

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	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
Peak stall torque	1.53 N.m
Continuous stall torque	1.53 N.m
Holding torque	1.7 N.m
Rotor inertia	0.38 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	8.5 kHz
[In] rated current	0.9 A
Resistance	25 Ohm (winding)
Time constant	4.6 ms
Maximum radial force Fr	25 N (second shaft end) 50 N (first shaft end)
Maximum axial force Fa	100 N (tensile force) 8.4 N (force pressure)
Service life in hours	20000 h (bearing)
Brake pull-in power	8 W
Angular acceleration	200000 rad/s ²
Net 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	20 m/s² maximum A conforming to EN/IEC 60034-14
IP degree of protection	IP41 shaft bushing: conforming to EN/IEC 60034-5 IP56 total except shaft bushing: conforming to EN/IEC 60034-5
Temperature class	F winding conforming to IEC/EN 60034-1

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	22 cm
Package 1 Width	19.5 cm
Package 1 Length	40 cm
Package 1 Weight	2.867 kg
Unit Type of Package 2	P06
Number of Units in Package 2	12
Package 2 Height	77 cm
Package 2 Width	80 cm
Package 2 Length	60 cm
Package 2 Weight	42.904 kg
Package 3 Height	73.5 cm

Offer Sustainability

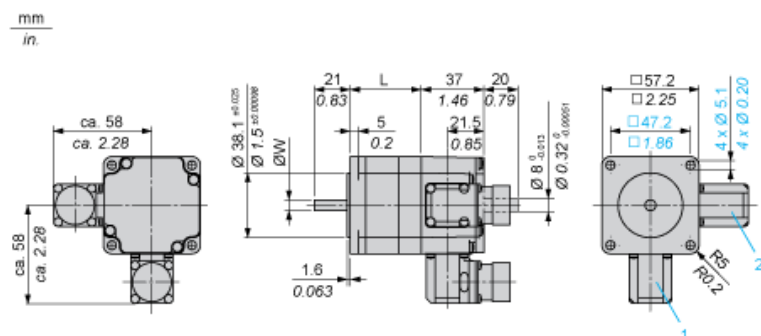
Sustainable offer status	Green Premium product
REACH Regulation	REACH Declaration
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration
Mercury free	Yes
China RoHS Regulation	China RoHS Declaration
RoHS exemption information	Yes
Environmental Disclosure	Product Environmental Profile
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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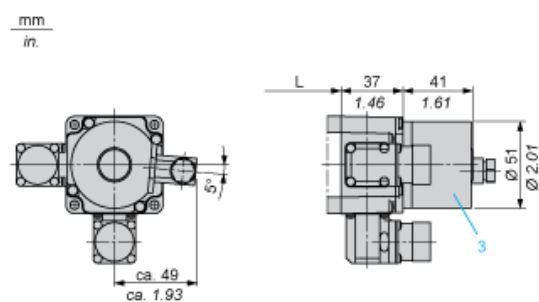
Dimensions

3-Phase Stepper Motor in Connector Version



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

Holding Brake



- 3 : Holding brake (optional)

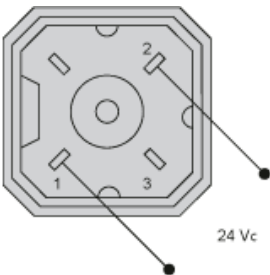
Dimensions in mm

L	Shaft diameter ØW
79 ±0.5	8 ±0.013

Dimensions in in.

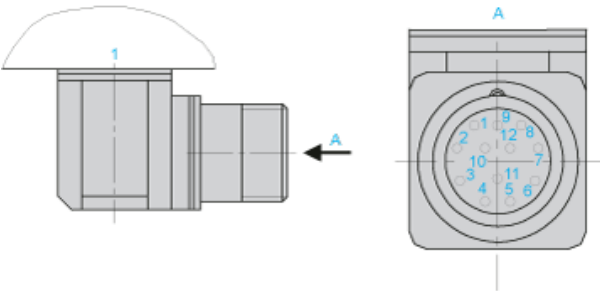
L	Shaft diameter ØW
3.11 ±0.020	0.31 ±0.00051

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••

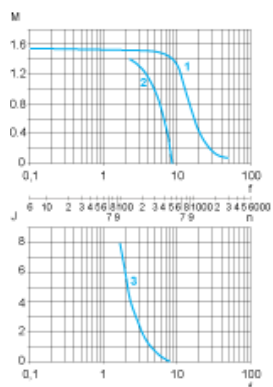


1 : Motor housing

Pin	Designation
1	A
2	A negated
3	B
4	B negated
5	C, I
6	C negated, I negated
7	5 V _{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