

Product data sheet

Specifications



SH3 servomotor, 100mm, 3 stacks, high Torque, keyed Shaft, SinCos Multiturn 128, no Brake, angular, IP54/65

SH31003M12A2000

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	3.4 A
Continuous stall torque	70.8 lbf.in (8 N.m) 115...480 V three phase
Continuous power	1500 W
Peak stall torque	250.5 lbf.in (28.3 N.m) 115...480 V three phase
Nominal output power	410 W 115 V single phase 790 W 230 V single phase 1470 W 400 V three phase 1700 W 480 V three phase
Nominal torque	69.04 lbf.in (7.8 N.m) 115 V single phase 66.4 lbf.in (7.5 N.m) 230 V single phase 62.0 lbf.in (7 N.m) 400 V three phase 59.83 lbf.in (6.76 N.m) 480 V three phase
Nominal speed	500 rpm 115 V single phase 1000 rpm 230 V single phase 2000 rpm 400 V three phase 2400 rpm 480 V three phase
Maximum current Irms	14.7 A
Shaft end	Parallel key
Shaft diameter	0.7 in (19 mm)
Shaft length	1.6 in (40 mm)
Key width	0.2 in (6 mm)
IP degree of protection	IP54 shaft bushing without shaft seal ring: conforming to IEC 60034-5 IP65 motor: conforming to IEC 60034-5 IP65 shaft bushing: conforming to IEC 60034-5
Encoder type	Absolute multiturn SinCos Hiperface
Speed feedback resolution	128 periods
Holding brake	Without
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	Straight connector
Torque constant	2.35 N.m/A 248 °F (120 °C)
Back emf constant	148 V/krpm 68 °F (20 °C)
Number of motor poles	4
Rotor inertia	3.22 kg.cm²
Stator resistance	5.3 Ohm
Stator inductance	17.4 mH
Maximum radial force Fr	1050 N 1000 rpm 830 N 2000 rpm 730 N 3000 rpm 660 N 4000 rpm
Maximum axial force Fa	160 N
Type of cooling	Natural convection
Length	9.5 in (240.5 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)
Net Weight	16.5 lb(US) (7.5 kg)
Sizing reference	SH31003M
Network number of phases	3
Temperature copper hot	266 °F (130 °C)
Electrical connection	rotatable right angled connector
Output current 3s peak	14.7 A
Inertia	0.0 kg.cm² of brake 3.22 kg.cm² of motor

Ordering and shipping details

GTIN	3606487682844
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Packing Units

Unit Type of Package 1	PCE
Nbr. of units in pkg.	1
Package 1 Height	11.8 in (30 cm)
Package 1 Width	11.8 in (30 cm)
Package 1 Length	15.7 in (40 cm)
Package weight(Lbs)	17.9 lb(US) (8.1 kg)

Contractual warranty

Warranty (in months)	18
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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