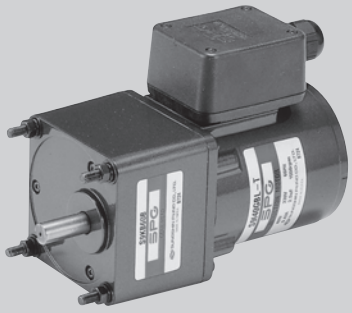


# 40W

## INDUCTION MOTOR, REVERSIBLE MOTOR
## □90㎜ TERMINAL BOX TYPE

## INDUCTION MOTOR - CONTINUOUS RATING

| SIZE mm sq. | Type | Poles | Output | Voltage | Frequency | Duty | Rated Load | | | | Starting Torque | | Capacitor |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Current | Speed | Torque | | | | |
| | | | (W) | (V) | (Hz) | | (A) | (rpm) | (kg-cm) | (N-m) | (kg-cm) | (N-m) | (uF) |
| 90 | S9I40GA( )-T<br>S9I40GA( )-T1 | 4 | 40 | 1Ø 110 | 60 | Cont. | 0.82 | 1600 | 2.50 | 0.250 | 2.90 | 0.290 | 10.0 |
| | S9I40GB( )-T<br>S9I40GB( )-T1 | 4 | 40 | 1Ø 220 | 60 | Cont. | 0.41 | 1600 | 2.50 | 0.250 | 2.90 | 0.290 | 2.5 |
| | S9I40GC( )-T<br>S9I40GC( )-T1 | 4 | 40 | 1Ø 100 | 50 | Cont. | 0.80 | 1300 | 3.10 | 0.310 | 2.40 | 0.240 | 10.0 |
| | | | | | 60 | | 0.85 | 1550 | 2.60 | 0.260 | | | |
| | S9I40GD( )-T<br>S9I40GD( )-T1 | 4 | 40 | 1Ø 200 | 50 | Cont. | 0.41 | 1300 | 3.10 | 0.310 | 2.40 | 0.240 | 2.5 |
| | | | | | 60 | | 0.43 | 1550 | 2.60 | 0.260 | | | |
| | S9I40GX( )-T<br>S9I40GX( )-T1<br>S9I40GX( )-TCE<br>S9I40GX( )-T1CE | 4 | 40 | 1Ø 220 | 50 | Cont. | 0.34 | 1250 | 3.15 | 0.320 | 1.80 | 0.180 | 2.0 |
| | | | | 1Ø 240 | | | 0.37 | | 3.35 | 0.355 | 2.10 | 0.210 | |
| | S9I40GU( )-T<br>S9I40GU( )-T1<br>S9I40GU( )-TCE<br>S9I40GU( )-T1CE | 4 | 40 | 3Ø 200 | 50 | Cont. | 0.36 | 1300 | 3.10 | 0.310 | 6.30 | 0.630 | — |
| | | | | | 60 | | 0.33 | 1550 | 2.60 | 0.260 | 5.20 | 0.520 | |
| | S9I40GT( )-T<br>S9I40GT( )-T1<br>S9I40GT( )-TCE<br>S9I40GT( )-T1CE | 4 | 40 | 3Ø 220 | 50 | Cont. | 0.39 | 1350 | 3.00 | 0.300 | 7.60 | 0.760 | — |
| | | | | | 60 | | 0.33 | 1600 | 2.50 | 0.250 | 6.10 | 0.610 | |
| | S9I40GS( )-T<br>S9I40GS( )-T1<br>S9I40GS( )-TCE<br>S9I40GS( )-T1CE | 4 | 40 | 3Ø 380 | 50 | Cont. | 0.21 | 1300 | 3.20 | 0.320 | 6.30 | 0.630 | — |
| | | | | | 60 | | 0.19 | 1550 | 2.70 | 0.270 | 4.85 | 0.485 | |
| | | | | 3Ø 400 | 50 | Cont. | 0.21 | 1300 | 3.30 | 0.330 | 6.90 | 0.690 | |
| | | | | | 60 | | 0.19 | 1550 | 2.80 | 0.280 | 5.25 | 0.525 | |
| | | | | 3Ø 415 | 50 | Cont. | 0.21 | 1350 | 3.10 | 0.310 | 7.30 | 0.730 | |
| | | | | | 60 | | 0.19 | 1600 | 2.60 | 0.260 | 5.70 | 0.570 | |
| | | | | 3Ø 440 | 50 | Cont. | 0.21 | 1350 | 3.20 | 0.320 | 8.20 | 0.820 | |
| | | | | | 60 | | 0.19 | 1600 | 2.70 | 0.270 | 6.30 | 0.630 | |

❖ 기종명 맨 끝자리에 CE가 명기된 MODEL의 인증 관련 내용은 SPG 규격 인증품 현황을 참고하여 주십시오. (CE marked at the end of the model name indicates that it is thermally protected type which has received CE with built-in TP.)
또한 기종명 S9I40GX, S9I40GX-T, S9I40GS-T는 TP가 내장된 THERMALLY PROTECTED TYPE입니다. (TP marked at the end of the model name indicates that it is standard motor with Thermal Protector mounted. S9I40GX, S9I40GX-T, S9I40GS-T is thermally protected type with TP mounted.)

❖ ( )는 L, H Type을 표시합니다. L은 GEAR HEAD의 L과, H는 GEAR HEAD의 H와 사용하여 주십시오. (( ) is for marking 'L' type or 'H'. 'L' should be used with gearhead 'L' and 'H' should be used with gearhead 'H'.)

❖ 삼상 380V~440V 모터에서는 인버터 사용을 주의하여 주십시오. 인버터 사용시 권선의 절연이 열화되어 모터가 파손될 수 있습니다. (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.)

## REVERSIBLE MOTOR - 30MINUTES RATING

| SIZE mm sq. | Type | Poles | Output | Voltage | Frequency | Duty | Rated Load | | | | Starting Torque | | Capacitor |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Current | Speed | Torque | | | | |
| | | | (W) | (V) | (Hz) | | (A) | (rpm) | (kg-cm) | (N-m) | (kg-cm) | (N-m) | (uF) |
| 90 | S9R40GA( )-T<br>S9R40GA( )-T1<br>S9R40GA( )-T(TP)<br>S9R40GA( )-T1(TP)<br>S9R40GA( )-TCE<br>S9R40GA( )-T1CE | 4 | 40 | 1 Ø 110 | 60 | 30min | 1.00 | 1600 | 2.50 | 0.250 | 3.50 | 0.350 | 15.0 |
| | S9R40GB( )-T<br>S9R40GB( )-T1<br>S9R40GB( )-T(TP)<br>S9R40GB( )-T1(TP)<br>S9R40GB( )-TCE<br>S9R40GB( )-T1CE | 4 | 40 | 1 Ø 220 | 60 | 30min. | 0.46 | 1600 | 2.50 | 0.250 | 3.50 | 0.350 | 3.5 |
| | S9R40GC( )-T<br>S9R40GC( )-T1<br>S9R40GC( )-T(TP)<br>S9R40GC( )-T1(TP)<br>S9R40GC( )-TCE<br>S9R40GC( )-T1CE | 4 | 40 | 1 Ø 100 | 50 | 30min. | 0.84 | 1300 | 3.00 | 0.300 | 2.80 | 0.280 | 15.0 |
| | | | | | 60 | | 1.00 | 1550 | 2.60 | 0.260 | | | |
| | S9R40GD( )-T<br>S9R40GD( )-T1<br>S9R40GD( )-T(TP)<br>S9R40GD( )-T1(TP)<br>S9R40GD( )-TCE<br>S9R40GD( )-T1CE | 4 | 40 | 1 Ø 200 | 50 | 30min. | 0.39 | 1300 | 3.10 | 0.310 | 2.80 | 0.280 | 3.5 |
| | | | | | 60 | | 0.47 | 1550 | 2.60 | 0.260 | | | |
| | S9R40GE( )-T<br>S9R40GE( )-T1<br>S9R40GE( )-TCE<br>S9R40GE( )-T1CE | 4 | 40 | 1 Ø 100 | 50 | 30min. | 0.86 | 1300 | 3.10 | 0.310 | 2.90 | 0.290 | 15.0 |
| | | | | | 60 | | 1.00 | 1550 | 2.60 | 0.260 | | | |
| | | | | 1 Ø 115 | 60 | | 1.00 | 1550 | 2.70 | 0.270 | | | 12.0 |
| | S9R40GX( )-T<br>S9R40GX( )-T1<br>S9R40GX( )-TCE<br>S9R40GX( )-T1CE | 4 | 40 | 1 Ø 220 | 50 | 30min. | 0.40 | 1250 | 3.20 | 0.320 | 3.00 | 0.300 | 3.0 |
| | | | | 1 Ø 240 | | | 0.42 | | 3.40 | 0.340 | 3.20 | 0.320 | |

❖ 기종명 S9R40GE-T는 사용하는 전압 사양에 따라 CONDENSER 용량이 다르게 사용되므로 사용전압에 맞게 CONDENSER 용량을 바르게 사용하여 주십시오. 고장의 원인이 됩니다. 주문시 사용전압을 제시하여 주십시오. 제시가 없으면 115V용 CONDENSER로 포장 출하됩니다. (Appropriate capacitors shall be used according to the voltage for S9R40GE-T 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.)

❖ 기종명 맨 끝자리에 CE가 명기된 MODEL의 인증 관련 내용은 SPG 규격 인증품 현황을 참고하여 주십시오. S9R40GE( )-TCE는 115V용 사양으로만 출하됩니다. (CE marked at the end of the model name indicates that it is thermally protected type which has received CE. S9R40GE-TCE is available only for 115V specification.)

❖ 기종명 맨 끝자리에 (TP)가 명기된 MODEL은 일반 MOTOR의 TP가 내장된 THERMALLY PROTECTED TYPE입니다. 또한 기종명 S9R40GE-T, S9R40GX-T는 TP가 내장된 THERMALLY PROTECTED TYPE입니다. (TP marked at the end of the model name indicates that it is standard motor with Thermal Protector mounted. S9R40GE-T, S9R40GX-T is thermally protected type with TP mounted.)

❖ 본 DATA는 BRAKE BLOCK을 MOTOR에 장착된 상태에서 측정한 DATA입니다. (Above data is measured with friction brake mounted.)

❖ ( )는 L, H Type을 표시합니다. L은 GEAR HEAD의 L과, H는 GEAR HEAD의 H와 사용하여 주십시오. (( ) is for marking 'L' type or 'H'. 'L' should be used with gearhead 'L' and 'H' should be used with gearhead 'H'.)

## 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 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 |
| S9KB□B( ) | kg-cm | 8.3 | 9.9 | 13.8 | 16.5 | 20.7 | 24.8 | 27.5 | 34.4 | 41.3 | 49.6 | 49.6 | 62.1 | 74.5 | 89.4 | 99.3 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| | N·m | 0.813 | 0.970 | 1.352 | 1.617 | 2.029 | 2.430 | 2.695 | 3.371 | 4.047 | 4.861 | 4.861 | 6.086 | 7.301 | 8.761 | 9.731 | 9.800 | 9.800 | 9.800 | 9.800 | 9.800 | 9.800 | 9.800 | 9.800 | 9.800 |

## 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 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 |
| S9KB□B( ) | kg-cm | 6.8 | 8.2 | 11.3 | 13.6 | 17.0 | 20.4 | 22.7 | 28.4 | 34.0 | 40.8 | 40.9 | 51.1 | 61.3 | 73.6 | 81.8 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| | N·m | 0.666 | 0.804 | 1.107 | 1.333 | 1.666 | 1.999 | 2.225 | 2.783 | 3.332 | 3.998 | 4.008 | 5.008 | 6.007 | 7.213 | 8.016 | 9.800 | 9.800 | 9.800 | 9.800 | 9.800 | 9.800 | 9.800 | 9.800 | 9.800 |

❖ GEAR HEAD 품명 중 □은 감속비를 표시합니다. (The code in □ of gearhead model is for gear ratio.)

❖ GEAR HEAD와 조합한 경우의 허용 TORQUE입니다. (It is the permissible torque of the assembled motor and gearhead.)

❖ 감속비 1/10의 중간 GEAR HEAD를 접속한 경우의 허용 TORQUE는 100㎏-㎝입니다. (The permissible torque of the motor and inter-decimal gearhead is 100 kg-cm.)

❖ 회전방향은 ■색이 MOTOR의 회전방향과 동일방향이고, 기타는 MOTOR 회전방향과 반대방향입니다. (■ 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. )

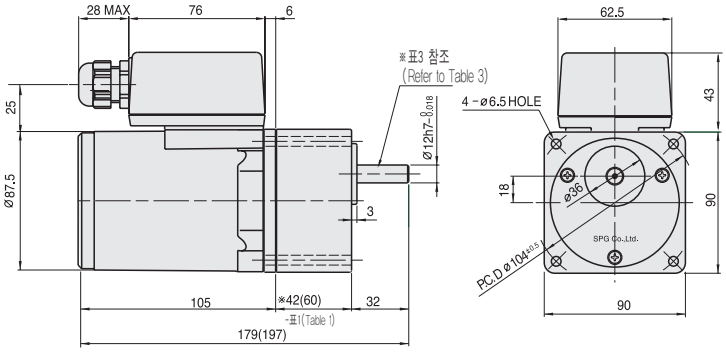
❖ 회전수는 MOTOR의 동기 회전수(50Hz : 1500rpm, 60Hz : 1800rpm)를 기준으로 하여 감속비로 나누어서 계산하였습니다. 실제의 회전수는 부하의 크기에 따라서 표시된 수치보다 2~20% 적습니다. (Rpm is based on synchronous speed (50Hz: 1500rpm, 60Hz: 1800rpm) divided by gear ratio. The actual rotation speed can be 2~20% less than displayed value depending on the load.)

❖ ( )는 L, H Type을 표시합니다. L은 MOTOR의 L과, H는 MOTOR의 H와 사용하여 주십시오. (( ) is for marking 'L' type or 'H'. 'L' should be used with motor 'L' and 'H' should be used with motor 'H'.)

# DIMENSIONS

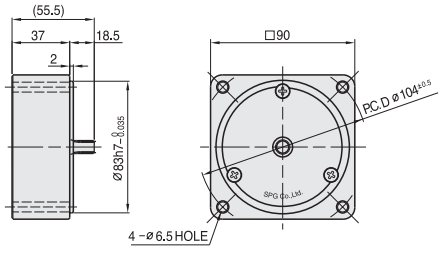
## ✚ GEARED MOTOR

※MOTOR MODEL : S9(I,R)40G□□-T
※HEAD MODEL : S9□B3□□~S9□B200□□



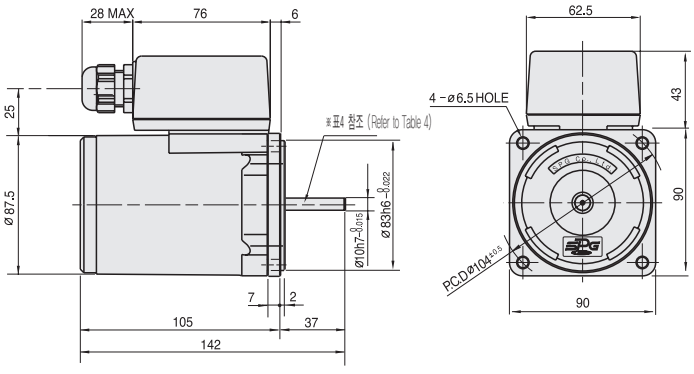

## ✚ INTER-DECIMAL GEAR HEAD

※MODEL : S9GX10B(H,L)




## ✚ MOTOR

※MOTOR MODEL : S9(I,R)40□□□-T

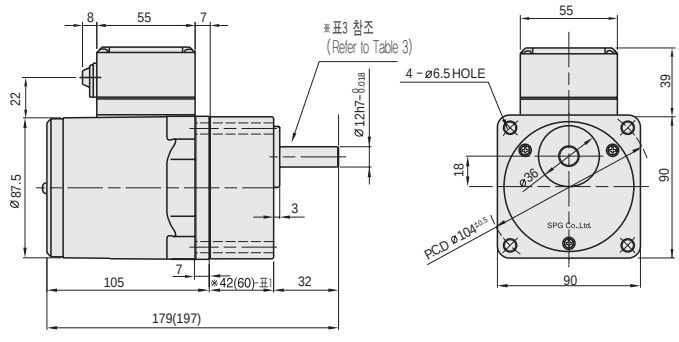



## ✚ WEIGHT - (표2 (Table2)

| PART | | WEIGHT(kg) |
|---|---|---|
| MOTOR | | 2.45 |
| REVERSIBLE MOTOR | | 2.50 |
| DECIMAL GEAR HEAD | | 0.60 |
| GEAR HEAD | S9□B3□□ ~S9□B18□□ | 0.73 |
| | S9□B20□□ ~S9□B40□□ | 1.03 |
| | S9□B50□□ ~S9□B200□□ | 1.13 |

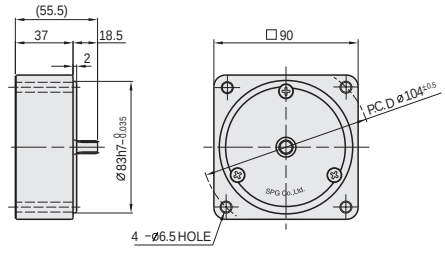
## ✚ GEARED MOTOR

※MOTOR MODEL : S9(I,R)40G□□-T1
※HEAD MODEL : S9□B3□□~S9□B200□



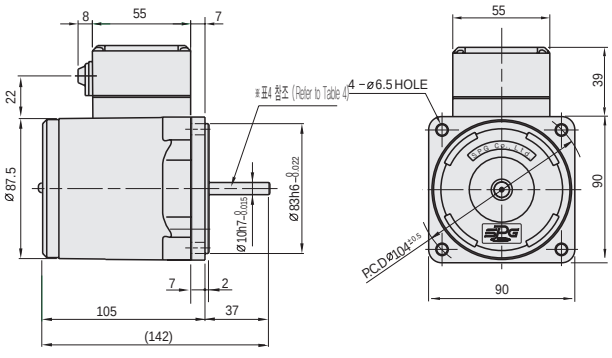

## ✚ INTER-DECIMAL GEAR HEAD

※MODEL : S9GX10B(H,L)




## ✚ MOTOR

※MOTOR MODEL : S9(I,R)40□□□-T1




## ✚ WEIGHT - (표2 (Table2))

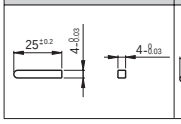
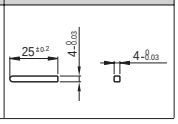
| PART | | WEIGHT(kg) |
|---|---|---|
| MOTOR | | 2.40 |
| REVERSIBLE MOTOR | | 2.45 |
| DECIMAL GEAR HEAD | | 0.60 |
| GEAR HEAD | S9□B3□□ ~S9□B18□□ | 0.73 |
| | S9□B20□□ ~S9□B40□□ | 1.03 |
| | S9□B50□□ ~S9□B200□□ | 1.13 |

# DIMENSIONS

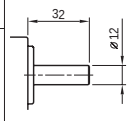
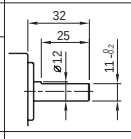
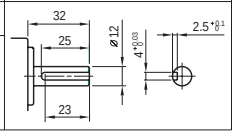
### ✚ ※42(60) – (표1 (Table1))

| GEAR RATIO | SIZE(㎜) |
|---|---|
| S9□B3□□ ~ S9□B18□□ | 42 |
| S9□B20□□ ~ S9□B200□□ | 60 |

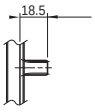
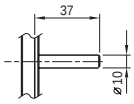
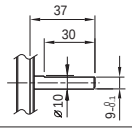
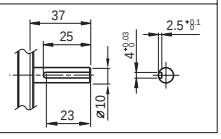
### ✚ KEY SPEC

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

### ✚ GEAR HEAD 출력축 사양 (SPEC for output shaft of gearhead) – (표3 (Table3))

| MODEL | 출력축 구분 (TYPES OF OUTPUT SHAFT) |
|---|---|
| STRAIGHT TYPE<br>S9SB3□□<br>~S9SB200□□ |  |
| D-CUT TYPE<br>S9DB3□□<br>~S9DB200□□ |  |
| KEY TYPE<br>S9IRB3□□<br>~S9IR200□□ |  |

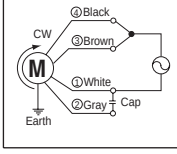
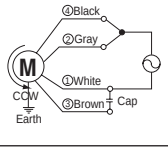
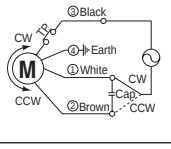
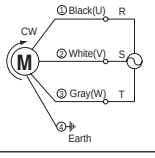
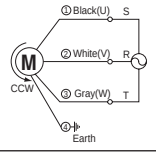
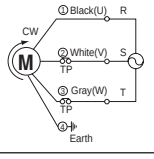
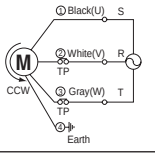
### ✚ MOTOR 출력축 사양 (SPEC for output shaft of motor) – (표4 (Table4))

| MODEL | 출력축 구분 (TYPES OF OUTPUT SHAFT) |
|---|---|
| GEAR TYPE<br>S9(I,R)40G□□–T<br>S9(I,R)40G□□–T1 |  |
| STRAIGHT TYPE<br>S9(I,R)40S□–T<br>S9(I,R)40S□–T1 |  |
| D-CUT TYPE<br>S9(I,R)40D□–T<br>S9(I,R)40D□–T1 |  |
| KEY TYPE<br>S9(I,R)40K□–T<br>S9(I,R)40K□–T1 |  |

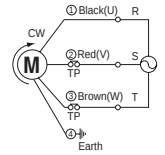
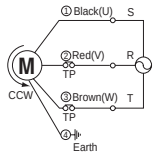
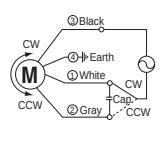
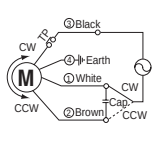
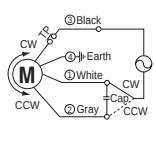
# SCHEMATIC DIAGRAMS

회전방향은 MOTOR의 SHAFT 끝쪽에서 볼 때의 회전방향입니다. 원안의 번호는 TERMINAL BOX 내의 단자 번호입니다. (The direction of motor rotation is as viewed from the front shaft end of the motor. Circled number is the terminal number inside terminal box.)

■INDUCTION MOTOR

| S9I40GA( )-T S9I40GB( )-T S9I40GC( )-T S9I40GD( )-T<br>S9I40GA( )-T1S9I40GB( )-T1 S9I40GC( )-T1 S9I40GD( )-T1 | | S9I40GX( )-T S9I40GX( )-TCE<br>S9I40GX( )-T1 S9I40GX( )-T1CE | S9I40GU( )-T S9I40GT( )-T<br>S9I40GU( )-T1 S9I40GT( )-T1 | | S9I40GU( )-TCE S9I40GT( )-TCE<br>S9I40GU( )-T1CE S9I40GT( )-T1CE | |
|---|---|---|---|---|---|---|
| **CW** | **CCW** | **CW,CCW** | **CW** | **CCW** | **CW** | **CCW** |
|  |  |  |  |  |  |  |

■REVERSIBLE MOTOR

| S9I40GS( )-TCE S9I40GS( )-T<br>S9I40GS( )-T1CE S9I40GS( )-T1 | | S9R40GA( )-T, S9R40GB( )-T<br>S9R40GA( )-T1, S9R40GB( )-T1<br>S9R40GC( )-T, S9R40GD( )-T<br>S9R40GC( )-T1, S9R40GD( )-T1 | S9R40GX( )-T, S9R40GX( )-TCE<br>S9R40GX( )-T1, S9R40GX( )-T1CE | S9R40GA( )-T(TP), S9R40GB( )-T(TP),<br>S9R40GC( )-T(TP), S9R40GD( )-T(TP),<br>S9R40GA( )-T1(TP), S9R40GB( )-T1(TP),<br>S9R40GC( )-T1(TP), S9R40GD( )-T1(TP),<br>S9R40GA( )-TCE , S9R40GB( )-TCE , S9R40GC( )-TCE<br>S9R40GD( )-TCE , S9R40GE( )-T , S9R40GE( )-TCE<br>S9R40GA( )-T1CE , S9R40GB( )-T1CE , S98R40GC( )-T1CE<br>S9R40GD( )-T1CE , S9R40GE( )-T1 , S9R40GE( )-T1CE |
|---|---|---|---|---|
| **CW** | **CCW** | **CW,CCW** | **CW,CCW** | **CW,CCW** |
|  |  |  |  |  |

주의 : INDUCTION MOTOR 회전방향의 교환은 MOTOR가 완전히 정지한 후에 실시하여 주십시오. MOTOR가 회전 중에 회전방향을 교환할 경우 회전방향이 바뀌지 않거나, 회전방향이 바뀌어지는 데 있어서 시간이 걸리는 수도 있습니다. (Change the direction of motor rotation only after the motor stops completely. If an attempt is made to change the direction of rotation while the motor is running, the motor may ignore the reversing command or change its direction of rotation after some delay.)