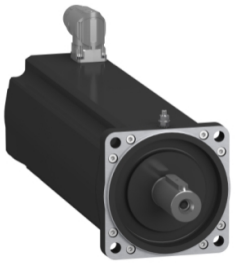
# Product data sheet

Specifications



## SH3 servomotor, 100mm, 4 stacks, keyed Shaft, Multiturn DSL 18bit, Brake, OneMotorCable angular M23, IP65/65

SH31004P1BF4100

**Product availability: Non-Stock - Not normally stocked in distribution facility**

## Main

| | |
|---|---|
| **Range Compatibility** | PacDrive 3 |
| **Device short name** | SH3 |
| **Product or Component Type** | Servo motor |

## Complementary

| | |
|---|---|
| **Maximum mechanical speed** | 6000 rpm |
| **[Us] rated supply voltage** | 115...480 V |
| **Phase** | Three phase |
| **Continuous stall current** | 6.2 A |
| **Continuous stall torque** | 88.5 lbf.in (10 N.m) 115...480 V three phase |
| **Continuous power** | 2500 W |
| **Peak stall torque** | 358.5 lbf.in (40.5 N.m) 115...480 V three phase |
| **Nominal output power** | 1490 W 230 V single phase<br>2480 W 400 V three phase<br>2480 W 480 V three phase |
| **Nominal torque** | 84.08 lbf.in (9.5 N.m) 230 V single phase<br>69.9 lbf.in (7.9 N.m) 400 V three phase<br>61.07 lbf.in (6.9 N.m) 480 V three phase |
| **Nominal speed** | 1500 rpm 230 V single phase<br>3000 rpm 400 V three phase<br>3600 rpm 480 V three phase |
| **Maximum current Irms** | 32.3 A |
| **Shaft end** | Parallel key |
| **Shaft diameter** | 0.9 in (24 mm) |
| **Shaft length** | 2.0 in (50 mm) |
| **Key width** | 0.3 in (8 mm) |
| **IP degree of protection** | IP65 motor: conforming to IEC 60034-5<br>IP65 shaft bushing: conforming to IEC 60034-5 |
| **Encoder type** | Absolute multiturn Hiperface DSL |
| **Speed feedback resolution** | 262144 points/turn x 4096 turns |
| **Holding brake** | With |
| **Holding torque** | 106.2 lbf.in (12 N.m) |
| **Mounting Support** | International standard flange |
| **Motor flange size** | 3.9 in (100 mm) |

Price is “List Price” and may be subject to a trade discount – check with your local distributor or retailer for actual price.

Disclaimer: 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

| | |
|---|---|
| **Electrical Connection** | Rotatable right angled connector |
| **Torque constant** | 1.62 N.m/A 248 °F (120 °C) |
| **Back emf constant** | 103 V/krpm 68 °F (20 °C) |
| **Number of motor poles** | 4.0 |
| **Rotor inertia** | 5.245 kg.cm² |
| **Stator resistance** | 1.8 Ohm |
| **Stator inductance** | 13 mH |
| **Brake pull-in power** | 18 W |
| **Type of cooling** | Natural convection |
| **Length** | 12.1 in (307.5 mm) |
| **Centring collar diameter** | 3.7 in (95 mm) |
| **Centring collar depth** | 0.1 in (3.5 mm) |
| **Number of mounting holes** | 4 |
| **Mounting holes diameter** | 0.4 in (9.0 mm) |
| **Circle diameter of the mounting holes** | 4.5 in (115 mm) |
| **Product Weight** | 21.6 lb(US) (9.8 kg) |
| **Sizing reference** | SH31004P |
| **Network number of phases** | 3 |
| **Temperature copper hot** | 266 °F (130 °C) |
| **Electrical connection** | quicklock rotatable right angled connector |
| **Output current 3s peak** | 32.3 A |
| **Inertia** | 1.025 kg.cm² of brake<br>0.0 kg.cm² of motor |

## Ordering and shipping details

| | |
|---|---|
| **Category** | US1PC5218359 |
| **Discount Schedule** | PC52 |
| **GTIN** | 3606481804945 |
| **Returnability** | No |
| **Country of origin** | DE |

## Packing Units

| | |
|---|---|
| **Unit Type of Package 1** | PCE |
| **Nbr. of units in pkg.** | 1 |
| **Package 1 Height** | 10.2 in (26.0 cm) |
| **Package 1 Width** | 7.9 in (20.0 cm) |
| **Package 1 Length** | 23.2 in (59.0 cm) |
| **Package weight(Lbs)** | 24.5 lb(US) (11.1 kg) |

## Contractual warranty

| | |
|---|---|
| **Warranty (in months)** | 18 |

## Environmental Data

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

| | |
|---|---|
| Total lifecycle Carbon footprint | **5 866 kg CO2 eq.** |
| Carbon footprint of the manufacturing phase [A1 to A3] | **49 kg CO2 eq.** |
| Carbon footprint of the distribution phase [A4] | **1 kg CO2 eq.** |
| Carbon footprint of the installation phase [A5] | **0.1 kg CO2 eq.** |
| Carbon footprint of the use phase [B2, B3, B4, B6] | **5 815 kg CO2 eq.** |
| Carbon footprint of the end-of-life phase [C1 to C4] | **1 kg CO2 eq.** |

## Use Better

### Materials and Substances

| | |
|---|---|
| Packaging made with recycled cardboard | **Yes** |
| Packaging without single use plastic | **No** |
| SCIP Number | **Ead0850d-370a-47c5-8cf7-1d93c2c974a4** |
| EU RoHS Directive | **Compliant By Exemption** |
| REACh Regulation | **Reference contains Substances of Very High Concern above the threshold** |
| 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** |
| PVC free | **Yes** |

## Use Longer

### Lifetime extension

| | |
|---|---|
| Repair | **No** |

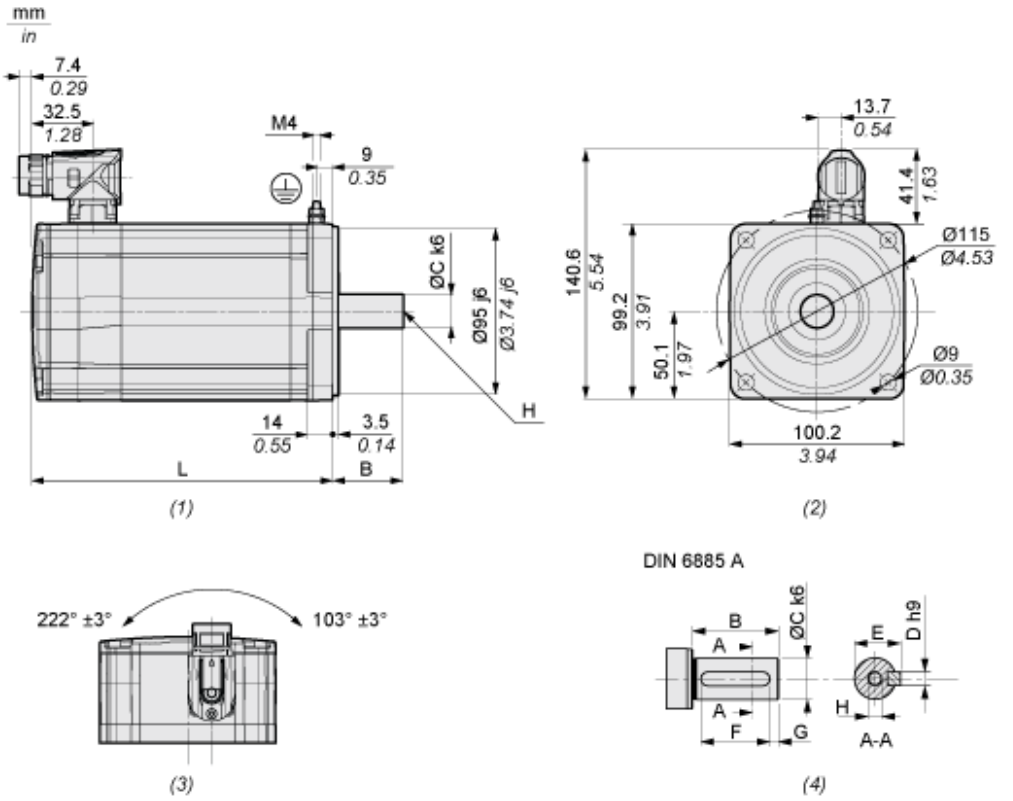
## Use Again

### Repack and remanufacture

| | |
|---|---|
| Circularity Profile | **No need of specific recycling operations** |
| Take-back | **No** |

## Dimensions Drawings

### Dimensions




(1) : Side view

(2) : Mounting

(3) : Rotating area

(4) : Feather key

| Characteristic | | Unit | Value |
|---|---|---|---|
| **L** | Length with holding brake | mm (in) | 307.5 (12.11) |
| **B** | Shaft length | mm (in) | 50 (1.97) |
| **C** | Shaft diameter | mm (in) | 24 (0.94) |
| **D** | Width of parallel key | mm (in) | 8 (0.31) |
| **E** | Shaft width with parallel key | mm (in) | 27 (1.06) |
| **F** | Length of parallel key | mm (in) | 40 (1.57) |
| **G** | Distance parallel key to shaft end | mm (in) | 5 (0.2) |
| **H** | Female thread of shaft | | DIN 332-D M8 |
| | Parallel key | | DIN 6885-A8x7x40 |