## Product data sheet Characteristics

### BRS3ACW850ABB

3-phase stepper motor - 13.5 Nm - shaft Ø19mm - L=180mm - w/o brake - term box





#### 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	110 mm
Length	180 mm
Centring collar diameter	56 mm

### Complementary

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	Terminal box	
Holding brake	Without	
Shaft end	Parallel key	
Second shaft	With 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	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	4.7 kHz	
[In] rated current	4.1 A	
Resistance	1.8 Ohm (winding)	
Time constant	22 ms	
Maximum radial force Fr	150 N (second shaft end) 300 N (first shaft end)	
Maximum axial force Fa	330 N (tensile force) 60 N (force pressure)	
Service life in hours	20000 h (bearing)	
Angular acceleration	200000 rad/s²	
Net weight	8.2 kg	

### **Environment**

Standards	EN 50347 IEC 60072-1	
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 EN/IEC 60034-14	
IP degree of protection	IP41 shaft bushing: conforming to EN/IEC 60034-5 IP56 total except shaft bushing: conforming to EN/IEC 60034-5	
Temperature class	F winding conforming to IEC/EN 60034-1	

## Packing Units

PCE	
1	
13.0 cm	
19.0 cm	
39.5 cm	
8.4 kg	
_	1 13.0 cm 19.0 cm 39.5 cm

### Offer Sustainability

Sustainable offer status	Green Premium product	
REACh Regulation	☑ REACh Declaration	
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope)	
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

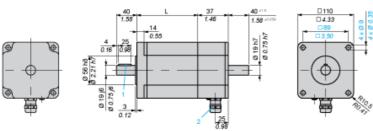
# Product data sheet **Dimensions Drawings**

# BRS3ACW850ABB

### **Dimensions**

### 3-Phase Stepper Motor in Terminal Box Version





#### Dimensions in mm

L	Parallel key DIN 6885 (1)	Cable gland (2)
180 ±1	6 x 6 x 25	ISO M20 x 1.5

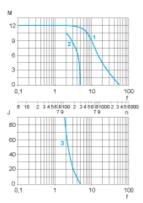
#### Dimensions in in.

L	Parallel key DIN 6885 (1)	Cable gland (2)
7.09 ±0.039	0.24 x 0.24 x 0.98	ISO M20 x 1.5

## BRS3ACW850ABB

### **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 torque2: Pull-in torque

3: Maximum load inertia