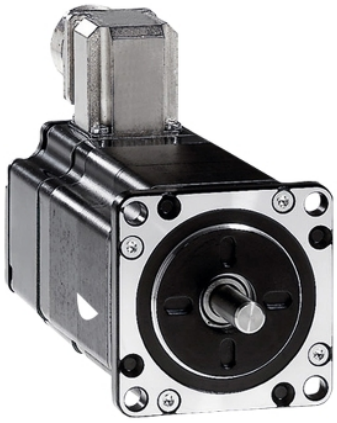
Product data sheet
Characteristics

BRS368H131ACA
3-phase stepper motor - 1.70 Nm - shaft Ø 8 mm - L = 79 mm - without brake



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	34 V DC 48 V DC
Mounting Support	Flange
Motor flange size	2.25 in (57.2 mm)
Length	4.57 in (116 mm)
Centring collar diameter	1.50 in (38 mm)

Complementary

Centring collar depth	0.06 in (1.6 mm)
Number of mounting holes	4
Mounting holes diameter	0.20 in (5.2 mm)
Circle diameter of the mounting holes	2.62 in (66.6 mm)
Electrical Connection	Connector
Feedback type	Single turn encoder
Speed feedback resolution	10000 points/turn
Holding brake	Without
Shaft end	Smooth shaft
Second shaft	Without second shaft end
Shaft diameter	0.31 in (8 mm)
Shaft length	0.83 in (21 mm)
Nominal torque	13.28 lbf.in (1.5 N.m)
Holding torque	15.05 lbf.in (1.7 N.m)
Rotor inertia	0.38 kg.cm²
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	6 kHz
Line Rated Current	5.8 A
Resistance	0.7 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)
Angular acceleration	200000 rad/s²
Net Weight	4.41 lb(US) (2 kg)

The information provided in this documentation contains general descriptions and/or technical characteristics of the performance of the products contained herein.
This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications.
It is the duty of any such user or integrator to perform the appropriate and complete risk analysis, evaluation and testing of the products with respect to the relevant specific application or use thereof.
Neither Schneider Electric Industries SAS nor any of its affiliates or subsidiaries shall be responsible or liable for misuse of the information contained herein.

Environment

Standards	IEC 60072-1 EN 50347
Type of cooling	Natural convection
Ambient Air Temperature for Operation	-13…104 °F (-25…40 °C)
Ambient Air Temperature for Storage	-13…158 °F (-25…70 °C)
Operating altitude	<= 3280.84 ft (1000 m) without power derating
Relative humidity	15…85 % without condensation
Vibration resistance	20 m/s² maximum A EN/IEC 60034-14
IP degree of protection	Total except shaft bushing IP56 EN/IEC 60034-5 Shaft bushing without shaft seal ring IP41 EN/IEC 60034-5
Temperature class	F winding IEC/EN 60034-1

Ordering and shipping details

Category	18284-STEPPER MOTORS
Discount Schedule	PC55
GTIN	3606485151649
Returnability	No
Country of origin	DE

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	3.94 in (10.0 cm)
Package 1 Width	6.30 in (16.0 cm)
Package 1 Length	8.46 in (21.5 cm)
Package 1 Weight	3.35 lb(US) (1.52 kg)

Offer Sustainability

Sustainable offer status	Green Premium product
California proposition 65	WARNING: This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov
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

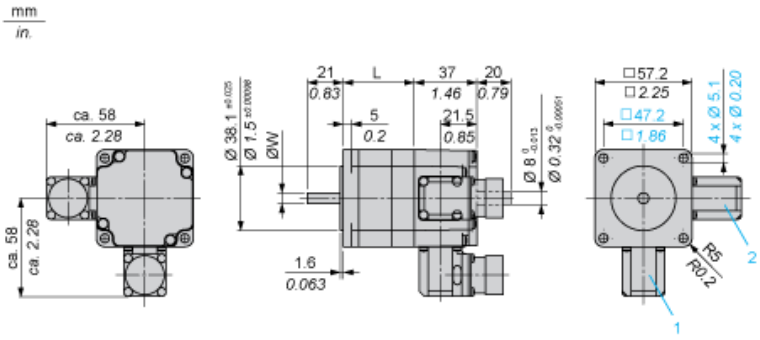
Contractual warranty

Warranty	18 months

BRS368H131ACA

Dimensions

3-Phase Stepper Motor in Connector Version



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

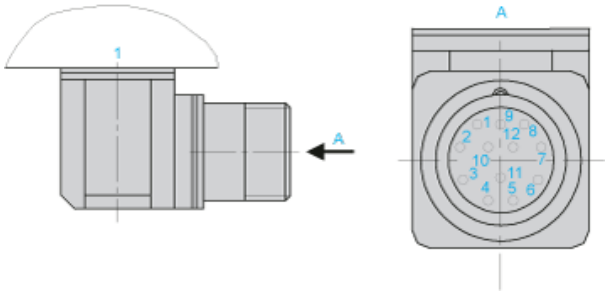
Dimensions in mm

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 Encoder Plug on BRS3••



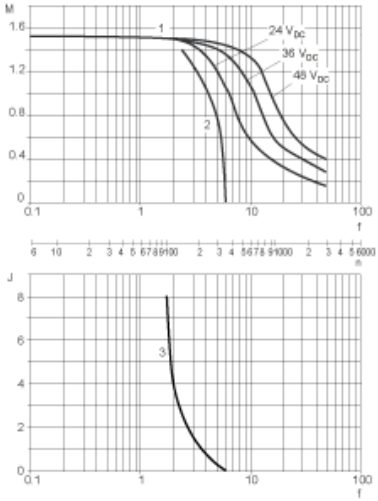
1 : Motor housing

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

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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 $kg.cm^2$
1 : Pull-out torque
2 : Pull-in torque
3 : Maximum load inertia