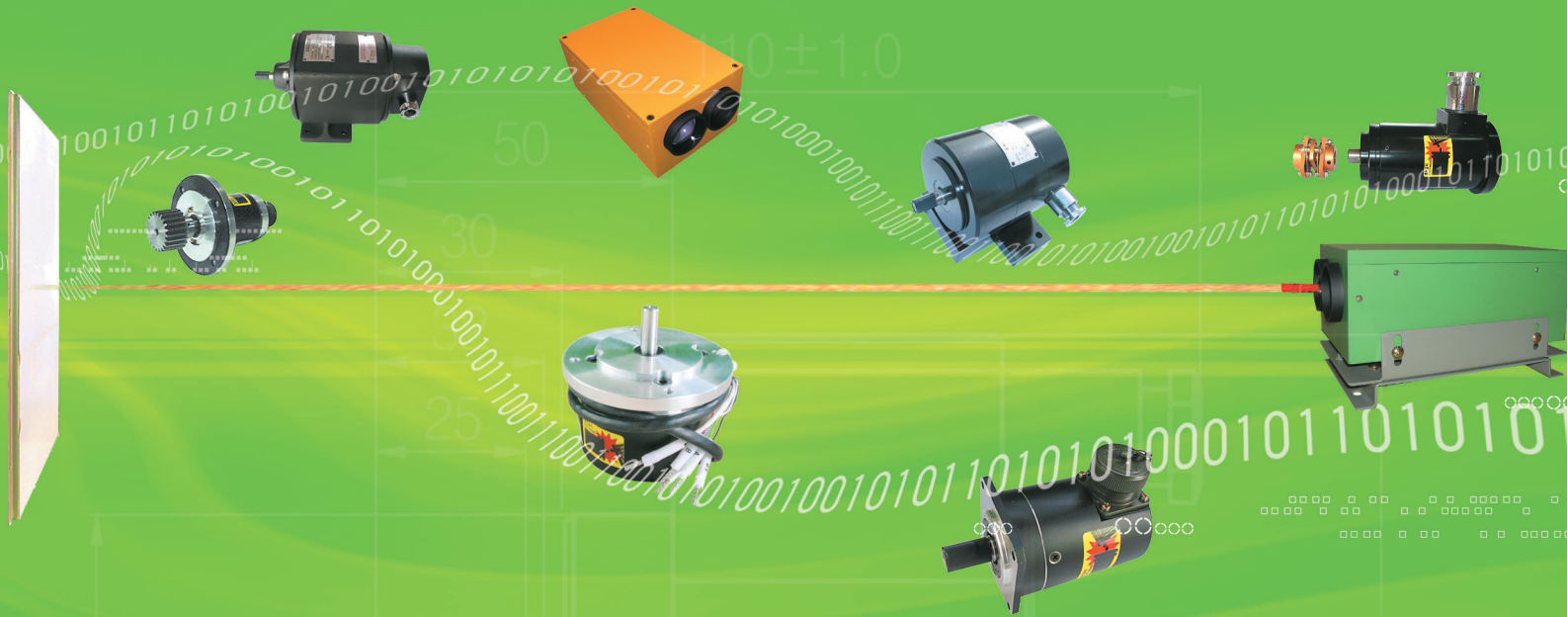


# 산업용엔코더

Industrial Encoder



웅지산업전주식회사  
WOONG JI INDUSTRY ELECTRIC CO., LTD.



# C contents

목 / 차

## 산업용 엔코더

INDUSTRIAL ENCODER

WJE63 ... 4

WJE66 ... 6

WJE67 ... 8

WJE68 ... 10

WJE90 ... 12

WJE122 ... 14

WJE128 ... 16

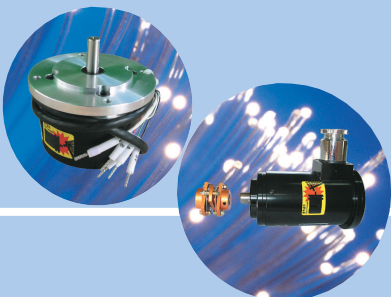
WJE138 ... 18

WJE148 ... 20

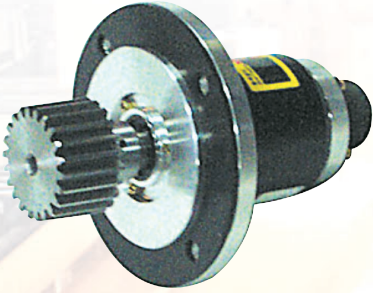
WJE150 ... 22

WJE151 ... 24

WJE158 ... 26



# WJE63Series



## 용도 Application

- 제철생산라인의 위치 조정용  
Iron steel line
- 고 신뢰성 High reliability
- 내진동에 강한 구조  
Vibration-proof

## 특징 Features

- 환경강화형  
Rigid type
- 일반계측  
Measuring instrument
- 장거리용  
Long distance

## 형식 Model

### WJE 63 S 12 [MHP-V]

- WJE  
Woongji Encoder
- 63 : 외경  
Output diameter
- S : 실축  
Solid shaft
- 12 : 축경  
Shaft size

#### 분해능(P/R) Resolution

- 0025
- 0200
- 0600
- 0900
- 1200
- 1500
- 2500

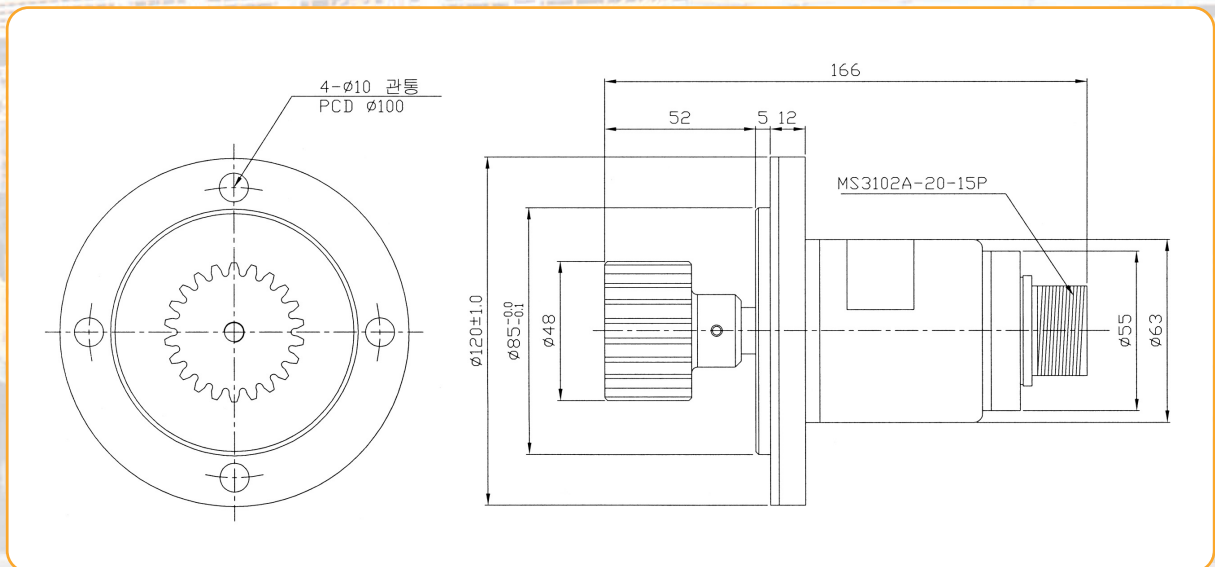
#### 출력 신호 Output signal

1. A,  $\bar{A}$
2. A, B,  $\bar{A}$ ,  $\bar{B}$
3. A, B, Z  
 $\bar{A}$ ,  $\bar{B}$ ,  $\bar{Z}$

#### 출력 형태 Output form

1. Complemental
2. Open collector
3. Voltage output

## 외형도 External Dimension







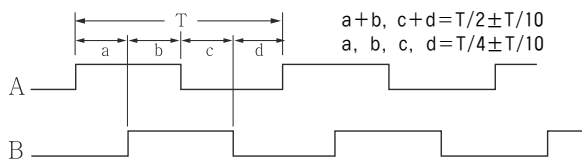
## 주요특성 Specification

| 전기적 특성 <i>Electrical spec.</i>        |  |                    |                             |
|---------------------------------------|--|--------------------|-----------------------------|
| 분해능<br>Resolution                     |  | 25 ~ 2500 P/R      |                             |
| 출력방식<br>Output form                   | 출력 형태  | 전원<br>Power supply | 소비전류<br>Current consumption |
|                                       | Voltage output<br>Open collector<br>Complemental | DC +24V            | 300mA Max.                  |
| 최대응답주파수<br>Maximum response frequency |  | 150kHz Max.        |                             |
| 결선<br>Connection                      |  | 6P 단자대             |                             |

| 기계적 특성 <i>Mechanical spec.</i>   |   |
|----------------------------------|---|
| 기동 토크<br>Starting torque         | 2kg-cm Max.   |
| 최대 회전수<br>Maximum rotating speed | 3000rpm   |
| 허용 축 하중<br>Allowable shaft load  | 반경방향 : 5kg Max.<br>(Radial)<br>축 방향 : 5kg Max.<br>(Axial) |
| 사용온도<br>Operating temp. range    | -10°C ~ +60°C   |
| 내진동<br>Vibration                 | 10G   |
| 내충격<br>Shock                     | 100G  |

## 신호규격 *Output phase shift*

*Voltage output, Open collector, Complemental*

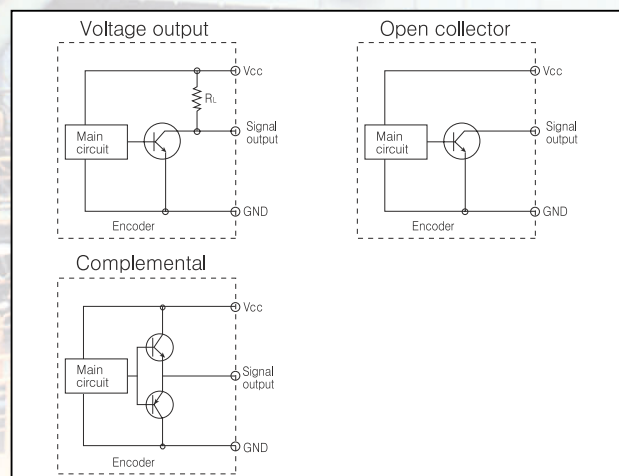


CCW 엔코더 축을 보아 반시계방향  
(viewed from shaft end)

## 결선도 *Connection table*

| 핀구분 | Voltage output<br>Open collector<br>Complemental |
|-----|--|
| 1   | A SIG  |
| 2   | B SIG  |
| 3   | Case Shield                                      |
| 4   | Vcc (+24V)                                       |
| 5   | GND  |
| 6   | GND  |

## 출력회로 *Output circuit*









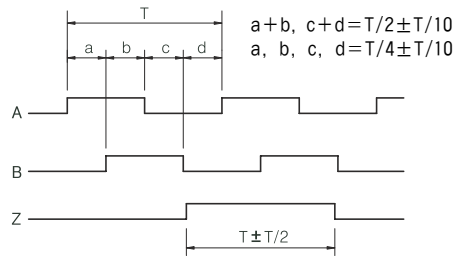
## 주요특성 Specification

| 전기적 특성 Electrical spec.            |  |  |                          |
|------------------------------------|--|--|--------------------------|
| 분해능 Resolution                     |  | 50 ~ 6000 P/R                                    |                          |
| 출력방식 Output form                   | 출력 형태  | 전원 Power supply                                  | 소비전류 Current consumption |
|                                    | Voltage output<br>Open collector<br>Complemental | DC +5V~24V                                       | 70mA Max.                |
| 최대응답주파수 Maximum response frequency |  | 10~2048P/R                                       | 150kHz                   |
|                                    |  | 2500~6000P/R                                     | 300kHz                   |
| 전선길이 Cable length                  |  | 1m(변경 가능)<br>Other length available upon request |                          |

| 기계적 특성 Mechanical spec.       |  |
|-------------------------------|--|
| 기동 토크 Starting torque         | 80g-cm Max.  |
| 최대 회전수 Maximum rotating speed | 5000rpm  |
| 허용 축 하중 Allowable shaft load  | 반경방향 : 2.50kg Max.<br>(Radial)<br>축 방향 : 1.3kg Max.<br>(Axial) |
| 사용온도 Operating temp. range    | -10°C ~ +70°C  |
| 내진동 Vibration                 | 5G   |
| 내충격 Shock                     | 50G  |

## 신호규격 Output phase shift

Voltage output, Open collector, Complemental

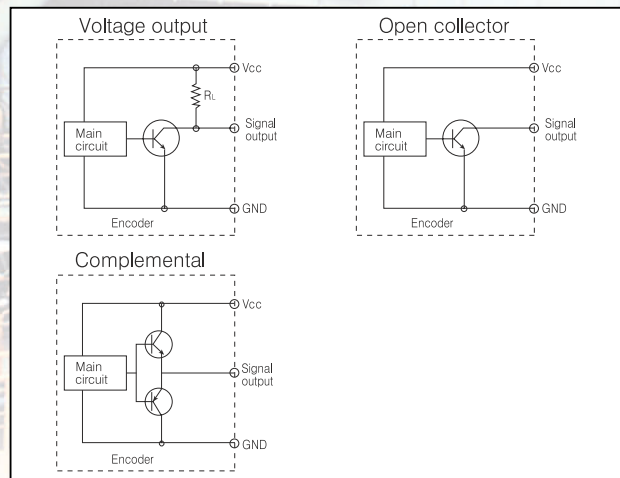


→ CW 엔코더 축을 보아 시계방향 (viewed from shaft end)

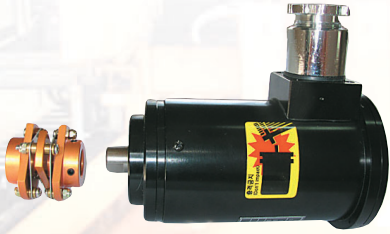
## 전선규격 Cable spec.

| 전선색상 Cable color | 전선규격   |
|------------------|--|
|                  | Voltage output<br>Open collector<br>Complemental |
| 적                | DC +5V~24V                                       |
| 흑                | GND  |
| 녹                | A  |
| 청                | -  |
| 백                | B  |
| 분홍               | -  |
| 황                | Z  |
| 주황               | -  |
| Shield           | Case shield                                      |

## 출력회로 Output circuit



# WJE67 Series



## 용도 Application

- 제철생산라인  
Iron steel line
- 산업기계  
Industrial machine
- 제지라인  
Paper line

## 특징 Features

- 환경 강화형 Rigid type
- 방수형 Water-proof
- 장거리용 Long distance

## 형 식 Model

### WJE 67 S 15 [FDP-06BE]

- WJE  
Woongji Encoder
- 67 : 외경  
Output diameter
- S : 실축  
Solid shaft
- 15 : 축경  
Shaft size

#### 분해능(P/R) Resolution

- 0300
- 0600
- 0900
- 1200
- 1500
- 1800

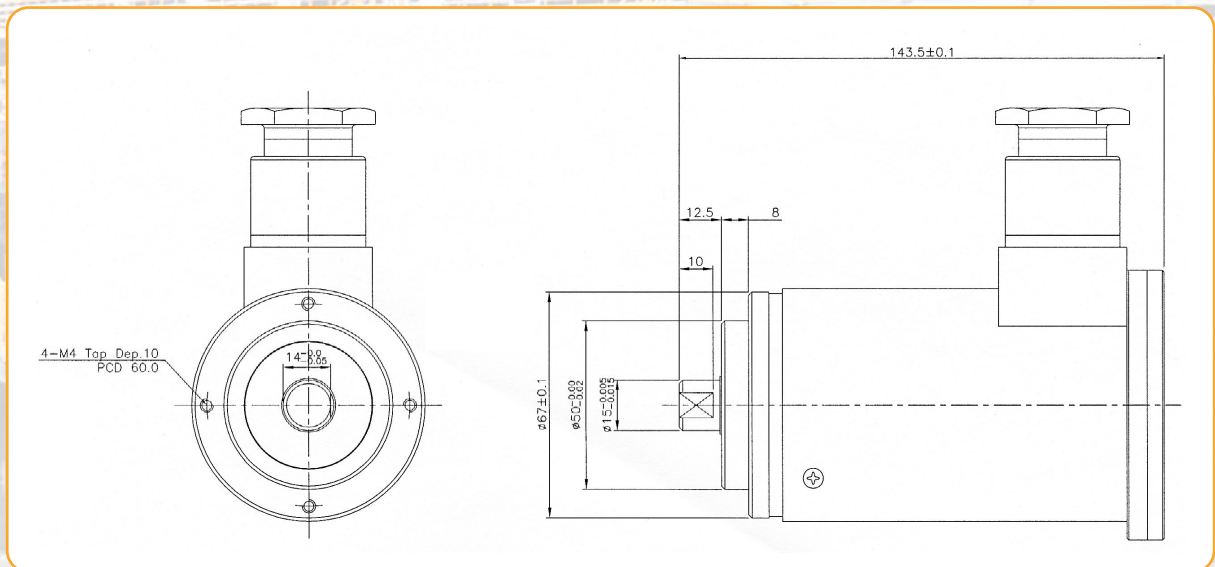
#### 출력 신호 Output signal

1. A,  $\bar{A}$
2. A, B,  $\bar{A}$ ,  $\bar{B}$
3. A, B, Z  
 $\bar{A}$ ,  $\bar{B}$ ,  $\bar{Z}$

#### 출력 형태 Output form

1. Complemental
2. Open collector
3. Voltage output

## 외형도 External Dimension







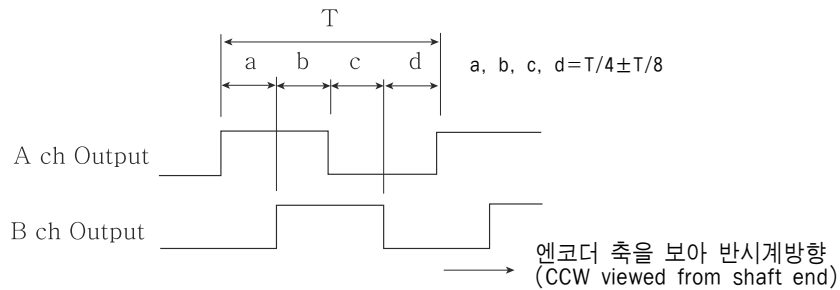
## 주요특성 Specification

| 전기적 특성 Electrical spec.            |  |                 |                          |
|------------------------------------|--|-----------------|--------------------------|
| 분해능 Resolution                     |  | 300 ~ 18000 P/R |                          |
| 출력 방식 Output form                  | 출력 형태  | 전원 Power supply | 소비전류 Current consumption |
|                                    | Voltage output<br>Open collector<br>Complemental | DC +24V         | 100mA Max.               |
| 최대응답주파수 Maximum response frequency |  | 150kHz Max.     |                          |
| 결선 Connection                      |  | 6P 단자대          |                          |

| 기계적 특성 Mechanical spec.       |  |
|-------------------------------|--|
| 기동 토크 Starting torque         | 1 kg-cm Max.   |
| 최대 회전수 Maximum rotating speed | 4500rpm  |
| 허용 축 하중 Allowable shaft load  | 반경방향 : 10kg Max.<br>(Radial)<br>축 방향 : 5kg Max.<br>(Axial) |
| 사용온도 Operating temp. range    | -10°C ~ +70°C  |
| 내진동 Vibration                 | 10G  |
| 내충격 Shock                     | 100G   |

## 신호규격 Output phase shift

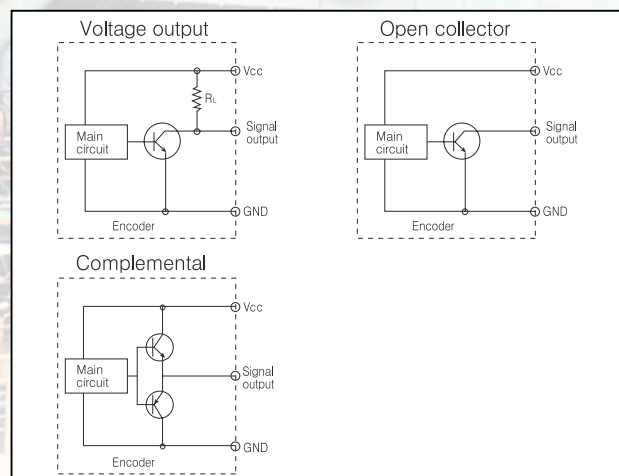
Voltage output, Open collector, Complemental



## 결선도 Connection table

| 핀구분 | Voltage output<br>Open collector<br>Complemental |
|-----|--|
| 1   | A SIG  |
| 2   | A GND  |
| 3   | B SIG  |
| 4   | B GND  |
| 5   | GND(TG)  |
| 6   | Vcc (+24V)                                       |

## 출력회로 Output circuit









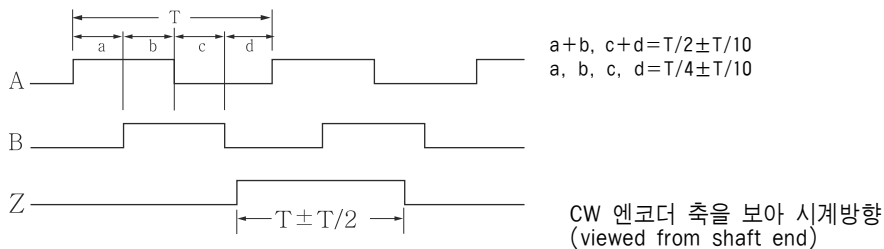
## 주요특성 Specification

| 전기적 특성 Electrical spec.               |                                  |                             |            |
|---------------------------------------|----------------------------------|-----------------------------|------------|
| 분해능<br>Resolution                     | 100 ~ 2048 P/R                   |                             |            |
| 출력 형태<br>Output form                  | 전원<br>Power supply               | 소비전류<br>Current consumption |            |
|                                       | Voltage output<br>Open collector | DC +12V, 24V                | 80mA Max.  |
|                                       | Complemental                     | DC +12V, 24V                | 150mA Max. |
| 최대응답주파수<br>Maximum response frequency | 150kHz Max.                      |                             |            |
| 컨넥터<br>Connector                      | MS3102A-20-29P                   |                             |            |

| 기계적 특성 Mechanical spec.          |   |
|----------------------------------|---|
| 기동 토크<br>Starting torque         | 1 kg-cm Max.  |
| 최대 회전수<br>Maximum rotating speed | 6000rpm   |
| 허용 축 하중<br>Allowable shaft load  | 반경방향 : 5kg Max.<br>(Radial)<br>축 방향 : 5kg Max.<br>(Axial) |
| 사용온도<br>Operating temp. range    | -10°C ~ +70°C   |
| 내진동 Vibration                    | 10G   |
| 내충격 Shock                        | 100G  |

## 신호규격 Output phase shift

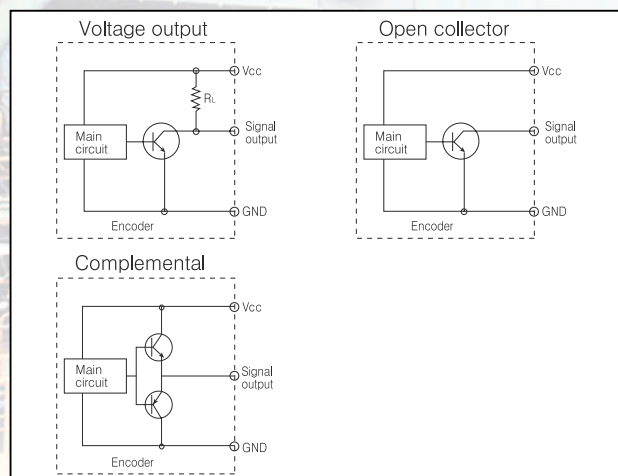
Voltage output, Open collector, Complemental



## 결선도 Connection table

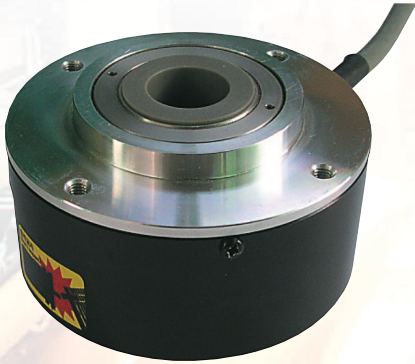
| 핀구분 | Voltage output<br>Complemental | Open collector |
|-----|--------------------------------|----------------|
| H   | DC +12, 24V                    |                |
| K,M | GND                            |                |
| A   | A SIG                          |                |
| N   | A GND                          |                |
| C   | B SIG                          |                |
| R   | B GND                          |                |
| B   | Z SIG                          |                |
| P   | Z GND                          |                |
| T   | Case Shield                    |                |

## 출력회로 Output circuit





# WJE90 Series



## 용도 Application

- 제철 라인(철판이송)  
Iron steel line
- 산업기계  
Industrial machine
- 승강기  
Elevator

## 특징 Features

- 고 신뢰성  
High reliability
- 다양한 축경( $\phi 12$ ,  $\phi 25$ )  
Various shaft size
- 용이한 취부구조  
Easy to attach

## 형식 Model

### WJE 90 G 20 [GH4920396R]

- WJE  
Woongji Encoder
- 90 : 외경  
Output diameter
- G : 중공축  
Hollow shaft
- 20 : 축경  
Shaft size

#### 분해능(P/R) Resolution

0025  
0050  
0100  
0200  
0250  
0500  
0600  
0900  
1000  
2500

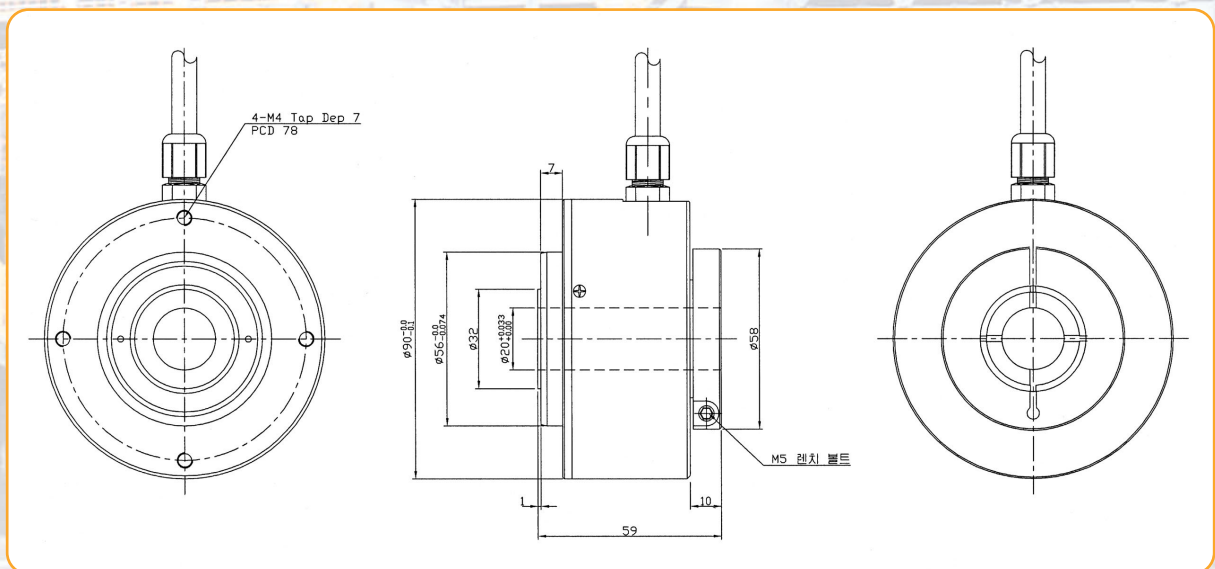
#### 출력 신호 Output signal

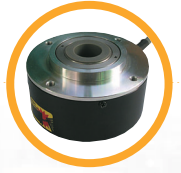
1. A,  $\bar{A}$
2. A, B,  $\bar{A}$ ,  $\bar{B}$
3. A, B, Z  
 $\bar{A}$ ,  $\bar{B}$ ,  $\bar{Z}$

#### 출력 형태 Output form

1. Complemental
2. Line driver

## 외형도 External Dimension





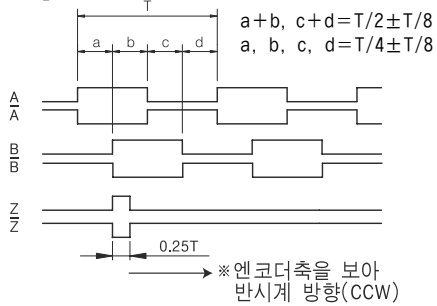
## 주요특성 Specification

| 전기적 특성 Electrical spec.               |  |                             |            |
|---------------------------------------|--|-----------------------------|------------|
| 분해능<br>Resolution                     | 25 ~ 2500 P/R                                      |                             |            |
| 출력방식<br>Output form                   | 전원<br>Power supply                                 | 소비전류<br>Current consumption |            |
|                                       | Complemental                                       | DC +24V                     | 150mA Max. |
| Line Driver                           | DC +5V   | 150mA Max.                  |            |
| 최대응답주파수<br>Maximum response frequency | 100kHz Max.  |                             |            |
| 전선길이<br>Cable length                  | 1m (변경가능)<br>(Other length available upon request) |                             |            |

| 기계적 특성 Mechanical spec.          |   |
|----------------------------------|---|
| 기동 토크<br>Starting torque         | 0.3kg-cm Max.   |
| 최대 회전수<br>Maximum rotating speed | 6000rpm   |
| 허용 축 하중<br>Allowable shaft load  | 반경방향 : 8kg Max.<br>(Radial)<br>축 방향 : 5kg Max.<br>(Axial) |
| 사용온도<br>Operating temp. range    | -10°C ~ +70°C   |
| 내진동 Vibration                    | 10G   |
| 내충격 Shock                        | 100G  |

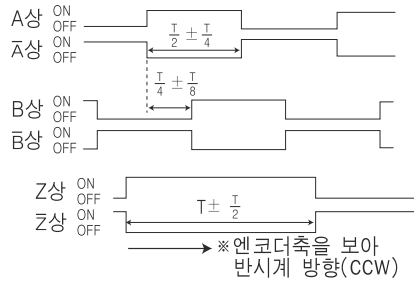
## 전선규격 Cable Spec.

### Complemental



### Line Driver

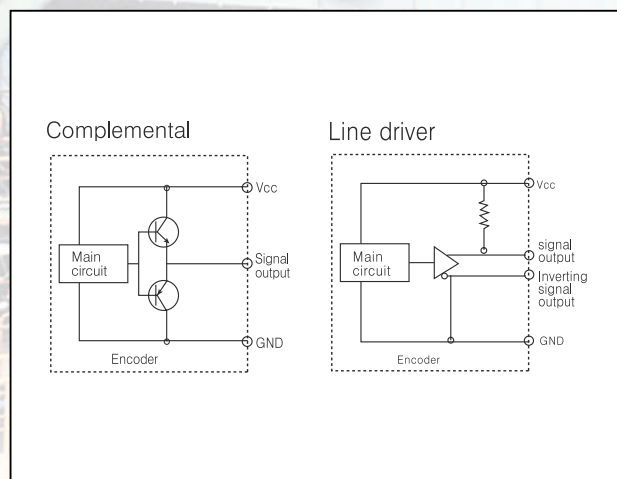
※ ON/OFF : 출력 트랜지스터의 ON/OFF를 의미함.



## 결선도 Connection table

| 전선색상<br>Cable color | 전선규격         |             |
|---------------------|--------------|-------------|
|                     | Complemental | Line driver |
| 갈색(Brown)           | DC +24V      | DC +24V     |
| 백색(white)           | GND          | GND         |
| 녹색(Green)           | A SIG        | A           |
| 분홍색(Pink)           | A GND        | $\bar{A}$   |
| 황색(Yellow)          | B SIG        | B           |
| 청색(Blue)            | B GND        | $\bar{B}$   |
| 회색(Gray)            | Z SIG        | Z           |
| 적색(Red)             | Z GND        | $\bar{Z}$   |
| Shield              | Case shield  | Case shield |

## 출력회로 Output circuit





# WJE122 Series



## 용도 Application

- 제철생산라인의 위치 조정용  
Iron steel line
- 일반계측  
Measuring instrument

## 특징 Features

- 환경강화형  
Rigid type
- 고 신뢰성  
High reliability

## 형 식 Model

### WJE 122 S 15

- WJE122S15(RP-112, fixed type)
- WJE123S15(RP-132, flange type)
- WJE124S15  
(RP-120, through shaft type)
- WJE  
Woongji Encoder
- 122 : 외경  
Output diameter
- S : 실축  
Solid shaft
- 15 : 축경  
Shaft size

#### 분해능(P/R) Resolution

0025  
0100  
0200  
0600  
0900  
1200  
1500  
2500

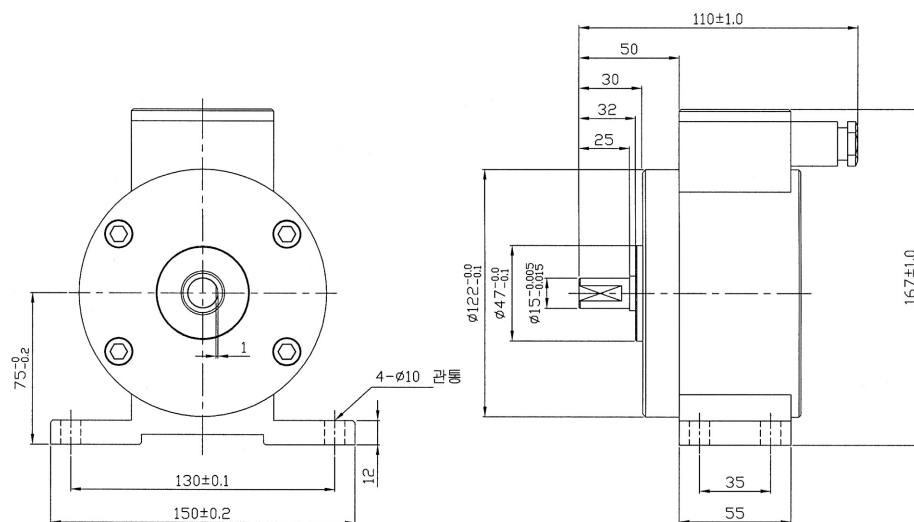
#### 출력 신호 Output signal

1. A,  $\bar{A}$
2. A, B,  $\bar{A}$ ,  $\bar{B}$
3. A, B, Z  
 $\bar{A}$ ,  $\bar{B}$ ,  $\bar{Z}$

#### 출력 형태 Output form

1. Complemental
2. Open collector
3. Voltage output

## 외형도 External Dimension







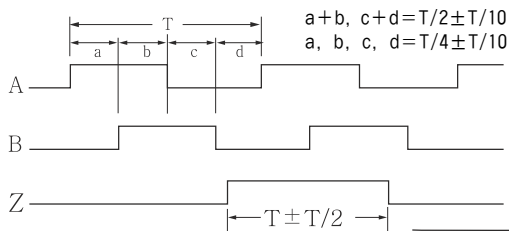
## 주요특성 Specification

| 전기적 특성 Electrical spec.            |  |                 |                          |
|------------------------------------|--|-----------------|--------------------------|
| 분해능 Resolution                     |  | 25 ~ 2500 P/R   |                          |
| 출력방식 Output form                   | 출력 형태  | 전원 Power supply | 소비전류 Current consumption |
|                                    | Voltage output<br>Open collector<br>Complemental | DC +12V         | 150mA Max.               |
| 최대응답주파수 Maximum response frequency |  | 150kHz Max.     |                          |
| 결선 Connection                      |  | 8P 단자대          |                          |

| 기계적 특성 Mechanical spec.       |   |
|-------------------------------|---|
| 기동 토크 Starting torque         | 4kg-cm Max.   |
| 최대 회전수 Maximum rotating speed | 5000rpm   |
| 허용 축 하중 Allowable shaft load  | 반경방향 : 8.0kg Max.<br>(Radial)<br>축 방향 : 6.0kg Max.<br>(Axial) |
| 사용온도 Operating temp. range    | -10°C ~ +70°C   |
| 내진동 Vibration                 | 10G   |
| 내충격 Shock                     | 100G  |

## 신호규격 Output phase shift

Voltage output, Open collector, Complemental

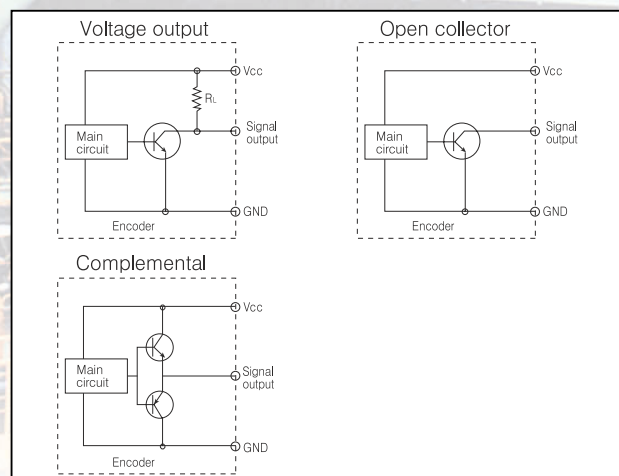


→ 엔코더 축을 보아 반시계방향 (CCW viewed from shaft end)

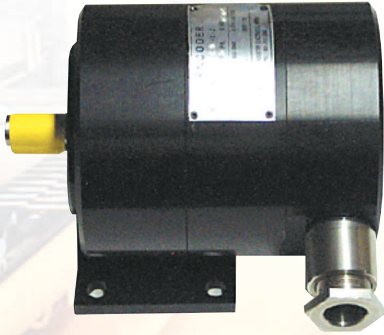
## 결선도 Connection table

| 핀구분 | Voltage output<br>Open collector<br>Complemental |
|-----|--|
| 1   | A SIG  |
| 2   | A GND  |
| 3   | B SIG  |
| 4   | B GND  |
| 5   | N.C  |
| 6   | Case Shield                                      |
| 7   | Vcc (+12V)                                       |
| 8   | GND  |

## 출력회로 Output circuit



# WJE128 Series



## 용도 Application

- 제철생산라인의 위치 조정용  
Iron steel line
- 산업기계  
Industrial machine
- 제지라인  
Paper line

## 특징 Features

- 환경강화형  
Rigid type
- 고 신뢰성  
High reliability
- 장거리용  
Long distance

## 형 식 Model

### WJE 128 S 16 [MSP, MNP]

- WJE  
Woongji Encoder
- 128 : 외경  
Output diameter
- S : 실축  
Solid shaft
- 16 : 축경  
Shaft size

#### 분해능(P/R) Resolution

- 0025
- 0100
- 0200
- 0600
- 0900
- 1200
- 1500
- 2500

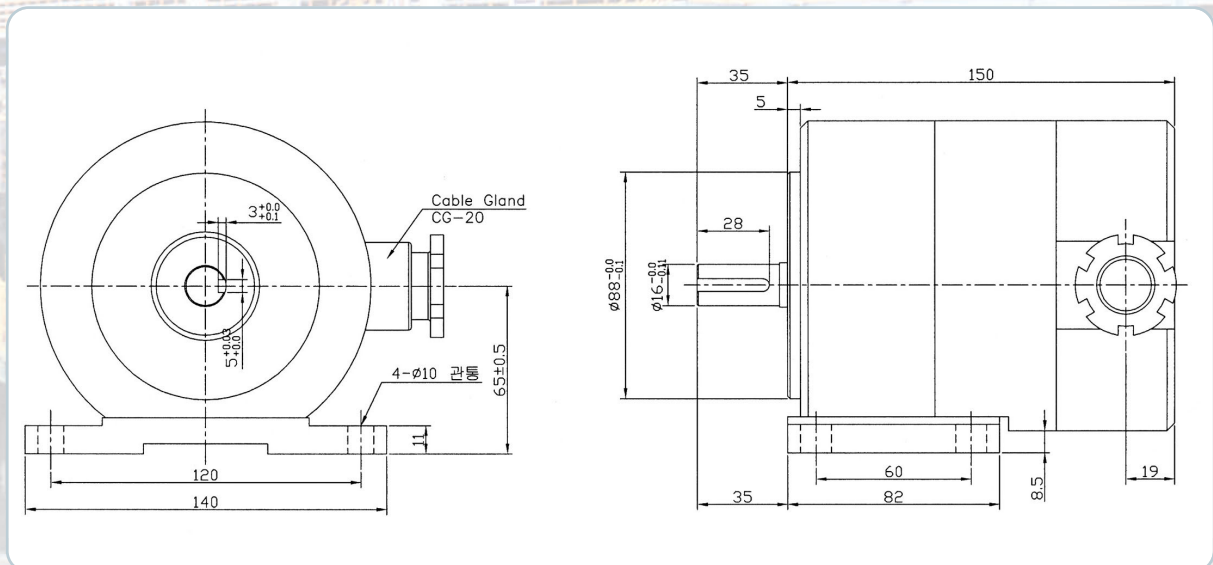
#### 출력 신호 Output signal

1. A,  $\bar{A}$
2. A, B,  $\bar{A}$ ,  $\bar{B}$
3. A, B, Z  
 $\bar{A}$ ,  $\bar{B}$ ,  $\bar{Z}$

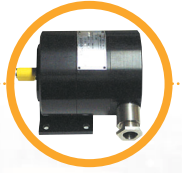
#### 출력 형태 Output form

1. Complemental
2. Open collector
3. Voltage output

## 외형도 External Dimension







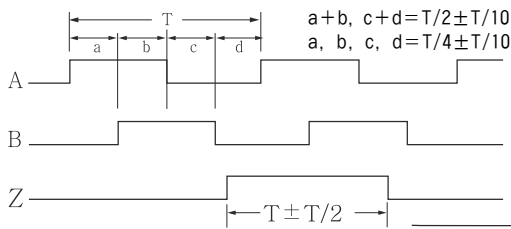
## 주요특성 Specification

| 전기적 특성 Electrical spec.               |  |                             |            |
|---------------------------------------|--|-----------------------------|------------|
| 분해능<br>Resolution                     | 25 ~ 2500 P/R                                    |                             |            |
| 출력 형태<br>Output form                  | 전원<br>Power supply                               | 소비전류<br>Current consumption |            |
|                                       | Voltage output<br>Open collector<br>Complemental | DC +24V                     | 300mA Max. |
| 최대응답주파수<br>Maximum response frequency | 100kHz Max.                                      |                             |            |
| 결선<br>Connection                      | 6P 단자대   |                             |            |

| 기계적 특성 Mechanical spec.          |   |
|----------------------------------|---|
| 기동 토크<br>Starting torque         | 2kg-cm Max.   |
| 최대 회전수<br>Maximum rotating speed | 2500rpm   |
| 허용 축 하중<br>Allowable shaft load  | 반경방향 : 5.0kg Max.<br>(Radial)<br>축 방향 : 5.0kg Max.<br>(Axial) |
| 사용온도<br>Operating temp. range    | -10°C ~ +70°C   |
| 내진동 Vibration                    | 10G   |
| 내충격 Shock                        | 100G  |

## 신호규격 Output phase shift

Voltage output, Open collector, Complemental

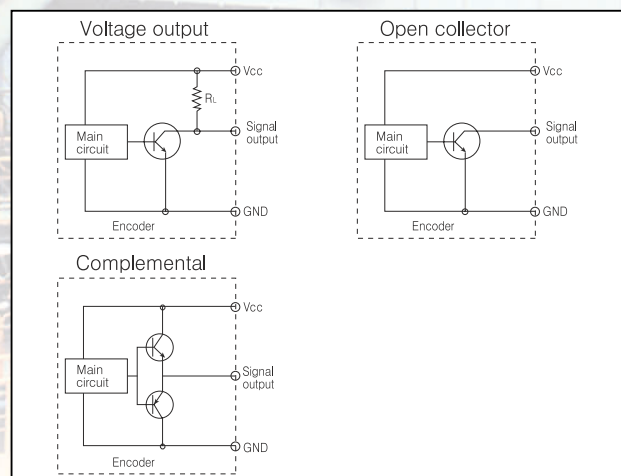


→ 엔코더 축을 보아 반시계방향 (CCW viewed from shaft end)

## 결선도 Connection table

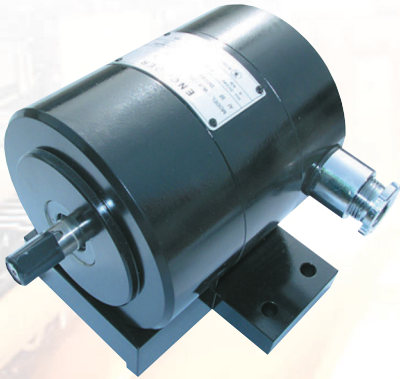
| 핀구분 | Voltage output<br>Open collector<br>Complemental |
|-----|--|
| 1   | Vcc(+24V)  |
| 2   | 0V   |
| 3   | 0V   |
| 4   | A SIG  |
| 5   | B SIG  |
| 6   | 0V   |

## 출력회로 Output circuit





# WJE138 Series



## 용도 Application

- 제철생산라인의 위치 조정용  
Iron steel line
- 산업기계  
Industrial machine
- 제지라인  
Paper line

## 특징 Features

- 환경강화형  
Rigid type
- 고 신뢰성  
High reliability
- 장거리용  
Long distance

## 형 식 Model

### WJE138S16

[EW-D]



출력펄스수



출력신호



출력형태

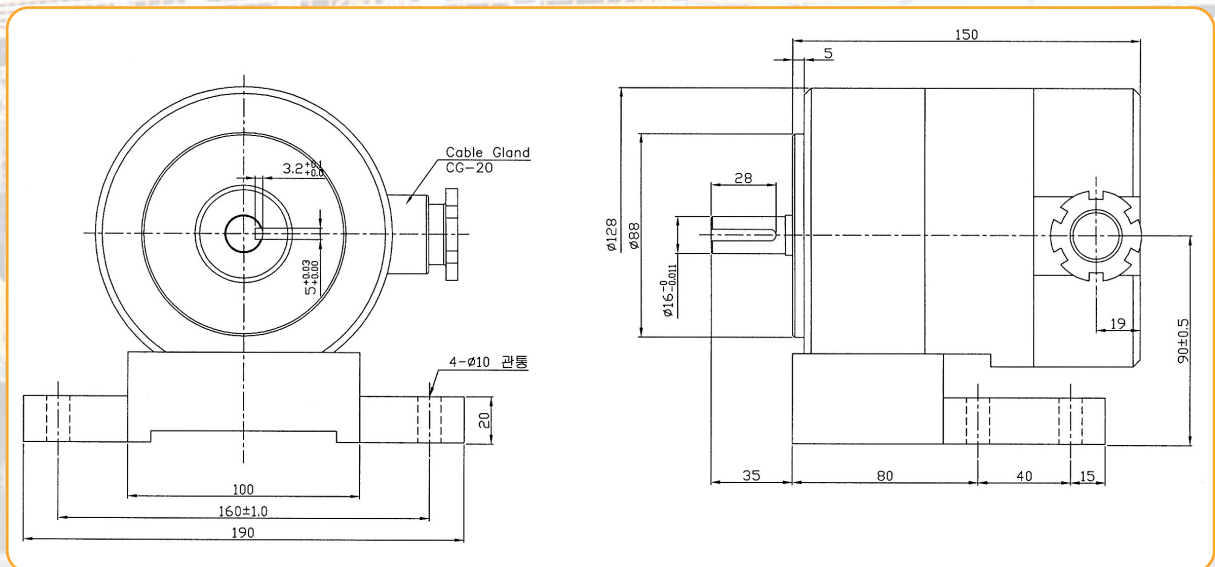
- WJE  
Woongji Encoder
- S : 실축  
Solid shaft
- 16 : 축경  
Shaft size

012  
025  
100  
200  
300  
600  
900  
1200  
1500

1. A,  $\bar{A}$
2. A, B,  $\bar{A}$ ,  $\bar{B}$
3. A, B, Z  
 $\bar{A}$ ,  $\bar{B}$ ,  $\bar{Z}$

1. Complemental
2. Open collection
3. Voltage output

## 외형도 External Dimension





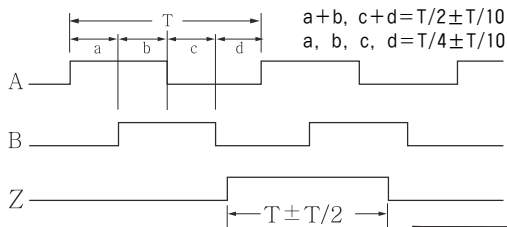
## 주요특성 Specification

| 전기적 특성 Electrical spec.               |  |                             |            |
|---------------------------------------|--|-----------------------------|------------|
| 분해능<br>Resolution                     | 25 ~ 2500 P/R                                    |                             |            |
| 출력 형태<br>Output form                  | 전원<br>Power supply                               | 소비전류<br>Current consumption |            |
|                                       | Voltage output<br>Open collector<br>Complemental | DC +24V                     | 300mA Max. |
| 최대응답주파수<br>Maximum response frequency | 100kHz Max.                                      |                             |            |
| 결선<br>Connection                      | 6P 단자대   |                             |            |

| 기계적 특성 Mechanical spec.          |   |
|----------------------------------|---|
| 기동 토크<br>Starting torque         | 2kg-cm Max.   |
| 최대 회전수<br>Maximum rotating speed | 2500rpm   |
| 허용 축 하중<br>Allowable shaft load  | 반경방향 : 5.0kg Max.<br>(Radial)<br>축 방향 : 5.0kg Max.<br>(Axial) |
| 사용온도<br>Operating temp. range    | -10°C ~ +70°C   |
| 내진동 Vibration                    | 10G   |
| 내충격 Shock                        | 100G  |

## 신호규격 Output phase shift

Voltage output, Open collector, Complemental

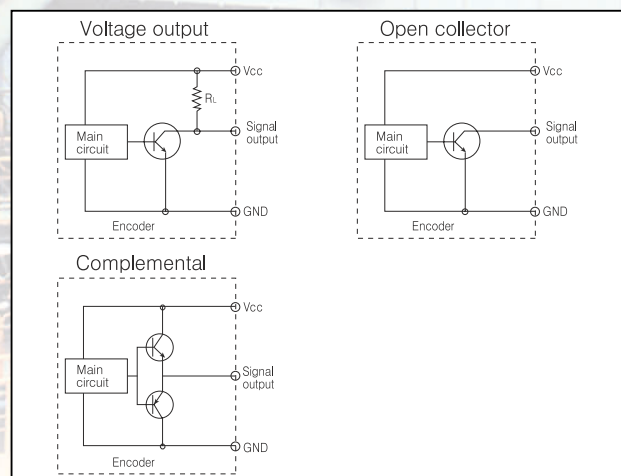


엔코더 축을 보아 반시계방향  
(CCW viewed from shaft end)

## 결선도 Connection table

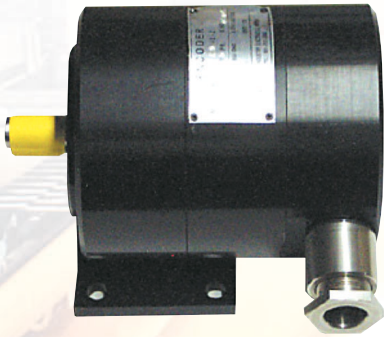
| 핀구분 | Voltage output<br>Open collector<br>Complemental |
|-----|--|
| 1   | Vcc (+24V)                                       |
| 2   | B GND  |
| 3   | A GND  |
| 4   | A SIG  |
| 5   | B SIG  |
| 6   | GND  |

## 출력회로 Output circuit





# WJE148 Series



## 용도 Application

- 제철생산라인의 위치 조정용  
Iron steel line
- 산업기계  
Industrial machine
- 제지라인  
Paper line

## 특징 Features

- 환경강화형  
Rigid type
- 고 신뢰성  
High reliability
- 장거리용  
Long distance

## 형식 Model

### WJE 148 S 16 [MNP]

- WJE  
Woongji Encoder
- S : 실축  
Solid shaft
- 16 : 축경  
Shaft size

#### 분해능(P/R) Resolution

- 0025
- 0100
- 0200
- 0600
- 0900
- 1200
- 1500
- 2500

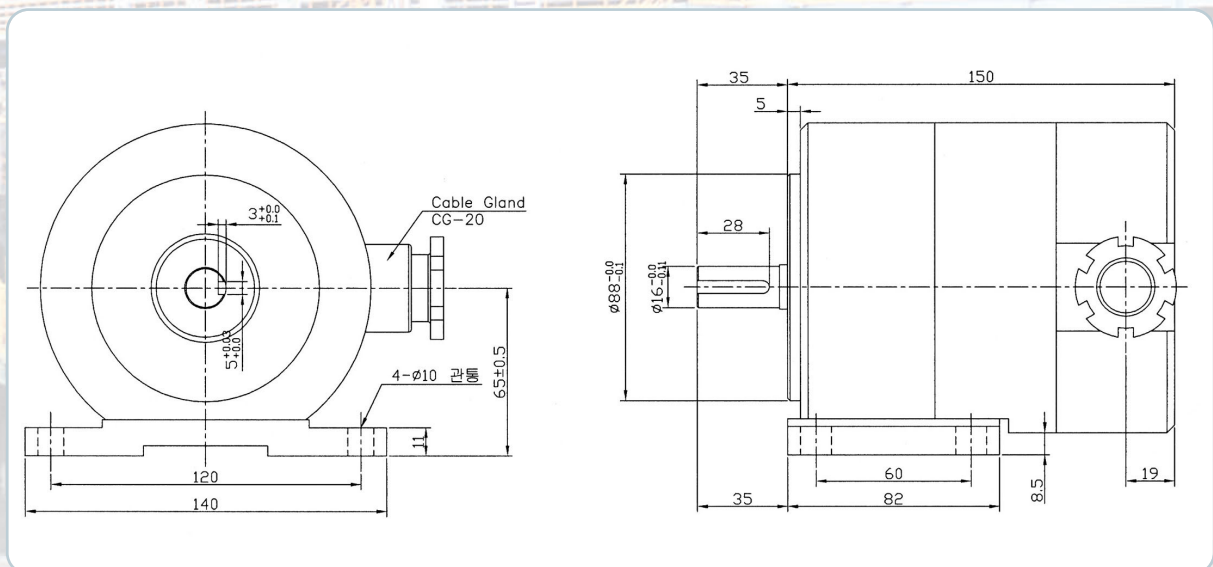
#### 출력 신호 Output signal

1. A,  $\bar{A}$
2. A, B,  $\bar{A}$ ,  $\bar{B}$
3. A, B, Z  
 $\bar{A}$ ,  $\bar{B}$ ,  $\bar{Z}$

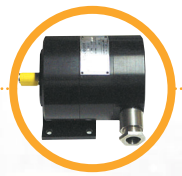
#### 출력 형태 Output form

1. Complemental
2. Open collector
3. Voltage output

## 외형도 External Dimension







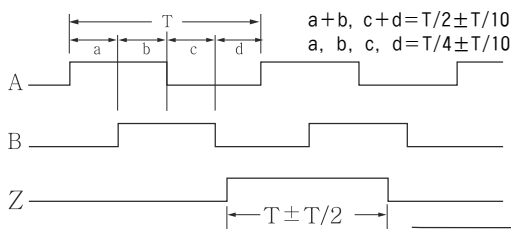
## 주요특성 Specification

| 전기적 특성 Electrical spec.               |  |                             |            |
|---------------------------------------|--|-----------------------------|------------|
| 분해능<br>Resolution                     | 25 ~ 2500 P/R                                    |                             |            |
| 출력 형태<br>Output form                  | 전원<br>Power supply                               | 소비전류<br>Current consumption |            |
|                                       | Voltage output<br>Open collector<br>Complemental | DC +24V                     | 300mA Max. |
| 최대응답주파수<br>Maximum response frequency | 100kHz Max.                                      |                             |            |
| 결선<br>Connection                      | 6P 단자대   |                             |            |

| 기계적 특성 Mechanical spec.          |   |
|----------------------------------|---|
| 기동 토크<br>Starting torque         | 2kg-cm Max.   |
| 최대 회전수<br>Maximum rotating speed | 2500rpm   |
| 허용 축 하중<br>Allowable shaft load  | 반경방향 : 5.0kg Max.<br>(Radial)<br>축 방향 : 5.0kg Max.<br>(Axial) |
| 사용온도<br>Operating temp. range    | -10°C ~ +70°C   |
| 내진동 Vibration                    | 10G   |
| 내충격 Shock                        | 100G  |

## 신호규격 Output phase shift

Voltage output, Open collector, Complemental

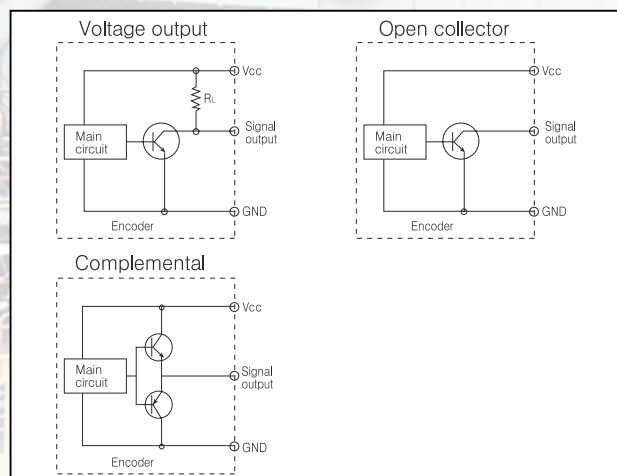


→ 엔코더 축을 보아 반시계방향 (CCW viewed from shaft end)

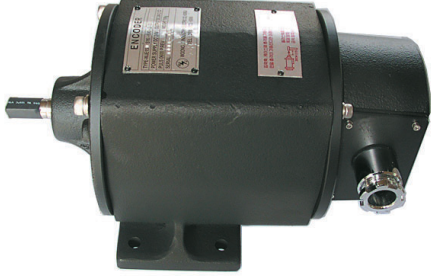
## 결선도 Connection table

| 핀구분 | Voltage output<br>Open collector<br>Complemental |
|-----|--|
| 1   | Vcc(+24V)  |
| 2   | 0V   |
| 3   | 0V   |
| 4   | A SIG(LEAD)                                      |
| 5   | B SIG  |
| 6   | 0V   |

## 출력회로 Output circuit



# WJE150 Series



## 용도 Application

- 구동모터 속도검출  
Rotate motor speed detector
- 산업기계  
Industrial machine

## 특징 Features

- 환경강화형  
Rigid type
- 방수형  
Water-proof
- 장거리용  
Long distance

## 형식 Model

### WJE 150 S 16 [MDP-G]

- WJE  
Woongji Encoder
- 150 : 외경  
Output diameter
- S : 실축  
Solid shaft
- 16 : 축경  
Shaft size

#### 분해능(P/R) Resolution

- 0025
- 0100
- 0200
- 0300
- 0600
- 0900
- 1200
- 1500
- 2000

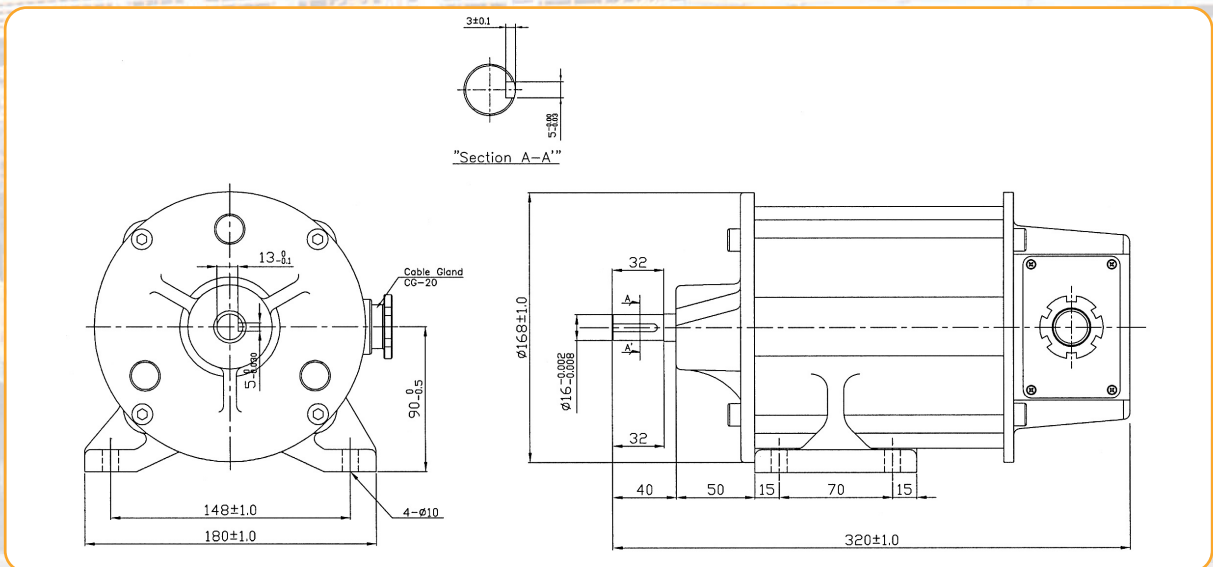
#### 출력 신호 Output signal

1. A,  $\bar{A}$
2. A, B,  $\bar{A}$ ,  $\bar{B}$
3. A, B, Z  
 $\bar{A}$ ,  $\bar{B}$ ,  $\bar{Z}$

#### 출력 형태 Output form

1. Complemental
2. Open collector
3. Voltage output

## 외형도 External Dimension







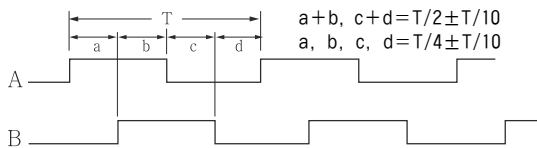
## 주요특성 Specification

| 전기적 특성 Electrical spec.            |  |                 |                          |
|------------------------------------|--|-----------------|--------------------------|
| 분해능 Resolution                     |  | 25 ~ 2500 P/R   |                          |
| 출력방식 Output form                   | 출력 형태  | 전원 Power supply | 소비전류 Current consumption |
|                                    | Voltage output<br>Open collector<br>Complemental | DC +24V         | 300mA Max.               |
| 최대응답주파수 Maximum response frequency |  | 100kHz Max.     |                          |
| 결선 Connection                      |  | 6P 단자대          |                          |

| 기계적 특성 Mechanical spec.       |   |
|-------------------------------|---|
| 기동 토크 Starting torque         | 4kg-cm Max.   |
| 최대 회전수 Maximum rotating speed | 5000rpm   |
| 허용 축 하중 Allowable shaft load  | 반경방향 : 8.0kg Max.<br>(Radial)<br>축 방향 : 6.0kg Max.<br>(Axial) |
| 사용온도 Operating temp. range    | -10°C ~ +70°C   |
| 내진동 Vibration                 | 40G   |
| 내충격 Shock                     | 100G  |

## 신호규격 Output phase shift

Voltage output, Open collector, Complemental

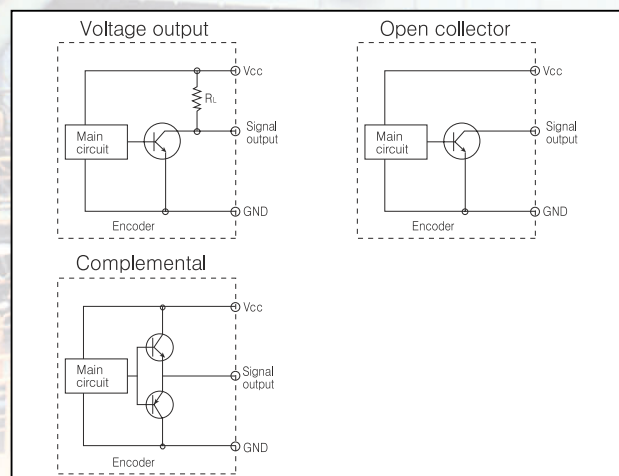


→ 엔코더 축을 보아 반시계방향 (CCW viewed from shaft end)

## 결선도 Connection table

| 핀구분 | Voltage output<br>Open collector<br>Complemental |
|-----|--|
| 6   | Vcc (+24V)                                       |
| 5   | GND  |
| 4   | GND  |
| 3   | Vcc (+24V)                                       |
| 2   | B SIG(LAG)                                       |
| 1   | A SIG(LEAD)                                      |

## 출력회로 Output circuit





# WJE151 Series



## 용도 Application

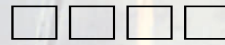
- 구동모터 속도검출  
Rotate motor speed detector
- 산업기계  
Industrial machine

## 특징 Features

- 환경강화형  
Rigid type
- 방수형  
Water-proof
- 장거리용  
Long distance

## 형식 Model

**WJE 151 S 16**  
[MHP-G]



출력펄스수



출력신호



출력형태

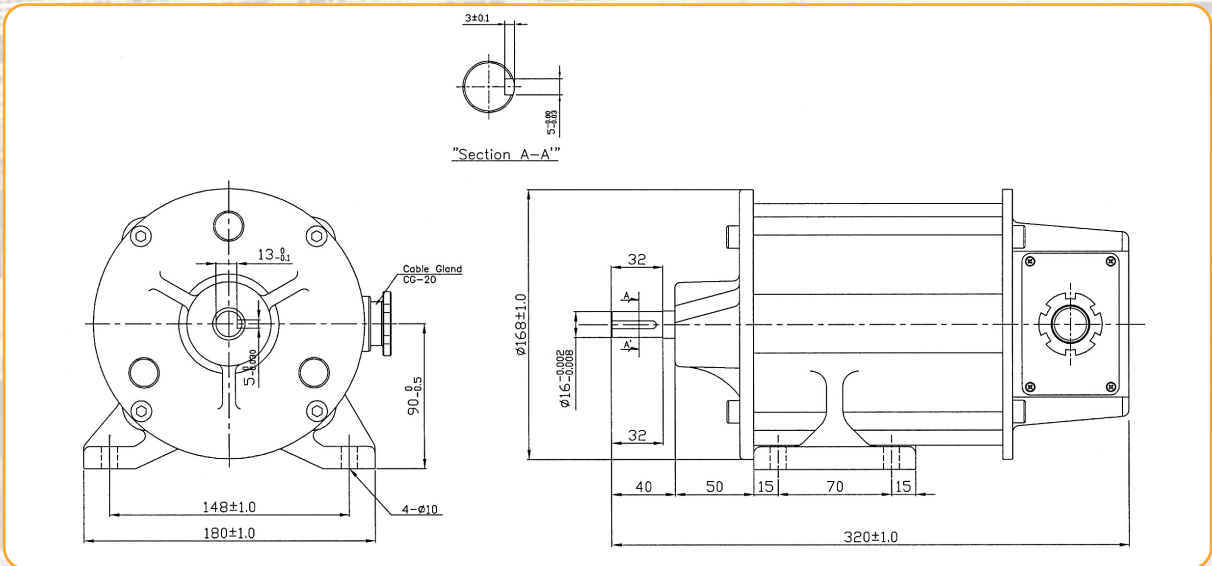
- WJE  
Woongji Encoder
- 151 : 외경  
Output diameter
- S : 실축  
Solid shaft
- 16 : 축경  
Shaft size

|      |
|------|
| 025  |
| 100  |
| 200  |
| 300  |
| 600  |
| 900  |
| 1200 |
| 1500 |
| 2000 |

|   |
|---|
| 1. A, $\bar{A}$                                 |
| 2. A, B, $\bar{A}$ , $\bar{B}$                  |
| 3. A, B, Z<br>$\bar{A}$ , $\bar{B}$ , $\bar{Z}$ |

|                   |
|-------------------|
| 1. Complemental   |
| 2. Open collector |
| 3. Voltage output |

## 외형도 External Dimension





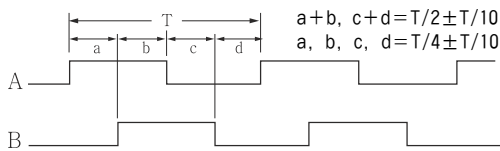
## 주요특성 Specification

| 전기적 특성 Electrical spec.               |  |                             |            |
|---------------------------------------|--|-----------------------------|------------|
| 분해능<br>Resolution                     | 25 ~ 2000 P/R                                    |                             |            |
| 출력 형태<br>Output form                  | 전원<br>Power supply                               | 소비전류<br>Current consumption |            |
|                                       | Voltage output<br>Open collector<br>Complemental | DC +24V                     | 300mA Max. |
| 최대응답주파수<br>Maximum response frequency | 100kHz Max.                                      |                             |            |
| 결선<br>Connection                      | 6P 단자대   |                             |            |

| 기계적 특성 Mechanical spec.          |   |
|----------------------------------|---|
| 기동 토크<br>Starting torque         | 4kg-cm Max.   |
| 최대 회전수<br>Maximum rotating speed | 2500rpm   |
| 허용 축 하중<br>Allowable shaft load  | 반경방향 : 5.0kg Max.<br>(Radial)<br>축 방향 : 5.0kg Max.<br>(Axial) |
| 사용온도<br>Operating temp. range    | -10°C ~ +70°C   |
| 내진동 Vibration                    | 40G   |
| 내충격 Shock                        | 100G  |

## 신호규격 Output phase shift

Voltage output, Open collector, Complemental

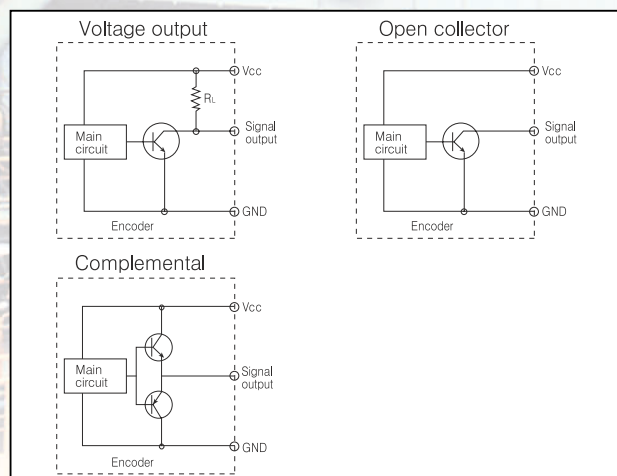


→ 엔코더 축을 보아 반시계방향 (CCW viewed from shaft end)

## 결선도 Connection table

|     |              |             |            |
|-----|--------------|-------------|------------|
| 핀구분 | 1            | 2           | 3          |
| 구성  | A SIG (LEAD) | B SIG (LAG) | Vcc (+24V) |
| 핀구분 | 4            | 5           | 6          |
| 구성  | GND          | GND         | Vcc (+24V) |

## 출력회로 Output circuit





# WJE158 Series



## 용도 Application

- 구동모터 속도검출  
Rotate motor speed detector
- 산업기계  
Industrial machine

## 특징 Features

- 환경강화형  
Rigid type
- 방수형  
Water-proof
- 장거리용  
Long distance

## 형식 Model

### WJE 158 S 16 — [MDP-D]

- WJE  
Woongji Encoder
- 158 : 외경  
Output diameter
- S : 실축  
Solid shaft
- 16 : 축경  
Shaft size

#### 분해능(P/R) Resolution

- 0025
- 0100
- 0200
- 0300
- 0600
- 0900
- 1200
- 1500

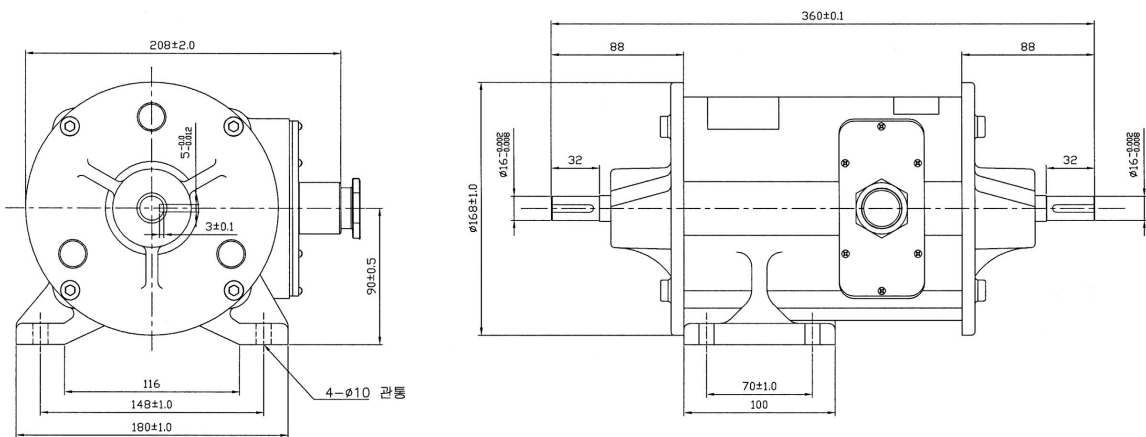
#### 출력 신호 Output signal

1. A,  $\bar{A}$
2. A, B,  $\bar{A}$ ,  $\bar{B}$
3. A, B, Z  
 $\bar{A}$ ,  $\bar{B}$ ,  $\bar{Z}$

#### 출력 형태 Output form

1. Complemental
2. Open collector
3. Voltage output

## 외형도 External Dimension







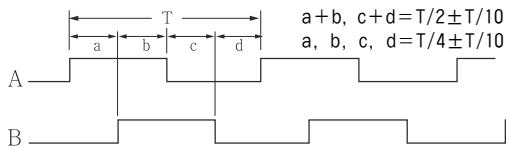
## 주요특성 Specification

| 전기적 특성 Electrical spec.               |  |                             |            |
|---------------------------------------|--|-----------------------------|------------|
| 분해능<br>Resolution                     | 25 ~ 1500 P/R                                    |                             |            |
| 출력 형태<br>Output form                  | 전원<br>Power supply                               | 소비전류<br>Current consumption |            |
|                                       | Voltage output<br>Open collector<br>Complemental | DC +24V                     | 300mA Max. |
| 최대응답주파수<br>Maximum response frequency | 100kHz Max.                                      |                             |            |
| 결선<br>Connection                      | 6P 단자대   |                             |            |

| 기계적 특성 Mechanical spec.          |   |
|----------------------------------|---|
| 기동 토크<br>Starting torque         | 4kg-cm Max.   |
| 최대 회전수<br>Maximum rotating speed | 5000rpm   |
| 허용 축 하중<br>Allowable shaft load  | 반경방향 : 40kg Max.<br>(Radial)<br>축 방향 : 20kg Max.<br>(Axial) |
| 사용온도<br>Operating temp. range    | -10°C ~ +70°C   |
| 내진동 Vibration                    | 40G   |
| 내충격 Shock                        | 100G  |

## 신호규격 Output phase shift

Voltage output, Open collector, Complemental



엔코더 축을 보아 반시계방향 (CCW viewed from shaft end)

## 결선도 Connection table

| 핀구분 | Voltage output<br>Open collector<br>Complemental |
|-----|--|
| 1   | Vcc (+24V)                                       |
| 2   | B GND  |
| 3   | A GND  |
| 4   | A SIG  |
| 5   | B SIG  |
| 6   | GND  |

## 출력회로 Output circuit

