

3-phase stepper motor - 2.26Nm - shaft Ø 12mm - L=68 mm - w/o brake - conn

BRS397W361ACA

EAN Code: 3389119223720

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	85 mm
Length	111 mm
Centring collar diameter	60 mm

Complementary

centring collar depth	2 mm
Number of mounting holes	4
Mounting holes diameter	6.5 mm
Circle diameter of the mounting holes	98.99 mm
Electrical connection	Connector
Feedback type	Single turn encoder
Speed feedback resolution	10000 points/turn
Holding brake	Without
Shaft end	Untapped
Second shaft	Without second shaft end
Shaft diameter	12 mm
Shaft length	30 mm
nominal torque	2 N.m
Peak stall torque	1.9 N.m
Continuous stall torque	1.9 N.m
Holding torque	2.26 N.m
Rotor inertia	1.1 kg.cm ²

Resolution	1000 points/turn 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	5.3 kHz	
[In] rated current	1.75 A	
Resistance	6.5 Ohm (winding)	
Time constant	7 ms	
Maximum radial force Fr	100 N (first shaft end) 50 N (second shaft end)	
Maximum axial force Fa	175 N (tensile force) 30 N (force pressure)	
Service life in hours	20000 h (bearing)	
Angular acceleration	200000 rad/s²	
Net weight	2.1 kg	

Environment

Standards	IEC 60072-1 IEC 50347		
type of cooling	Natural convection		
Ambient air temperature for operation	-2540 °C		
Ambient air temperature for storage	-2570 °C		
Operating altitude	<= 1000 m without power derating		
Relative humidity	1585 % without condensation		
Vibration resistance	20 m/s² maximum A conforming to IEC 60034-14		
IP degree of protection	IP41 shaft bushing: conforming to IEC 60034-5 IP56 total except shaft bushing: conforming to IEC 60034-5		
Temperature class	F winding conforming to IEC 60034-1		

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	22.517 cm
Package 1 Width	19.014 cm
Package 1 Length	40.030 cm
Package 1 Weight	2.734 kg

Logistical informations

Country of origin DE

Contractual warranty

Warranty 18 months



Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing "Use Better, Use Longer, Use Again" campaign to extend product lifetimes and recyclability.

Environmental Data explained >

How we assess product sustainability >

☑ Environmental footprint	
Carbon footprint (kg.eq.CO2 per CR, Total Life cycle)	1822
Environmental Disclosure	Product Environmental Profile

Use Better

Packaging made with recycled cardboard	Yes
Packaging without single use plastic	No
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope)
REACh Regulation	REACh Declaration
PVC free	Yes

Use Again

○ Repack and remanufacture	
Circularity Profile	No need of specific recycling operations
Take-back	No
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins

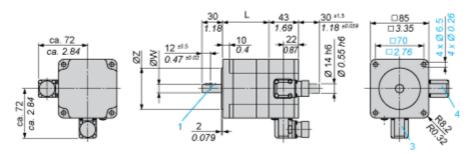
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Dimensions Drawings

Dimensions

3-Phase Stepper Motor in Connector Version

in.



3: Motor connection 6 poles

4: Motor connection (optional) 12 poles

Dimensions in mm

L	Shaft diameter ØW	Centring collar ØZ	Woodruff key DIN 6888 (1)
67.5 (+0.6) (-0.8)	12 h6	60 h8	4 x 6.5

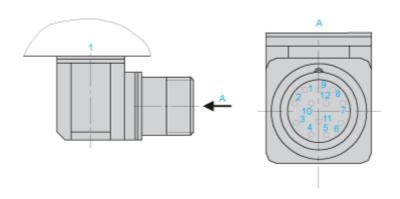
Dimensions in in.

Difference in in.			
L	Shaft diameter ØW	Centring collar ØZ	Woodruff key DIN 6888 (1)
2.66 (+0.023) (-0.031)	0.47 h6	2.36 h8	0.16 x 0.25

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Connections and Schema

Wiring Diagram of Encoder Plug on BRS3••



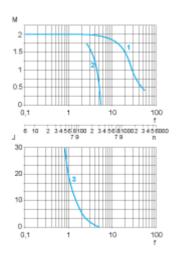
1: Motor housing

Pin	Designation
1	A
2	A negated
3	В
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

Performance Curves

Torque Characteristics

Measurement at 1000 Steps/Revolution, Nominal Voltage DC Bus $\mathbf{U_N}$ and Phase Current $\mathbf{I_N}$



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