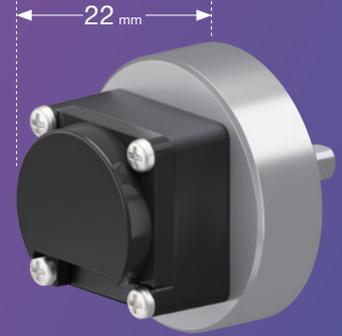


Rotary Encoder

- Outer diameter $\varnothing 30$ mm and $\varnothing 40$ mm
- Resolution from 100 to 4000 P/R (14 types)
- Line driver output, voltage output, open collector output



Front



Back

Diameter: $\varnothing 30$ mm

Shaft Type: Round Shaft

Mass: **33 g**

Product Number

RE 40 A J 1000 F

① ② ③ ④ ⑤

| | | |
|---|---------------------|--|
| ① | Diameter (mm) | 30: $\varnothing 30$ mm 40: $\varnothing 40$ mm |
| ② | Shaft Type | A: Round Shaft H: Hollow Shaft |
| ③ | Encoder Type | J: Incremental |
| ④ | Resolution (P/R) | |
| ⑤ | Output Circuit Type | E: Line Driver Output L: Voltage Output F: Open Collector Output 5 - 24 VDC |

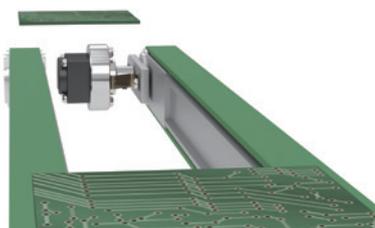
Product Line

| Diameter [mm] | Shaft Type | Resolution [P/R] | Product Name | | |
|------------------|---|------------------|-----------------------------|-----------------------------|--|
| | | | Line Driver Output | Voltage Output | Open Collector Output (Power Supply Voltage 5 to 24 VDC) |
| $\varnothing 30$ |  Round Shaft | 100 - 4000 | RE30AJ □□□□ E | RE30AJ □□□□ L | RE30AJ □□□□ F |
| |  Hollow Shaft | 100 - 4000 | RE30HJ □□□□ E | RE30HJ □□□□ L | RE30HJ □□□□ F |
| $\varnothing 40$ |  Round Shaft | 100 - 4000 | RE40AJ □□□□ E | RE40AJ □□□□ L | RE40AJ □□□□ F |
| |  Hollow Shaft | 100 - 4000 | RE40HJ □□□□ E | RE40HJ □□□□ L | RE40HJ □□□□ F |

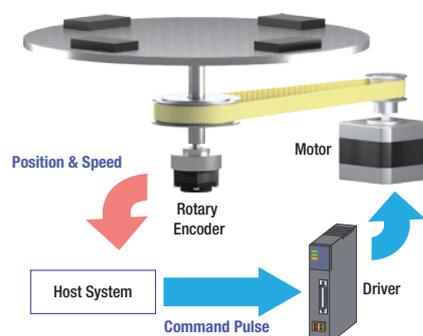
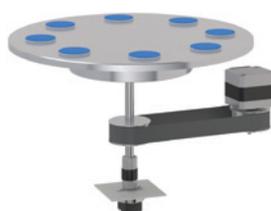
●The □ in the product name contains the desired resolution. Resolutions of 100, 200, 360, 400, 500, 600, 720, 800, 1,000, 1,800, 2,000, 2,500, 3,600 and 4,000 P/R are offered.

Application Examples

● Conveyor



● Index Table



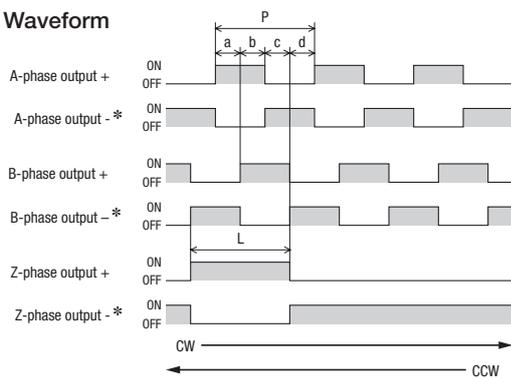
● Application Example
In a belt-and-pulley mechanism, it is possible to detect the difference in rotation between the motor and mechanism due to belt deflection or breakage.

Specifications

Electrical Specifications

| | | | |
|-------------------------------|--|----------------|------------------------|
| Encoder Type | Incremental | | |
| Output Circuit Type | Line Driver Output (26C31 equivalent) | Voltage Output | Open Collector Output |
| Resolution (P/R) | 100, 200, 360, 400, 500, 600, 720, 800, 1000, 1800, 2000, 2500, 3600, 4000 | | |
| Output Signals | A phase, B phase, Z phase: 3 channel | | |
| Output Circuit | | | |
| Max. Draw Current | 20 mA | | 30 mA |
| Output Voltage | H Level | 2.5 VDC min. | 4.3 VDC min. (no load) |
| | L Level | 0.5 VDC max. | |
| Response Frequency | 200 kHz max. | 100 kHz max. | |
| Power Supply Voltage | 5 VDC ± 10% | | 5 - 24 VDC ± 10% |
| Current Consumption (No load) | 30 mA max. | 45 mA max. | 18 mA max. |
| Angular Accuracy | ±0.36° | | |

Output Waveform



*Line driver output only

Waveform Accuracy

- Duty ratio: 50% ± 12.5% for both A-phase output and B-phase output
- Z phase output: L = P
- Phase difference: a, b, c, d = P/4 ± P/8
- Signal rise and fall times: 1 μs max. (at connector terminal)

Encoder connection cable (Sold Separately)

① Lead Wire



Product Line

| Applicable Encoder Type | Product Name | Length L [m] | Conductor AWG |
|-------------------------|-------------------|--------------|-------------------------------|
| Voltage Output | LCE05A-006 | 0.6 | 26 (0.13 mm ²) |
| Line Driver Output | LCE08A-006 | | |

② Flexible Shielded Cable



Product Line

| Applicable Encoder Type | Product Name | Length L [m] | Conductor AWG |
|---------------------------------------|-----------------|--------------|-------------------------------|
| Voltage Output/ Line Driver Output | CC010E1R | 1 | 26 (0.13 mm ²) |
| | CC020E1R | 2 | |
| | CC030E1R | 3 | |

Mounting Bracket (Round Shaft Type)

The round shaft type rotary encoder can be installed by using the mounting bracket. (for Ø30mm only)

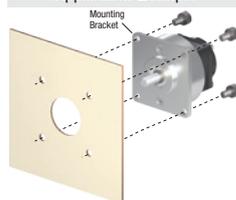
Mounting Bracket



Assembly Example



Application Example



Product Line

Product Name

PEF2

Material: Aluminum Alloy

Surface Treatment: Anodized Aluminum

Included Items

Installation

Screws M2.5 × 2

Orientalmotor

Specifications are subject to change without notice. This catalogue was published in March 2025.

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These products are manufactured at plants certified with the international standards ISO 9001 (for quality assurance) and ISO 14001 (for systems of environmental management).