

# BRS366H031FCA

3-phase stepper motor - 1.02 Nm - shaft Ø6.35 mm - L=56 mm - with brake -con.



## 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	134 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	6.35 mm
Shaft length	21 mm
Nominal torque	0.9 N.m
Holding torque	1.02 N.m
Rotor inertia	0.22 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	8 kHz
[In] rated current	5.8 A
Resistance	0.5 Ohm (winding)
Time constant	3.3 ms
Maximum radial force Fr	24 N (first shaft end) 40 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	1.6 kg

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## Environment

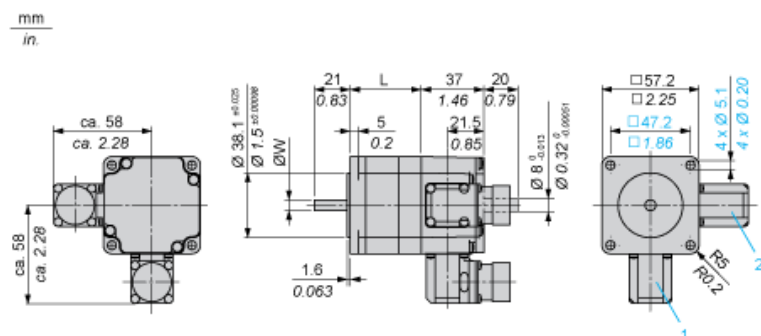
Standards	EN 50347 IEC 60072-1
Type of cooling	Natural convection
Ambient air temperature for operation	-25...40 °C
Ambient air temperature for storage	-25...70 °C
Operating altitude	<= 1000 m without power derating
Relative humidity	15...85 % without condensation
Vibration resistance	A conforming to 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

RoHS (date code: YYWW)	Compliant - since 0623 - <a href="#">Schneider Electric declaration of conformity</a>
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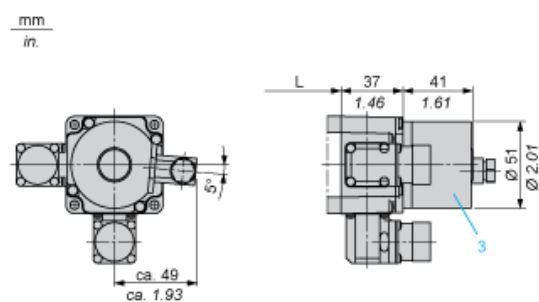
## Dimensions

### 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)

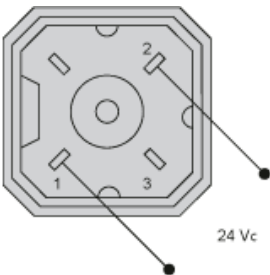
Dimensions in mm

L	Shaft diameter ØW
56 ±0.5	6.35 ±0.013

Dimensions in in.

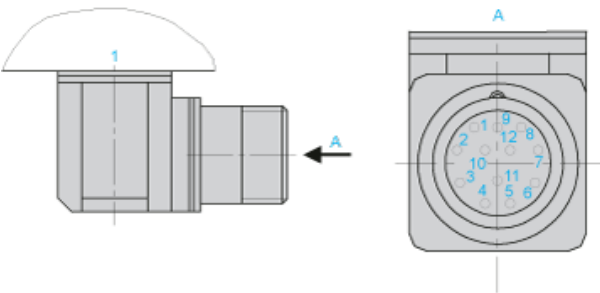
L	Shaft diameter ØW
2.20 ±0.020	0.25 ±0.00051

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••

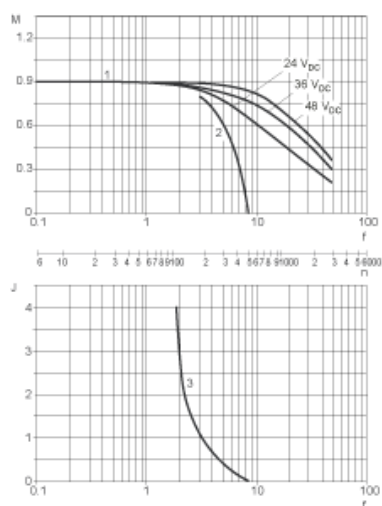


1 : Motor housing

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