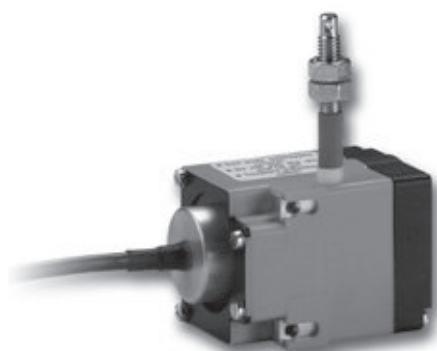


## Draw wire mechanics with incremental encoder

## Draw wire encoder A40

**Measuring length max. 2 m**  
**Traverse speed max. 0.8 m/s**



**The draw wire system A40 with incremental encoder excels with its compact construction.**



## Compact and simple

- Measuring length up to 2000 mm.
- For applications with low traverse speeds.
- Easy mounting.

**Order code**  
**draw wire encoder**

|      |          |   |    |          |   |      |
|------|----------|---|----|----------|---|------|
| D5.2 | XXX      | . | 24 | XX       | . | 1000 |
| Type | <b>a</b> |   |    | <b>b</b> |   |      |

- a** *Steel wire, length*  
501 = 1000 mm  
102 = 2000 mm

- b** *Output circuit / power supply*  
 21 = Push-Pull with inverted signal / 5 ... 24 V DC  
 41 = Push-Pull with inverted signal / 8 ... 30 V DC

### Stock types

D5.2102.2421.1000

D5.2102.2441.1000

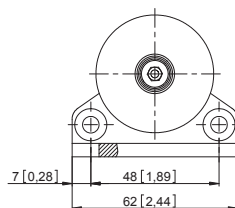
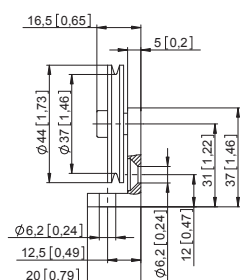
D5.2501.2421.1000

D5.2501.2441.1000

## Accessories for draw wire encoder

Order no.

### Guide pulley

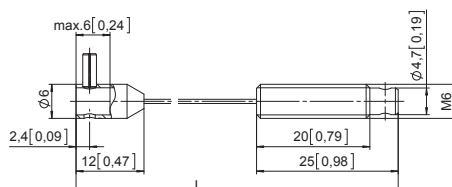


Order code for the set:

- Guide pulley (anodised aluminium)
- 2 x countersunk screws for lateral fixing
- 2 x hexagonal screws for fixing on a flat surface

8.0000.7000.0045

### Extension cable



Steel wire 2 m [6.56']

Steel wire 5 m [16.40']

Steel wire 10 m [32.81']

Paraleine 2 m [6.56']

8.0000.7000.0033

**8.0000.7000.0034**

**8.0000.7000.0035**

8.0000.7000.0032

# Linear measuring technology

|                                                         |                              |                                                                  |
|---------------------------------------------------------|------------------------------|------------------------------------------------------------------|
| <b>Draw wire mechanics<br/>with incremental encoder</b> | <b>Draw wire encoder A40</b> | <b>Measuring length max. 2 m<br/>Traverse speed max. 0.8 m/s</b> |
|---------------------------------------------------------|------------------------------|------------------------------------------------------------------|

## Technical data

| Mechanical characteristics (draw wire mechanics) |                                                              | Electrical characteristics (encoder) |                                                                                     |
|--------------------------------------------------|--------------------------------------------------------------|--------------------------------------|-------------------------------------------------------------------------------------|
| Measuring range                                  | up to 2000 mm                                                | Output circuits                      | Push-pull      Push-pull                                                            |
| Absolute accuracy                                | ±0.1 %<br>for the whole measuring range                      | Power supply                         | 5 ... 24 V DC      8 ... 30 V DC                                                    |
| Repetition accuracy                              | ±0.15 mm<br>per direction of travel                          | Current consumption (no load)        | max. 50 mA      max. 50 mA                                                          |
| Resolution (incremental)                         | 0.1 mm standard encoder<br>with 1000 ppr                     | Permissible load / channel           | max. +/- 50 mA      max. +/- 50 mA                                                  |
| Traversing speed                                 | max. 800 mm/s                                                | Pulse rate                           | max. 160 kHz      max. 160 kHz                                                      |
| Required force                                   | approx. 10 N (on wire)                                       | Switching level                      | HIGH      min. +V - 2.5 V<br>LOW      max. 0.5 V      min. +V - 3.0 V<br>max. 2.5 V |
| Material                                         | housing reinforced plastic<br>wire stainless steel ø 0.45 mm | Rising edge time $t_r$               | max. 1 µs      max. 1 µs                                                            |
| Weight                                           | approx. 210 g [7.41 oz]                                      | Falling edge time $t_f$              | max. 1 µs      max. 1 µs                                                            |
|                                                  |                                                              | Short-circuit protected outputs      | yes      yes                                                                        |
|                                                  |                                                              | CE compliant acc. to                 | EMC guideline 2004/108/EC<br>RoHS guideline 2011/65/EU                              |

| Mechanical characteristics (encoder)      |                                   |
|-------------------------------------------|-----------------------------------|
| Protection acc. to EN 60529               | IP54                              |
| Working temperature                       | -20°C ... +85°C [-4°F ... +185°F] |
| Shock resistance acc. to EN 60068-2-27    | 1000 m/s², 6 ms                   |
| Vibration resistance acc. to EN 60068-2-6 | 100 m/s², 55 ... 2000 Hz          |

### Description of the incremental encoder (connected on load side)

- Compensation for temperature and ageing
- Short-circuit protected outputs
- Reverse polarity protected power supply input
- Push-pull output

### Terminal assignment of the encoder

| Signal       | 0 V | +V | A  | $\bar{A}$ | B  | $\bar{B}$ | 0  | $\bar{0}$ |
|--------------|-----|----|----|-----------|----|-----------|----|-----------|
| Cable colour | WH  | BN | GN | YE        | GY | PK        | BU | RD        |

Isolate unused outputs before initial start-up.

### Dimensions

Dimensions in mm [inch]

1 2 x M4, max. screw-in depth 8 mm [0.32"]

