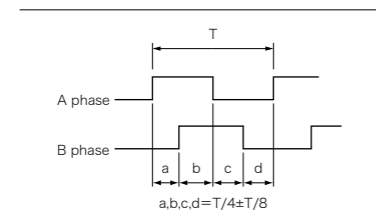


## Specifications

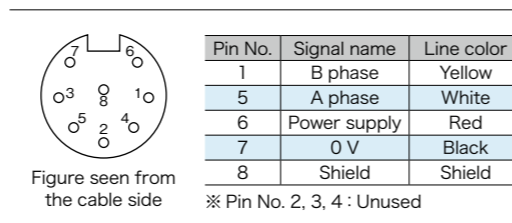
| Series                                 | D-540/D-5400   | D-1000Z   | DE-04   | DL-07                     |
|--|--|---|---|---------------------------|
| Valid length of wire                   | 600 mm   | 2400 mm   | 4000 mm   | 7000 mm                   |
| Resolution (mm)                        | 0.1/0.01<br>(Both 4 multiplied)  |   | 0.1<br>(2 multiplied)                                       |                           |
| Number of output pulse                 | 2.5 pulse/mm (D-540)<br>25 pulse/mm (D-5400)   |   | 5 pulse/mm  |                           |
| Maximum detecting speed                | 100 m/min (D-540)<br>40 m/min (D-5400)   | 100 m/min   | 60 m/min  | 100 m/min                 |
| Maximum accelerating speed             | 9.8 m/s <sup>2</sup> (1G)  | 13.7 m/s <sup>2</sup> (1.5G)  | 7.8 m/s <sup>2</sup> (0.8G)                                 |                           |
| Wire tension                           | Approx. 1.96 N<br>(200 gf)   | Approx. 2.94 N<br>(300 gf)  | Approx. 1.96~4.9 N<br>(200~500 gf)                          | Approx. 7.4 N<br>(750 gf) |
| Wire diameter                          | φ0.6 mm  | φ0.6 mm   | φ0.45 mm  | φ0.7 mm                   |
| Wire material                          | SUS304   |   |   |                           |
| Reciprocating durability               | More than 1,000,000 times  | More than 50,000 times  | 500,000 times<br>(Less than 0~2 m)<br>200,000 times (2~4 m) | More than 50,000 times    |
| Output phase                           | A/B phase  |   |   |                           |
| Output option                          | Complementary output   | Open collector/Complementary/Line driver  |   |                           |
| Output capacity                        | Residual voltage : less than 0.7 V/Sinking current : less than 30mA/Pressure-resistance : less than 30 V |   |   |                           |
| Power source                           | DC4.5~26 V<br>50 mA or less  | DC4.5~26 V (Line driver output: 5 V±5%)<br>70 mA or less (Less than 150 mA in case of line driver output) |   |                           |
| Operating temperature range            | 0~45 °C<br>(No humidity)   | -10~45 °C<br>(No humidity)  |   |                           |
| Operating humidity range               |  | 35~90 % RH<br>(No humidity)   |   |                           |
| Storage temperature range              | -20~80 °C  |   |   |                           |
| Weight                                 | 350 g  | 750 g   | 880 g   | 1.65 kg                   |
| Cable specifications                   | 2 m φ5.3<br>(DIN8P with connector)   | 2 m φ5.3<br>(DIN8P with connector. Line driver output type : Cable end open)                              |   |                           |
| Distance accuracy (20 °C)              | 0.05 % + Quantization error  |   |   |                           |
| Stability accuracy (20 °C)             | ±0.1 mm + Quantization error   | ±0.2 mm + Quantization error  |   |                           |
| Vibration resistance                   | 49 m/s <sup>2</sup> (5G), 30 minutes   |   |   |                           |
| Impact resistance                      | With 490 m/s <sup>2</sup> (50G)  |   |   |                           |
| Protective structure*                  | IP50   | IP63  |   |                           |
| Recommended range of transfer distance | Less than 15 m   | Less than 15 m (Less than 50 m in case of line driver output)   |   |                           |
| RoHS                                   | Compliant  |   |   |                           |

※ Electric parts only

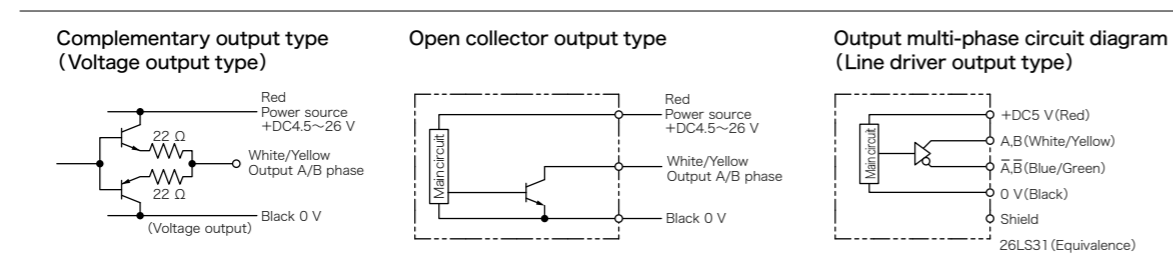
## Output waveform



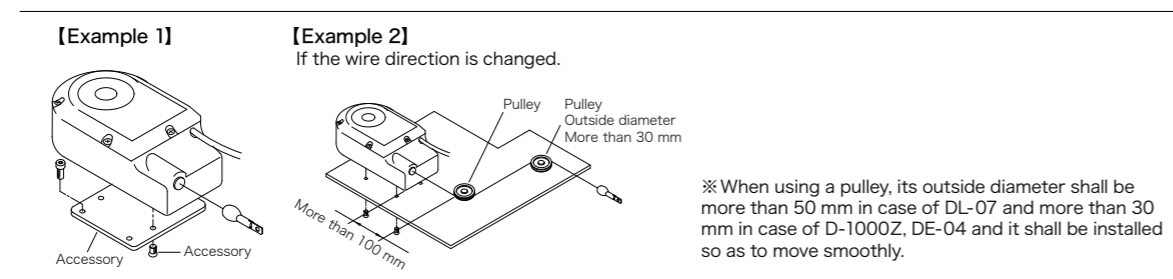
## Connecting cable



## Output multi-phase circuit diagram

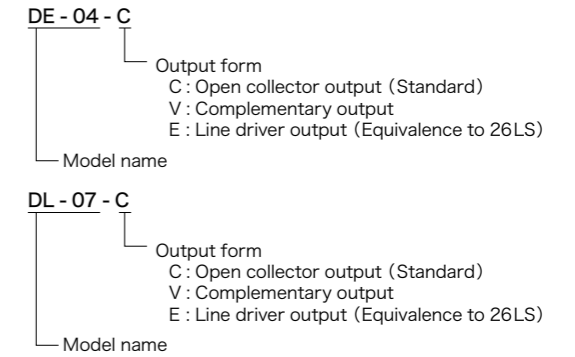
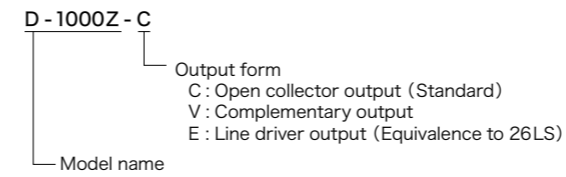


## Installation example

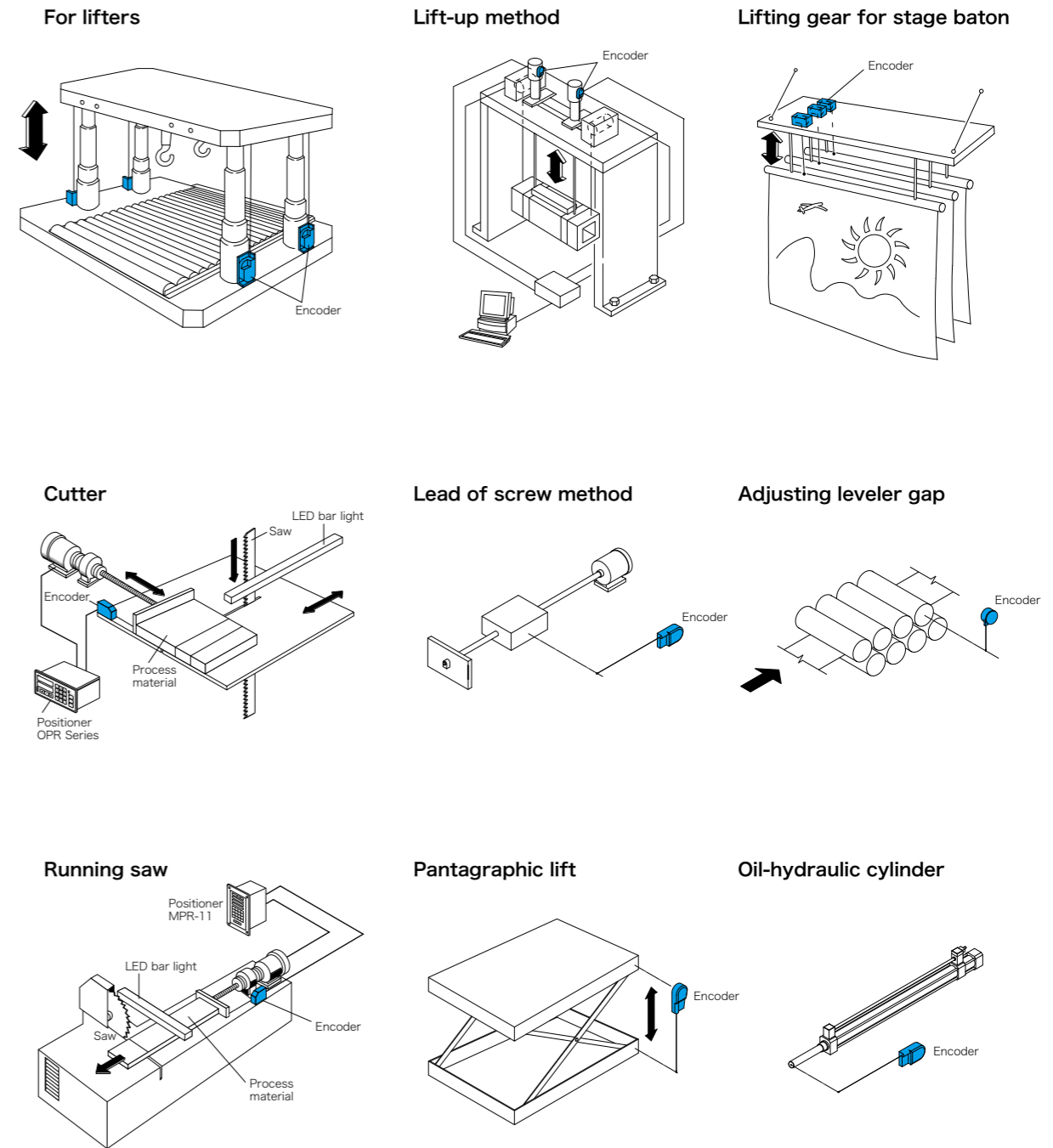


## About model names

Output form needs to be selected after model name.

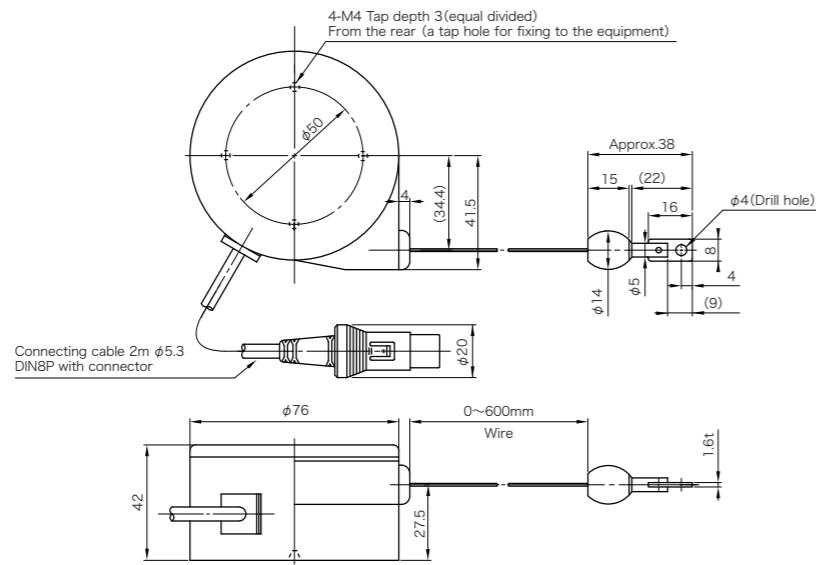


## Example of use



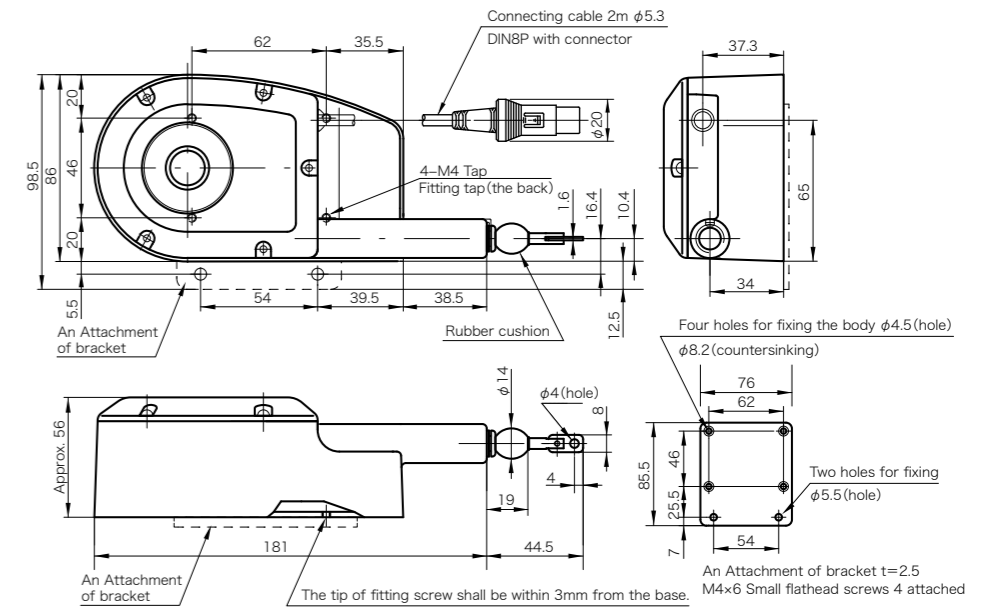
■ Outline drawing

D-540  
D-5400



■ Outline drawing

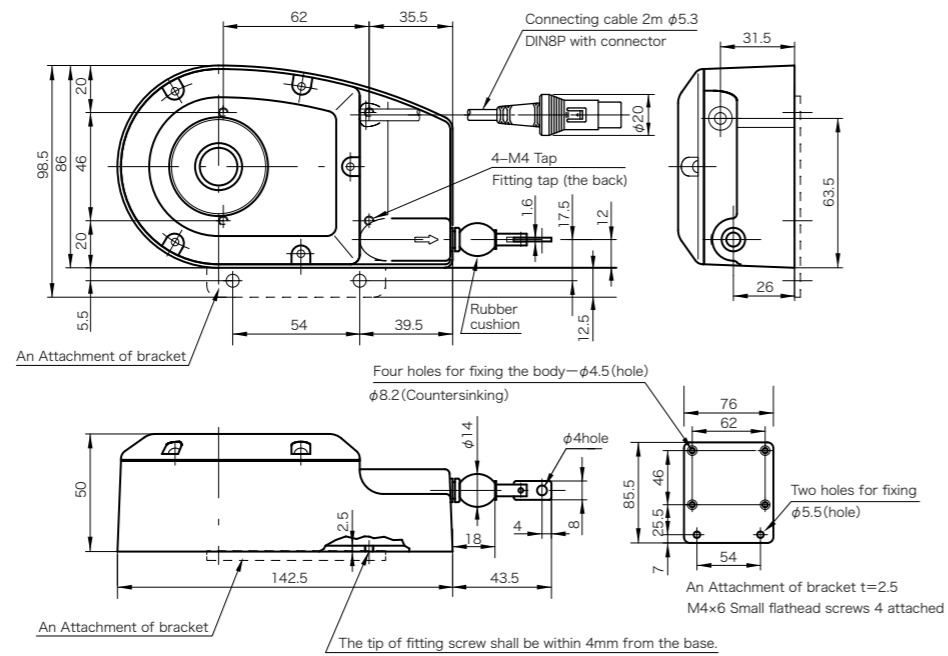
DE-04



※ Connectors are unnecessary when line driver is outputting.

■ Outline drawing

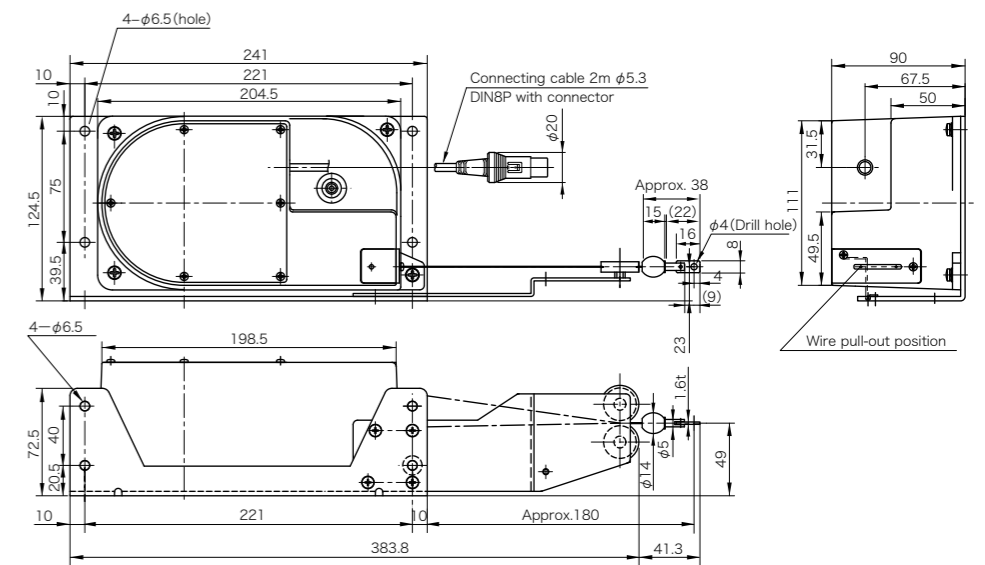
D-1000Z



※ Connectors are unnecessary when linedriver is outputting.

■ Outline drawing

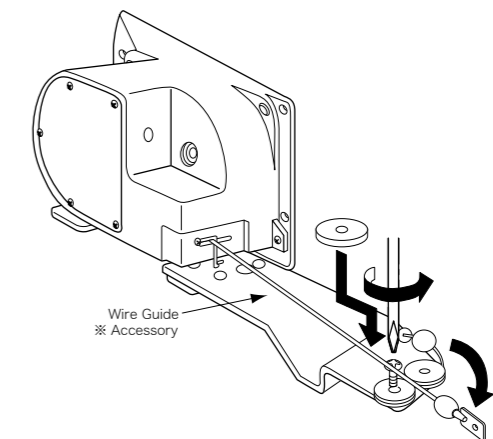
DL-07



※ Connectors are unnecessary when line driver is outputting.

■ Installation procedure

DL-07



※ Please attach wire guide board when in use.

# DIGICOLLAR LINEUP

## Mutoh covers sensing, displaying and controlling.

### Meeting your various demands such as setting up a position, sensing, displaying and controlling.

Digicollar was originally designed to measure feed of machine tools. In order to suit the needs for industrial machines such as calculating devices and processing control, we have been manufacturing a new model after another. Having specialized in sensing and controlling, we are now proudly releasing a variety of equipments: Rotary Encoder, Wired Linear Encoder, Linear Scale and Digital counter for display and control. Mutoh delivers Digicollar with high accuracy, performance efficiency and durability to you.

### Available with full support.

Digicollar plays an important role as calculator and controller in production sites. It is capable of sensing, displaying and controlling under unexpected troubles, and handles with good speed. Our long history and experience with the products makes it possible to give you full support. Digicollar performs all the functions with high accuracy, quality and efficiency. It automates your production and saves you labors.

#### RoHS compliant

All products are made up with parts which do not contain 6 hazardous substances specified by RoHS. However, a use excluded by RoHS is counted out.

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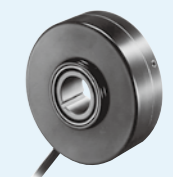


LINEAR ENCODER

ROTARY ENCODER

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S Series  
C Series  
O Series  
A Series



ROTARY ENCODER