

# Product data sheet

Specifications



SH3 servomotor, 140mm, 1 stack, high Torque, keyed Shaft, SinCos Multiturn 128, no Brake, angular, IP54/65

SH31401M12A2000

! Discontinued

! Discontinued on: Jun 20, 2025

## Main

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

## Complementary

|                           |                                                                                                                                                                                 |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Maximum mechanical speed  | 4000 rpm                                                                                                                                                                        |
| [Us] rated supply voltage | 115...480 V                                                                                                                                                                     |
| Phase                     | Three phase                                                                                                                                                                     |
| Continuous stall current  | 4 A                                                                                                                                                                             |
| Continuous stall torque   | 98.2 lbf.in (11.1 N.m) 115...480 V three phase                                                                                                                                  |
| Continuous power          | 1700 W                                                                                                                                                                          |
| Peak stall torque         | 239.0 lbf.in (27 N.m) 115...480 V three phase                                                                                                                                   |
| Nominal output power      | 430 W 115 V single phase<br>860 W 230 V single phase<br>1670 W 400 V three phase<br>1960 W 480 V three phase                                                                    |
| Nominal torque            | 97.4 lbf.in (11 N.m) 115 V single phase<br>96.92 lbf.in (10.95 N.m) 230 V single phase<br>93.8 lbf.in (10.6 N.m) 400 V three phase<br>92.05 lbf.in (10.4 N.m) 480 V three phase |
| Nominal speed             | 375 rpm 115 V single phase<br>750 rpm 230 V single phase<br>1500 rpm 400 V three phase<br>1800 rpm 480 V three phase                                                            |
| Maximum current Irms      | 10.8 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   | IP54 shaft bushing without shaft seal ring: conforming to IEC 60034-5<br>IP65 motor: conforming to IEC 60034-5<br>IP65 shaft bushing: conforming to IEC 60034-5                 |
| Encoder type              | Absolute multiturn SinCos Hiperface                                                                                                                                             |
| Speed feedback resolution | 128 periods                                                                                                                                                                     |
| Holding brake             | Without                                                                                                                                                                         |

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

|                                       |                                                       |
|---------------------------------------|-------------------------------------------------------|
| Mounting Support                      | International standard flange                         |
| Motor flange size                     | 5.5 in (140 mm)                                       |
| Electrical Connection                 | Straight connector                                    |
| Torque constant                       | 2.78 N.m/A 248 °F (120 °C)                            |
| Back emf constant                     | 193 V/krpm 68 °F (20 °C)                              |
| Number of motor poles                 | 5                                                     |
| Rotor inertia                         | 7.41 kg.cm²                                           |
| Stator resistance                     | 5.3 Ohm                                               |
| Stator inductance                     | 88.55 mH                                              |
| Maximum radial force Fr               | 1930 N 1000 rpm<br>1530 N 2000 rpm<br>1340 N 3000 rpm |
| Maximum axial force Fa                | 300 N                                                 |
| Type of cooling                       | Natural convection                                    |
| Length                                | 8.6 in (217.5 mm)                                     |
| Centring collar diameter              | 5.1 in (130 mm)                                       |
| Centring collar depth                 | 0.1 in (3.5 mm)                                       |
| Number of mounting holes              | 4                                                     |
| Mounting holes diameter               | 0.4 in (11 mm)                                        |
| Circle diameter of the mounting holes | 6.5 in (165 mm)                                       |
| Net Weight                            | 26.2 lb(US) (11.9 kg)                                 |
| Sizing reference                      | SH31401M                                              |
| Network number of phases              | 3                                                     |
| Temperature copper hot                | 266 °F (130 °C)                                       |
| Electrical connection                 | rotatable right angled connector                      |

## Packing Units

|                        |     |
|------------------------|-----|
| Unit Type of Package 1 | PCE |
| Nbr. of units in pkg.  | 1   |

## 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 >](#)

### Use Better

| Materials and Substances               |     |
|----------------------------------------|-----|
| Packaging made with recycled cardboard | Yes |
| Packaging without single use plastic   | No  |

### Use Longer

| Lifetime extension |    |
|--------------------|----|
| Repair             | No |

### Use Again

| Repack and remanufacture |    |
|--------------------------|----|
| Take-back                | No |