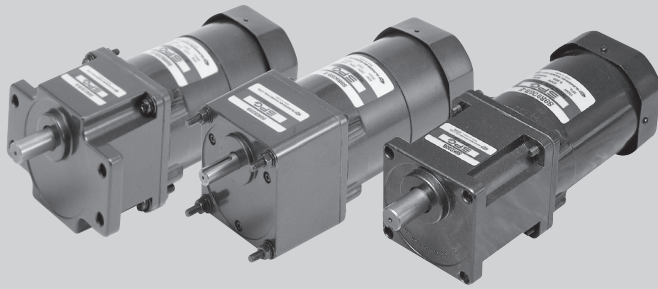


Powermec



90W

ELECTROMAGNETIC BRAKE MOTOR

□ 90mm LEAD WIRE TYPE

| SIZE mm sq. | Type | Poles | Output (W) | Voltage (V) | Frequency (Hz) | Duty | Rated Load | | | | Starting Torque | | Capacitor (uF) |
|----------------|--|-------|---------------|--------------------|-------------------|--------|----------------|----------------|-------------------------|----------------|-----------------|----------------|-------------------|
| | | | | | | | Current (A) | Speed (rpm) | Torque (kg-cm) (N-m) | | (kg-cm) | (N-m) | |
| 90 | S9R90GA()-E S9R90GA()-E(TP) S9R90GA()-ECE | 4 | 90 | 1 ∅ 110 | 60 | 30min. | 2.20 | 1550 | 5.80 | 0.580 | 8.90 | 0.890 | 30.0 |
| | S9R90GB()-E S9R90GB()-E(TP) S9R90GB()-ECE | 4 | 90 | 1 ∅ 220 | 60 | 30min. | 1.10 | 1550 | 5.80 | 0.580 | 8.90 | 0.890 | 7.5 |
| | S9R90GC()-E S9R90GC()-E(TP) S9R90GC()-ECE | 4 | 90 | 1 ∅ 100 | 50 60 | 30min. | 2.00 2.25 | 1250 1500 | 7.20 6.00 | 0.720 0.600 | 7.00 | 0.700 | 30.0 |
| | S9R90GD()-E S9R90GD()-E(TP) S9R90GD()-ECE | 4 | 90 | 1 ∅ 200 | 50 60 | 30min. | 0.90 1.10 | 1250 1500 | 7.20 6.00 | 0.720 0.600 | 7.00 | 0.700 | 7.5 |
| | S9R90GE()-E S9R90GE()-ECE | 4 | 90 | 1 ∅ 100 1 ∅ 115 | 50 60 | 30min. | 1.80 1.90 | 1300 1600 | 7.20 5.80 | 0.720 0.580 | 6.30 6.90 | 0.630 0.690 | 30.0 25.0 |
| | S9R90GX()-E S9R90GX()-ECE | 4 | 90 | 1 ∅ 220 1 ∅ 240 | 50 | 30min. | 0.71 0.75 | 1300 | 6.90 7.20 | 0.690 0.720 | 6.80 8.60 | 0.680 0.860 | 6.0 |
| | S9I90GU()-E S9I90GU()-ECE | 4 | 90 | 3 ∅ 200 | 50 60 | Cont. | 0.63 0.60 | 1300 1550 | 6.90 6.00 | 0.690 0.600 | 10.60 8.90 | 1.060 0.890 | — |
| | S9I90GT()-E S9I90GT()-ECE | 4 | 90 | 3 ∅ 220 | 50 60 | Cont. | 0.68 0.55 | 1350 1600 | 6.80 5.70 | 0.680 0.570 | 13.00 10.50 | 1.300 1.050 | — |
| | S9I90GS()-E S9I90GS()-ECE | 4 | 90 | 3 ∅ 380 | 50 | Cont. | 0.32 | 1300 | 6.80 | 0.680 | 10.55 | 1.055 | — |
| | | | | | 60 | | 0.30 | 1550 | 5.70 | 0.570 | 8.20 | 0.820 | |
| | | | | 3 ∅ 400 | 50 | Cont. | 0.35 | 1300 | 6.90 | 0.690 | 11.70 | 1.170 | |
| | | | | | 60 | | 0.32 | 1550 | 5.80 | 0.580 | 8.90 | 0.890 | |
| | | | | 3 ∅ 415 | 50 | Cont. | 0.33 | 1350 | 6.80 | 0.680 | 12.00 | 1.200 | |
| | | | | | 60 | | 0.29 | 1600 | 5.70 | 0.570 | 9.50 | 0.950 | |
| | | | | 3 ∅ 440 | 50 | Cont. | 0.35 | 1350 | 6.90 | 0.690 | 13.30 | 1.330 | |
| | | | | | 60 | | 0.31 | 1600 | 5.80 | 0.580 | 10.50 | 1.050 | |

- ❖ S9R90GE-E is UL approved(UL FILE NO. E172720) thermally protected type.
- ❖ Appropriate capacitors shall be used according to the voltage for S9R90GE-E type since the size of the capacitor differs by different voltages. Malfunction may occur when not used properly. Capacitor for 115V will be delivered otherwise the required voltage is informed.
- ❖ CE marked at the end of model name indicates that it is thermally protected type which has received CE with built-in TP. S9R90GE()-ECE is available only for 115V specification.
- ❖ TP marked at the end of the model name indicates that it is standard motor with Thermal Protector mounted. S9R90GE-E, S9R90GX-E is thermally protected type with TP mounted.
- ❖ Above data is measured with brake removed from electromagnetic brake motor.
- ❖ () is for marking 'L' type or 'H'. 'L' should be used with gearhead 'L' and 'H' should be used with gearhead 'H'.
- ❖ For a three-phase 380V~440V motor, be cautious when using the inverter. When inverter is used, the insulation of winding becomes hot and may cause damage to motor.

50Hz

| GEAR RATIO | 3 3.6 5 6 7.5 9 10 12.5 15 18 20 25 30 36 40 50 60 75 90 100 120 150 180 200 | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | MODEL | rpm | 500 | 416 | 300 | 250 | 200 | 166 | 150 | 120 | 100 | 83 | 75 | 60 | 50 | 41 | 37 | 30 | 25 | 20 | 16 | 15 | 12 | 10 | 8 | 7.5 | |
| S9KC□B() | kg-cm | 18.2 | 21.9 | 30.4 | 36.5 | 45.6 | 54.7 | 60.8 | 68.4 | 82.1 | 98.6 | 110 | 124 | 149 | 178 | 198 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 |
| S9KC□B()-S | N·m | 1.784 | 2.146 | 2.979 | 3.577 | 4.469 | 5.361 | 5.958 | 6.703 | 8.046 | 9.663 | 10.78 | 12.15 | 14.60 | 17.44 | 19.40 | 19.60 | 19.60 | 19.60 | 19.60 | 19.60 | 19.60 | 19.60 | 19.60 | 19.60 | 19.60 | 19.60 |

60Hz

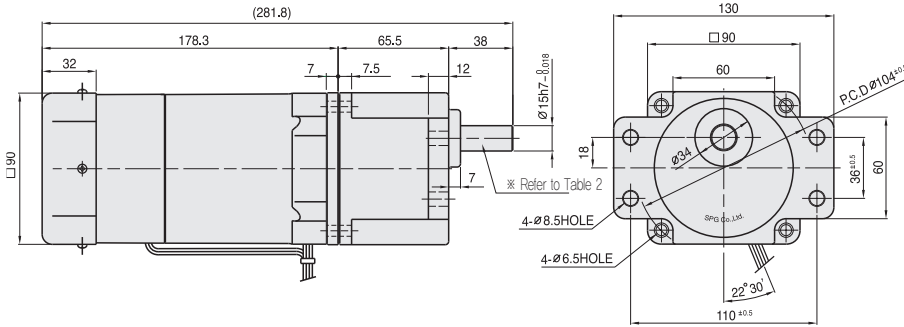
| GEAR RATIO | 3 3.6 5 6 7.5 9 10 12.5 15 18 20 25 30 36 40 50 60 75 90 100 120 150 180 200 | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | MODEL | rpm | 600 | 500 | 360 | 300 | 240 | 200 | 180 | 144 | 120 | 100 | 90 | 72 | 60 | 50 | 45 | 36 | 30 | 24 | 20 | 18 | 15 | 12 | 10 | 9 | |
| S9KC□B() | kg-cm | 14.6 | 17.5 | 24.3 | 29.2 | 36.5 | 43.7 | 48.6 | 54.8 | 65.7 | 78.8 | 87.6 | 99.0 | 119 | 143 | 158 | 198 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 |
| S9KC□B()-S | N·m | 1.431 | 1.715 | 2.381 | 2.862 | 3.577 | 4.675 | 4.763 | 5.370 | 6.439 | 7.722 | 8.585 | 9.702 | 11.66 | 14.01 | 15.48 | 19.40 | 19.60 | 19.60 | 19.60 | 19.60 | 19.60 | 19.60 | 19.60 | 19.60 | 19.60 | 19.60 |

- ❖ The code in □ of gearhead model is for gear ratio.
- ❖ It is the permissible torque of the assembled motor and gearhead.
- ❖ The permissible torque of the motor and inter-decimal gearhead is 200 kg-cm.
- ❖ ■ color indicates that the output shaft of the geared motor rotates in the same direction as the output shaft of the motor. Others indicate rotation in the opposite direction.
- ❖ Rpm is based on synchronous speed (50Hz: 1500rpm, 60Hz: 1800rpm) divided by gear ratio. The actual rotation speed can be 2~20% less than displayed value depending on the load.
- ❖ () is for marking 'L' type or 'H'. 'L' should be used with motor 'L' and 'H' should be used with motor 'H'.

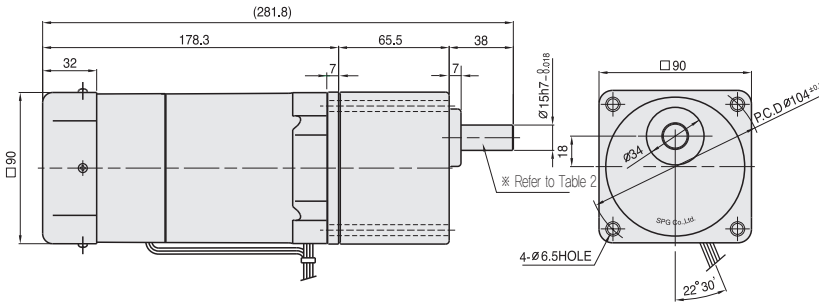
DIMENSIONS

+ GEARED MOTOR

- ※ MOTOR MODEL : S9R90G□□-E
- ※ HEAD MODEL : S9□C3B□-S-S9□C200B□-S

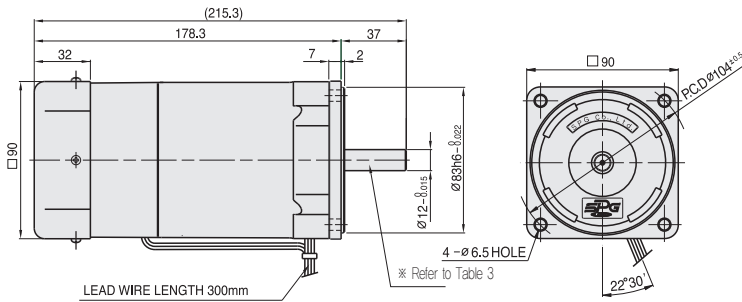


- ※ HEAD MODEL : S9□C3B□-S9□C200B□



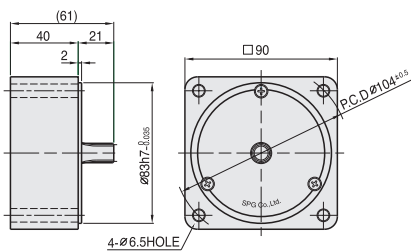
+ MOTOR

- ※ MOTOR MODEL : S9R90□□□-E



+ INTER-DECIMAL GEAR HEAD

- ※ MODEL : S9GX10B(H,L)-S



+ WEIGHT - (Table 1)

| PART | WEIGHT(kg) | |
|-------------------|-------------------------|------|
| MOTOR | 3.41 | |
| DECIMAL GEAR HEAD | 0.65 | |
| GEAR HEAD | S9□C3B□ ~S9□C10B□ | 1.21 |
| | S9□C12.5B□ ~S9□C20B□ | 1.30 |
| | S9□C25B□ ~S9□C60B□ | 1.40 |
| | S9□C75B□ ~S9□C200B□ | 1.45 |

+ KEY SPEC

| GEAR HEAD | MOTOR |
|-----------|-------|
| | |

+ SPEC for output shaft of gearhead - (Table 2)

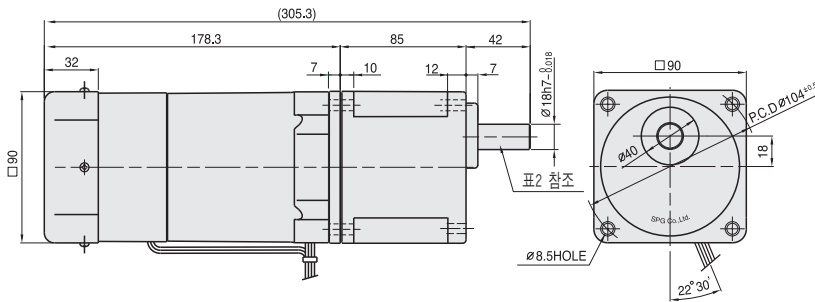
| MODEL | TYPES OF OUTPUT SHAFT |
|-----------------------|-----------------------|
| STRAIGHT TYPE | |
| S9SC3B□ ~S9SC200B□ | |
| D-CUT TYPE | |
| S9DC3B□ ~S9DC200B□ | |
| KEY TYPE | |
| S9KC3B□ ~S9KC200B□ | |

+ SPEC for output shaft of motor - (Table 3)

| MODEL | TYPES OF OUTPUT SHAFT |
|---------------|-----------------------|
| GEAR TYPE | |
| S9R90G□□-E | |
| STRAIGHT TYPE | |
| S9R90S□-E | |
| D-CUT TYPE | |
| S9R90D□-E | |
| KEY TYPE | |
| S9R90K□-E | |

DIMENSIONS

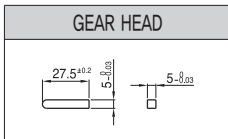
+ GEARED MOTOR * MOTOR MODEL : S9R90G□H
 * HEAD MODEL : S9□D3B~S9□D200B



+ WEIGHT - (Table 1)

| PART | | WEIGHT(kg) |
|-----------|-----------------------|------------|
| MOTOR | | 3.41 |
| GEAR HEAD | S9□D3B ~S9□D10B | 1.65 |
| | S9□D12.5B ~S9□D20B | 1.80 |
| | S9□D25B ~S9□D60B | 1.90 |
| | S9□D75B ~S9□D200B | 1.95 |

+ KEY SPEC



+ SPEC for output shaft of gearhead - (Table 2)

| MODEL | TYPES OF OUTPUT SHAF | MODEL | TYPES OF OUTPUT SHAF | MODEL | TYPES OF OUTPUT SHAF |
|---------------------|----------------------|---------------------|----------------------|---------------------|----------------------|
| S9SD3B ~S9SD200B | STRAIGHT TYPE | S9DD3B ~S9DD200B | D-CUT TYPE | S9KD3B ~S9KD200B | KEY TYPE |
| | | | | | |

50Hz

| MODEL | GEAR RATIO | 3 | 3.6 | 5 | 6 | 7.5 | 9 | 10 | 12.5 | 15 | 18 | 20 | 25 | 30 | 36 | 40 | 50 | 60 | 75 | 90 | 100 | 120 | 150 | 180 | 200 |
|-------|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | S9KD□B | rpm | 500 | 416 | 300 | 250 | 200 | 166 | 150 | 120 | 100 | 83 | 75 | 60 | 50 | 41 | 37 | 30 | 25 | 20 | 16 | 15 | 12 | 10 | 8 |
| kg-cm | | 18.2 | 21.9 | 30.4 | 36.5 | 45.6 | 54.7 | 60.8 | 68.4 | 82.1 | 98.6 | 110 | 124 | 149 | 178 | 198 | 248 | 297 | 300 | 300 | 300 | 300 | 300 | 300 | 300 |
| N·m | | 1.784 | 2.146 | 2.979 | 3.577 | 4.469 | 5.361 | 5.958 | 6.703 | 8.046 | 9.663 | 10.78 | 12.15 | 14.60 | 17.44 | 19.40 | 24.32 | 29.13 | 29.42 | 29.42 | 29.42 | 29.42 | 29.42 | 29.42 | 29.42 |

60Hz

| MODEL | GEAR RATIO | 3 | 3.6 | 5 | 6 | 7.5 | 9 | 10 | 12.5 | 15 | 18 | 20 | 25 | 30 | 36 | 40 | 50 | 60 | 75 | 90 | 100 | 120 | 150 | 180 | 200 |
|-------|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | S9KD□B | rpm | 600 | 500 | 360 | 300 | 240 | 200 | 180 | 144 | 120 | 100 | 90 | 72 | 60 | 50 | 45 | 36 | 30 | 24 | 20 | 18 | 15 | 12 | 10 |
| kg-cm | | 14.6 | 17.5 | 24.3 | 29.2 | 36.5 | 43.7 | 48.6 | 54.8 | 65.7 | 78.8 | 87.6 | 99.0 | 119 | 143 | 158 | 198 | 238 | 266 | 300 | 300 | 300 | 300 | 300 | 300 |
| N·m | | 1.431 | 1.715 | 2.381 | 2.862 | 3.577 | 4.675 | 4.763 | 5.370 | 6.439 | 7.722 | 8.585 | 9.702 | 11.66 | 14.01 | 15.48 | 19.40 | 23.34 | 26.09 | 29.42 | 29.42 | 29.42 | 29.42 | 29.42 | 29.42 |

- ❖ The code in □ of gearhead model is for gear ratio. ❖ It is the permissible torque of the assembled motor and gearhead.
- ❖ The permissible torque of the motor and inter-decimal gearhead is 300 kg-cm.
- ❖ ■ color indicates that the output shaft of the geared motor rotates in the same direction as the output shaft of the motor. Others indicate rotation in the opposite direction.
- ❖ Rpm is based on synchronous speed (50Hz: 1500rpm, 60Hz: 1800rpm) divided by gear ratio.
- The actual rotation speed can be 2~20% less than displayed value depending on the load.
- ❖ Only "H" type is applicable. Please use "H" type motor.

SCHEMATIC DIAGRAMS

The direction of motor rotation is as viewed from the front shaft end of the motor.

