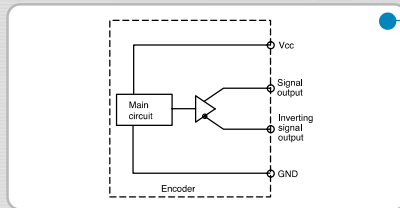


MECAPION

Rotary Encoder

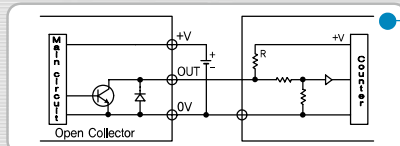


Line Driver

- It applies the exclusive IC(26LS31) for Line driver to the encoder output circuit. The exclusive IC for Line driver is suitable for long-distance transmission because it has high-speed response and good noise-proof. For the receiver of controller which receives the line driver output of encoder, IC(26LS32) which is corresponding to RS-422A should be used.

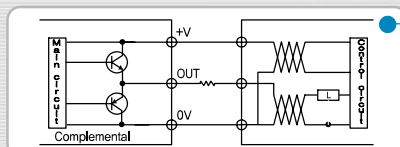
(Application) AC Servo system, DC Servo System, Robot, A.G.V., NC Construction machine

The example of output connection for Rotary Encoder



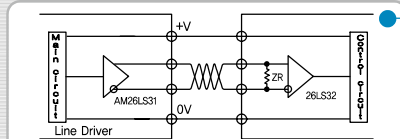
The output connection with counter

- In case that open collector type of encoder is connected to the counter, you have to connect Pull up resistor to the receiving circuit and the resistor[R] should be set less than 5/1 of input impedance.



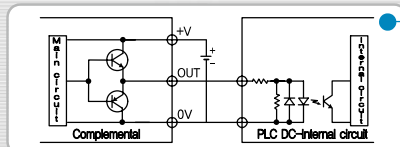
The output connection of Complemental type

- In case of complemental output type, the current inflows all the time since two transistors complements each other. It is suitable for middle-distance transmission since it has good noise-proof and low distorted wave, which is mainly applied for elevator.



The output connection of Line Driver type

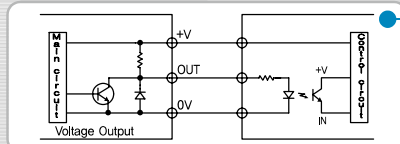
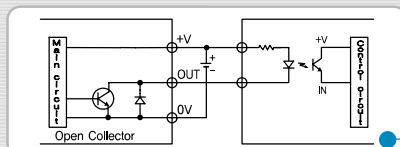
- In case of Line driver output type, For the receiving circuit which receives the output of encoder, you have to use IC(26LS32) which is corresponding to RS422A. You have to also apply use Twist pair cable .



The output connection of Encoder and PLC

- In case that you connect the encoder to the PLC, you can use them by connecting directly DC input unit of encoder and PLC. In this case, the input scanning frequency of DC input unit of PLC which receive the output of encoder should be higher than max. response frequency of encoder.(Approximately, more than 10 times)

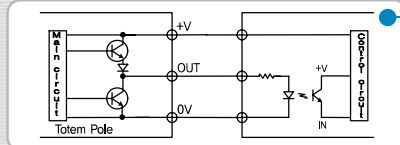
In case that the power is not stable when you apply the DC power of PLC to the encoder, the encoder may have malfunction so you have to use separately the stable DC power for encoder.



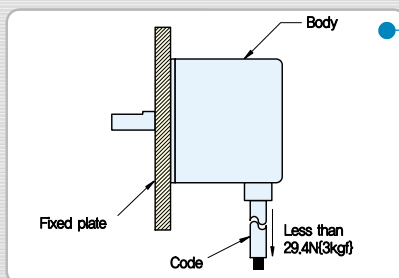
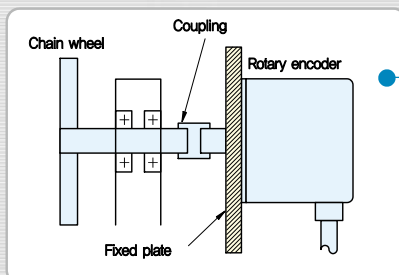
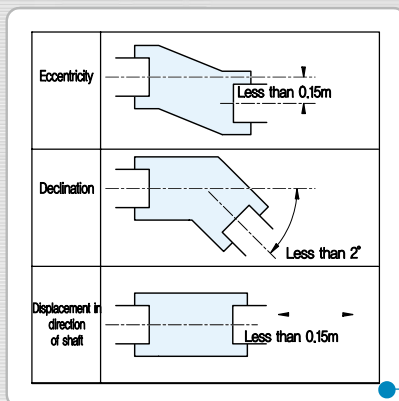
The output connection with Photo coupler

- In case of connecting rotary encoder and photo coupler, the resistor[R] should not exceed the operating current of photo coupler and encoder's max. load current.

The response of photo coupler should be more faster than max. response frequency of encoder to secure the allowance of response.



Notice for applying Rotary Encoder



■Circumstances

- Do not use rotary encoder in the below circumstances.
 - The place where the equipment may be defected due to the excessive vibration, shock
 - Nearby the equipment which emits strong magnetism, electric noise
 - The place which has inflammable, corrosive gas / the splashing water, oil / dirt
 - The place where the temperature, humidity exceeds the propriety
 - Nearby the strong alkali / acid materials
 - The place is exposed to a direct ray of light

■Instructions to install encode

- Please don't splash water or oil to the body
- As rotary encoder is composed by precision components, you must handle it with care.
- In case of forward, reverse rotation, you have to check the installation direction and adjusting direction
- In case that you set the origin of the applicable equipment at Z phase of encoder, please make sure to check the position of Z phase.
- In case of gear connection, mind that you do not inflict the excessive load to the rotating shaft.
- In case of fixing with screw, please tighten with less than 0.49N.m[5kg.f]
- In case of using coupling, make sure to install it within permitted limit.
- Please be noted that if installation error(partial disposition, declination) encoder may be broken or the life span may be shortened
- In case of connecting with chain timing belt or wheel, the extra bearing and coupling will be needed to connect encoder.

■ Instructions for wiring

- For Rotary encoder, please provide the power independently within the rated voltage.
- In case that you wire the coder after fixing the product, the power to pull the code should not exceed 29.4N[3kgf]
- Please check the connection to avoid the mis-wiring.
 - In case of short, the product may be broken or damaged.
- Wiring work should be done after cutting off the power.
 - In case that the power is on, the output circuit may be damaged.
- In case of wiring high-tension wire and power line at the same time, the malfunction caused by induction noise or damage may occur. So please use the separate wiring.
- In case that surge occurs at the used power, please suck surge by connecting surge observer between power.
- In case of no used output line, FG line, they should be insulated

■Instructions in case of extending wiring

- Please make sure that you have to use Twist Pair Shield cable when you extend the rotary encoder cable.
 - Line Driver ➔ Vcc-0V, A- \bar{A} , B- \bar{B} , Z- \bar{Z}
 - Open Collector, Voltage Output, Totem Pole, Complemental ➔ Vcc-0V, A-0V, B-0V, Z-0V

This document was created with Win2PDF available at <http://www.win2pdf.com>.
The unregistered version of Win2PDF is for evaluation or non-commercial use only.
This page will not be added after purchasing Win2PDF.