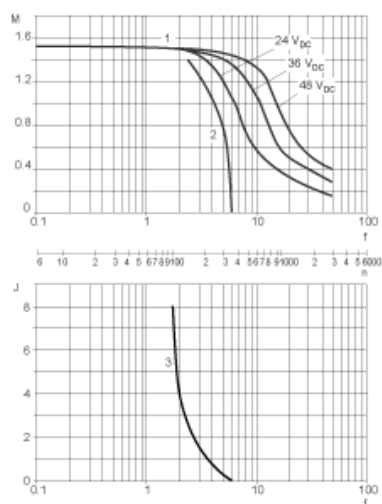


1 : Motor housing

Pin	Designation
1	A
2	A negated
3	B
4	B negated
5	C, I
6	C negated, I negated
7	5 V <sub>GND</sub>
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.cm<sup>2</sup>
- 1 : Pull-out torque
- 2 : Pull-in torque
- 3 : Maximum load inertia