Product data sheet
Characteristics

BRS3ACW850FCA
3-phase stepper motor - 13.5 Nm - shaft Ø19mm - L=180 mm - with brake- connector

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	325 V DC 230 V AC
Mounting support	Flange
Motor flange size	110 mm
Length	180 mm
Centring collar diameter	56 mm

Complementary

Centring collar depth	3 mm
Number of mounting holes	4
Mounting holes diameter	9 mm
Circle diameter of the mounting holes	125.86 mm
Electrical connection	Connector
Holding brake	With
Shaft end	Parallel key
Second shaft	Without second shaft end
Shaft diameter	19 mm
Shaft length	40 mm
Nominal torque	12 N.m
Peak stall torque	11.42 N.m
Continuous stall torque	11.42 N.m
Holding torque	13.5 N.m
Rotor inertia	10.5 kg.cm²
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	4.7 kHz
[In] rated current	4.1 A
Resistance	1.8 Ohm (winding)
Time constant	22 ms
Maximum radial force Fr	300 N (first shaft end) 150 N (second shaft end)
Maximum axial force Fa	60 N (force pressure) 330 N (tensile force)
Service life in hours	20000 h (bearing)
Angular acceleration	200000 rad/s²
Product weight	8.2 kg

Environment

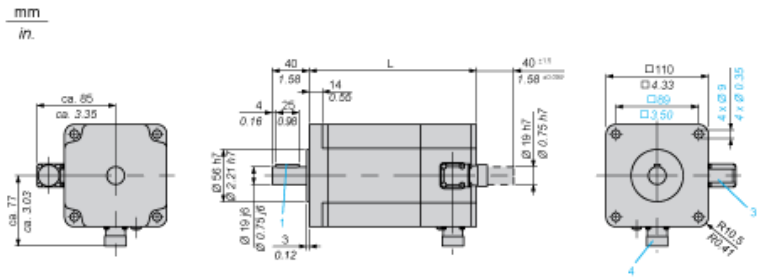
Standards	EN 50347 IEC 60072-1
Type of cooling	Natural convection
Ambient air temperature for operation	-25...40 °C
Ambient air temperature for storage	-25...70 °C
Operating altitude	<= 1000 m without power derating
Relative humidity	15...85 % without condensation
Vibration resistance	A conforming to EN/IEC 60034-14 20 m/s² maximum
IP degree of protection	IP56 for total except shaft bushing conforming to EN/IEC 60034-5 IP41 for 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

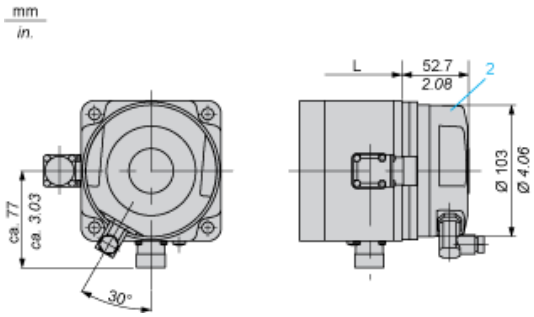
Dimensions

3-Phase Stepper Motor in Connector Version



3 : Plug connection encoder (optional) 12 poles
4 : Plug connection motor 6 poles

Holding Brake



2 : Holding brake (optional)

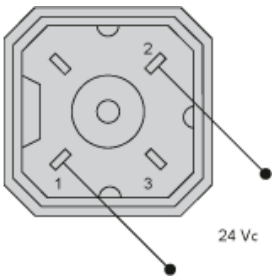
Dimensions in mm

L	Parallel key DIN 6885 (1)
180 ±1	6 x 6 x 25

Dimensions in in.

L	Parallel key DIN 6885 (1)
7.09 ±0.039	0.24 x 0.24 x 0.98

Wiring Diagram of Holding Brake

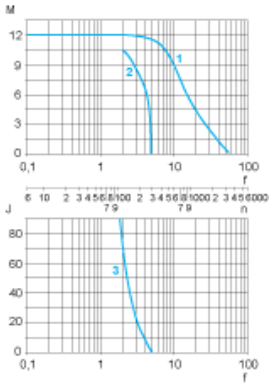


The connector is part of the scope of delivery. Connector designation: Hirschmann type G4 A 5M

BRS3ACW850FCA

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