

Product data sheet

Characteristics

BRS368H131FCA

3-phase stepper motor - 1.70 Nm - shaft Ø8 mm - L=79 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 | 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 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 |
| 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 ² |
| 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 ² 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 |

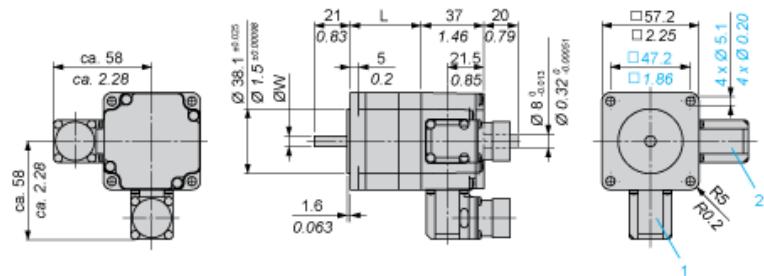
Offer Sustainability

| | |
|----------------------------------|---|
| Sustainable offer status | Green Premium product |
| RoHS (date code: YYWW) | Compliant - since 0623 -  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

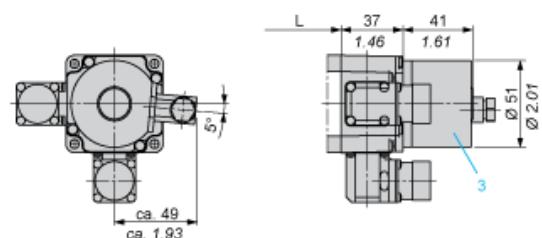
mm
in.



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

Holding Brake

mm
in.



3 : Holding brake (optional)

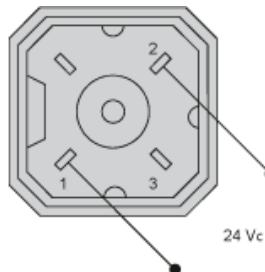
Dimensions in mm

| L | Shaft diameter ØW |
|---------|-------------------|
| 79 ±0.5 | 8 ±0.013 |

Dimensions in in.

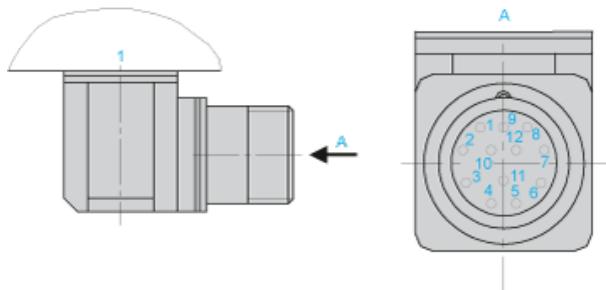
| L | Shaft diameter ØW |
|-------------|-------------------|
| 3.11 ±0.020 | 0.31 ±0.00051 |

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..

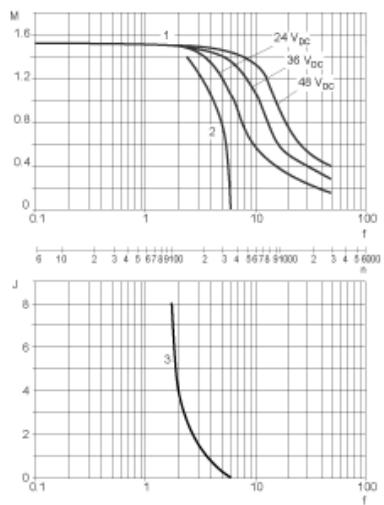


1 : Motor housing

| 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