## SUB-FHP MOTORS

**General Specifications:**

Precision subfractional horsepower DC permanent magnet motors designed for use with full wave non-filtered SCR controls for adjustable speed applications requiring dynamic braking and constant torque throughout the speed range.

31/34 Frame

**Mechanical Features:**

Compact space saving designs. Ball bearings. Long-life brushes for demanding applications. Brushes easily replaced without disassembly of the motor. Standard mounted conduit box on 31 and 34 frame models simplifies connections.

25 Frame

**Electrical Features:**

Continuous duty with full wave un-filtered rectified SCR (thyristor) controls. Linear speed torque characteristics throughout the speed range. High starting torques. Reversible rotation from a simple two lead connection.

## SUB-FHP IP55 WASHGUARD MOTORS

**General Specifications:**

Precision subfractional horsepower DC permanent magnet motors. Designed for use with fullwave non-filtered SCR controls or battery supplied low voltage for adjustable speed applications requiring constant torque throughout the speed range.

**Mechanical Features:**

Corrosion resistant 303 stainless steel. Shaft with spring-loaded contact shaft seal protect the double sealed ball bearings and motor interior.

Frame, endshields, armature and interior components protected by enamel and polyester compounds for resistance to moisture, acids, alkalies and oil.

Cast conduit box with threaded conduit holes and Nitrile gaskets keep water out. The conduit box cover is made from 304 stainless steel.

For any condensation that may accumalte inside the motor a one-way stainless steel vapor vent is provided. All hardware is stainless steel. Motor painted with white epoxy for superior corrosion resistance and protection. Gaskets seal conduit box to motor frame and conduit box cover. Thru-bolt heads and nuts sealed with fiber washers. O-rings under each threaded brush cover.

**Application Notes:**

LEESON WASHGUARD motors are designed for extended life in applications requiring regular washdown or otherwise wet environments. Washguard motors retard the entrance of water. Extra protection for the motor's interior prevents rust and corrosion build-up and releases trapped moisture to insure a longer life than possible with a standard motor.

**Dimensions:**

Found on page 283.

### SCR RATED (90 & 180 V) • TENV • SQUARE FLANGE OR C FACE

| HP | Full Load RPM | Frame | Catalog Number | App. Wgt. (lbs.) | Arm. Volts DC | Control Volts AC Input | F.L. Amps DC |
|---|---|---|---|---|---|---|---|
| **1/25** | 3600 | 25AS | **M1110014.00Ⓑ** | 3 | 90 | 115 | 0.5 |
| | 1800 | 25CS | **M1110003.00Ⓑ** | 3 | 90 | 115 | 0.5 |
| **1/15** | 3600 | 25CS | **M1110015.00Ⓑ** | 5 | 90 | 115 | 0.7 |
| | 1800 | 31BS | **M1120013.00** | 5 | 90 | 115 | 0.8 |
| | 1800 | 31BS | **M1120039.00** | 7 | 180 | 230 | 0.4 |
| **1/10** | 3600 | 31BS | **M1120060.00** | 5 | 90 | 115 | 1.3 |
| | 1800 | 31CS | **M1120014.00** | 7 | 90 | 115 | 1.1 |
| | 1800 | 31CS | **M1120041.00** | 7 | 180 | 230 | 0.6 |
| **1/8** | 3600 | 31CS | **M1120059.00** | 6 | 90 | 115 | 1.5 |
| | 1800 | 31ES | **M1120027.00** | 7 | 90 | 115 | 1.3 |
| | 1800 | 31ES | **M1120045.00** | 7 | 180 | 230 | 0.7 |
| | 1800 | 34D42CZ | **M1130053.00** | 8 | 90 | 115 | 1.4 |
| | 1800 | 34D42CZ | **M1130118.00** | 7 | 180 | 230 | 0.7 |
| **1/6** | 3600 | 31ES | **M1120058.00** | 9 | 90 | 115 | 1.9 |
| | 1800 | 31GS | **M1120042.00** | 9 | 90 | 115 | 1.8 |
| | 1800 | 31GS | **M1120043.00** | 11 | 180 | 230 | 0.9 |
| | 1800 | 34E56C | **M1130054.00** | 11 | 90 | 115 | 1.7 |
| | 1800 | 34E56C | **M1130119.00** | 11 | 180 | 230 | 0.9 |
| **1/4** | 3600 | 31GS | **M1120062.00** | 9 | 90 | 115 | 2.6 |
| | 1800 | 34G56C | **M1130055.00**** | 13 | 90 | 115 | 2.7 |
| | 1800 | 34G56C | **M1130120.00**** | 13 | 180 | 230 | 1.3 |

Ⓑ 25 frame motors have provisions for an optional conduit box catalog number M1760000, see page 179.
** These motors are totally enclosed fan cooled.

### SCR RATED (90 V) • TENV • SQUARE FLANGE OR C FACE

| HP | Full Load RPM | Frame | Catalog Number | Arm. Volts DC | Control Volts AC Input | F.L. Amps DC |
|---|---|---|---|---|---|---|
| **1/8** | 1800 | 31S | **M1120181.00** | 90 | 115 | 1.5 |
| **1/6** | 1800 | 31S | **M1120183.00** | 90 | 115 | 1.9 |
| **1/4** | 3600 | 32F42CZ | **M1120185.00** | 90 | 115 | 1.9 |

### LOW VOLTAGE (12 V) • TENV SQUARE FLANGE OR C FACE

| HP | Full Load RPM | Frame | Catalog Number | Arm. Volts DC | F.L. Amps DC |
|---|---|---|---|---|---|
| **1/8** | 1800 | 31S | **M1120182.00** | 12 | 10.5 |
| **1/6** | 1800 | 31S | **M1120184.00** | 12 | 14.5 |
| **1/4** | 3600 | 32F42CZ | **M1120186.00** | 12 | 20 |