

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

BRS3ACW850ACA

EAN Code: 3389119224178

### 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<br>325 V DC  |  |
| 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                         | Without   |
| 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                            | 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)<br>300 N (first shaft end) |
| Maximum axial force Fa     | 330 N (tensile force)<br>60 N (force pressure)      |
| Service life in hours      | 20000 h (bearing)                                   |
| Angular acceleration       | 200000 rad/s²                                       |
| Net weight                 | 8.2 kg  |

## **Environment**

| Standards                             | IEC 60072-1<br>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<br>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             | 23.0 cm   |
| Package 1 Width              | 20.0 cm   |
| Package 1 Length             | 40.0 cm   |
| Package 1 Weight             | 9.07 kg   |
| Unit Type of Package 2       | P06       |
| Number of Units in Package 2 | 12        |
| Package 2 Height             | 77.0 cm   |
| Package 2 Width              | 80.0 cm   |
| Package 2 Length             | 60.0 cm   |
| Package 2 Weight             | 117.34 kg |

# Logistical informations

Country of origin DE

# **Contractual warranty**

Warranty

7 Jul 2025

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) | 3464                          |
| 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**

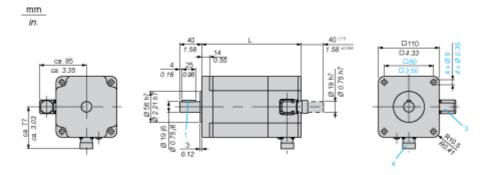
| ○ Repack and remanufacture |   |
|----------------------------|---|
| Circularity Profile        | No need of specific recycling operations  |
| Take-back                  | No  |
| WEEE                       | The product must be disposed on European Union markets following specific waste collection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

## **BRS3ACW850ACA**

### **Dimensions Drawings**

### **Dimensions**

### 3-Phase Stepper Motor in Connector Version



3: Plug connection encoder (optional) 12 poles

4: Plug connection motor 6 poles

### Dimensions in mm

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

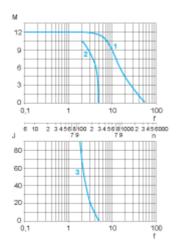
### Dimensions in in.

| Difficiations in in. |                           |
|----------------------|---------------------------|
| L                    | Parallel key DIN 6885 (1) |
| 7.09 ±0.039          | 0.24 x 0.24 x 0.98        |

### 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.cm<sup>2</sup>

1: Pull-out torque

2: Pull-in torque

3: Maximum load inertia