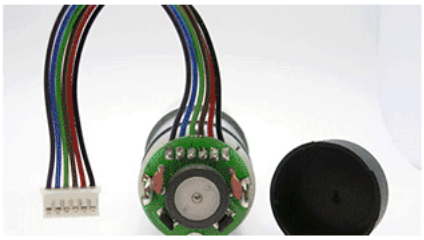
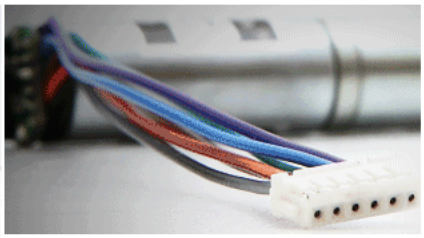
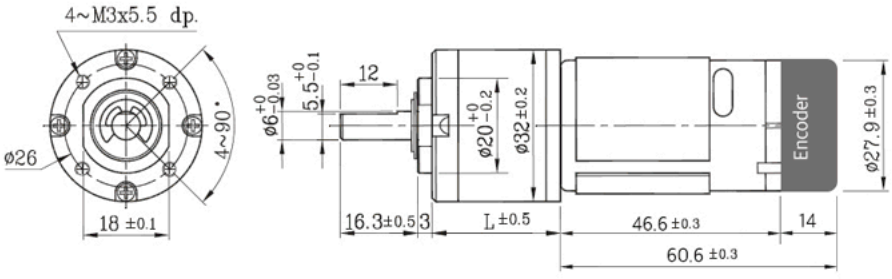




## 제품도면 DIMENSION



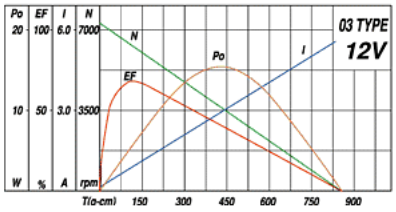

## 감속모터사양 GEARED MOTOR SPECIFICATION

| 감속기길이(mm) Gear Head L | | 20.6 | | 27.0 | | | | 33.4 | | | | 39.8 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 중량(g) | | 211 | | 231 | | | | 256 | | | | 282 | | | | |
| 감속비 Reduction ratio | | 1/4 | 1/5 | 1/14 | 1/19 | 1/27 | 1/35 | 1/51 | 1/71 | 1/100 | 1/139 | 1/189 | 1/264 | 1/516 | 1/721 | 1/939 |
| 03 TYPE 12V | 정격토크(kgf-cm) Rated torque | 0.35 | 0.45 | 1.1 | 1.5 | 2.1 | 2.7 | 3.4 | 4.7 | 6.6 | 9.1 | 10 | 12 | 12 | 12 | 12 |
| | 정격 회전수(RPM) Rated speed | 1487 | 1140 | 430 | 310 | 221 | 170 | 117 | 83 | 60 | 44 | 32 | 24 | 12.9 | 9.5 | 6.3 |
| | 무부하 회전수(RPM) | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| No load speed | 1825 | 1460 | 521 | 384 | 270 | 208 | 143 | 102 | 73 | 52 | 38 | 27 | 14 | 10 | 7.7 |

## 장착된 모터사양 INSTALL MOTOR SPECIFICATION

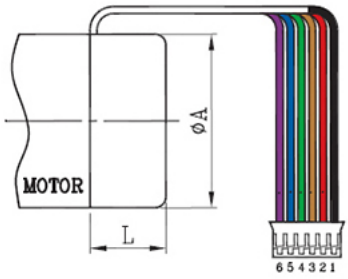
| 03Type Motor (DC 12v) | | |
|---|---|---|
| 정격 토크 Rated torque | 110 | (gf-cm) |
| 정격 회전수 Rated speed | 5,950 | (RPM) |
| 정격 전류 Rated current | 900 | (mA) |
| 무부하 회전수 No load speed | 7,300 | (RPM) |
| 무부하 전류 No load current | 150 | (mA) |
| 정격 출력 Rated output | 7.0 | (W) |




# Magnet Encoder 자기식 엔코더

- 사용 습도(Operating relative humidity) : 20%~85%
- 사용 온도(Operating temperature) : -10℃ ~ +60℃

## Two channel Hall Effect Encoder



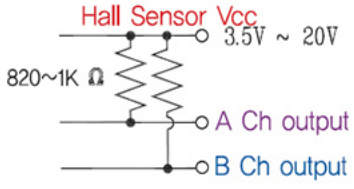

엔코더 컨넥터 핀별 내용 :
Two Channel Encoder Connections :

1. Black : -MOTOR
2. Red : +MOTOR
3. Brown : HALL SENSOR Vcc
4. Green : HALL SENSOR GND
5. Blue : HALL SENSOR B Vout
6. Purple : HALL SENSOR A Vout

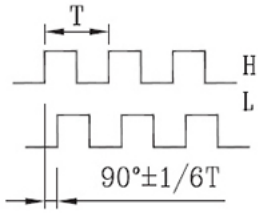
☆ WITHOUT CAP

| Motor ØA | CAP L | COUNTS POLES OF PER TURN(PPR) current | limit. | Wire Type Length | Connector Type | model |
|---|---|---|---|---|---|---|
| ø12 | ☆6.5 | 2, 6 (1, 3) | 6 (3) | UL1061 AWG26 100mm | JST ZHR-6 P=1.5-6P | IG12, IG16, RA12W, RA20 |
| ø15.4 | ☆6.5 | 2, 6 (1, 3) | 6 (3) | | | |
| ø20.3 | ☆8.5 | 2, 6 (1, 3) | 6 (3) | | | |
| ø30.0 | 12.6 | 26 (13) | 26 (13) | UL1007 AWG24 100mm | JST PHR-6 P=2.0-6P | IG22, IG22C, IG28, IG30, IG32, IG32P, IG32R, IG36P, IG43, RA35, RB30, RB35, RB40 |
| ø32 | 14.3 | 26 (13) | 26 (13) | | | |
| ø36 | 13.5 | 26 (13) | 26 (13) | | | |
| ø42.5 | 15.5 | 38 (19) | 38 (19) | UL1007 AWG24 UL1007 AWG18 100mm | JST PHR-4 P=2.0-4P Molex 09-50-3021 P=3.96-2P | IG42, IG52 |
| ø52 ø54 | 18.0 | 38 (19) | 38 (19) | | | |

출력회로 구성
Output Circuit :




출력 파형
Output Wave :




| Characteristics | Symbol | Test conditions | Min | Ref | Max | Units |
|---|---|---|---|---|---|---|
| Supply Voltage | VCC | - | 3.5 | - | 20 | V |
| Output Saturation Voltage | Vce(sat) | Vcc=14v ; Ic=20mA | - | 300 | 700 | mV |
| Output Leakage Current | Icex | Vce=14v ; Vcc=14v | - | 0.1 | 10 | μA |
| Supply Current | Ice | Vcc=20v Output open | - | 5 | 10 | mA |
| Output Rise Time | tr | Vcc=14v ; RL=820 Ohm | - | 0.3 | 1.5 | μs |
| Output fa Time | tf | Vcc=14v ; RL=820 Ohm | - | 0.3 | 1.5 | μs |