

Linear measuring technology

| | | |
|------------------------------|---------------------|----------------------------------|
| Draw-wire encoder A41 | Compact-Line | Measuring length max. 2 m |
|------------------------------|---------------------|----------------------------------|



The draw-wire mechanics A41 with absolute encoder excels with its compact construction.

These draw-wire mechanics can be equipped with multiturn encoders of the F366x and M366x series. The maximum measuring length is 2 meters.



| | | | | |
|------------------------|-----------------------|-----------------------------|---------------|----------------|
| | | | | |
| Wide temperature range | High protection level | Reverse polarity protection | Easy mounting | Compact design |

Compact and simple

- Measuring length up to 2000 mm.
- Scalable analog output with limit switch function.
- For applications with low traverse speeds.
- Easy mounting.
- Robust zinc die-cast housing.

Order code with encoder (absolute)

D 5.55 02 . XX XX . XXXX
Type a b c d e

- | | | | |
|---|--|---|--|
| a <i>Measuring range</i> 02 = 2000 mm | b <i>Encoder used</i> M3 = Sendix M3663, absolute, SSI F3 = Sendix F3663, absolute, SSI M8 = Sendix M3668, absolute, CANopen Sendix M3668, absolute, SAE J1939 Sendix M3668, absolute, IO-Link F8 = Sendix F3668, absolute, CANopen | c <i>Output circuit</i> depends on the encoder used | e <i>Resolution / Protocol / Options</i> depends on the encoder used |
| | | d <i>Type of connection</i> depends on the encoder used | |

| Standard resolutions for draw-wire with absolute encoder Sendix F3663/M3663 (12 bit ST) or F3668/M3668 (12 bit ST, programmable via bus) | |
|--|------|
| Drum circumference [mm] | 100 |
| Pulses / revolution [ppr] | 4096 |
| Pulses / mm | 41 |
| Resolution [mm] | 0.02 |

Recommended standard variants (with absolute encoder)

| Order no. draw-wire encoder | Mounted encoder | Interface | Power supply | Type of connection | Resolution / Protocol | Option |
|-----------------------------|----------------------------------|-----------|----------------|-----------------------|------------------------------------|--------|
| D5.5502.M324.G222 | Sendix M3663 (8.M3663.4124.G222) | SSI | 10 ... 30 V DC | radial M12 connector | 4096 ppr / SSI-Gray-Code | - |
| D5.5502.M824.2122 | Sendix M3668 (8.M3668.4124.2122) | CANopen | 10 ... 30 V DC | radial M12 connector | CANopen encoder profile DS406 V4.0 | - |
| D5.5502.M834.3222 | Sendix M3668 (8.M3668.4134.3222) | SAE J1939 | 10 ... 30 V DC | radial M12 connector | SAE J1939 | - |
| D5.5502.M844.4122 | Sendix M3668 (8.M3668.4144.4122) | IO-Link | 18 ... 30 V DC | radial M12 connector | IO-Link | - |
| D5.5502.F321.G222 | Sendix F3663 (8.F3663.4121.G222) | SSI | 10 ... 30 V DC | tangential cable, 1 m | 4096 ppr / SSI-Gray-Code | - |
| D5.5502.F821.2122 | Sendix F3668 (8.F3668.4121.2122) | CANopen | 10 ... 30 V DC | tangential cable, 1 m | CANopen encoder profile DS406 V3.2 | - |

Linear measuring technology

Draw-wire encoder A41 Compact-Line Measuring length max. 2 m

Order code with encoder (analog, scalable with limit switch function) D5.55 02 . M1 XX . XXXX


- a** *Measuring range*
02 = 2000 mm
- b** *Encoder used*
M1 = Sendix M3661, absolute, analog ¹⁾
- c** *Output circuit*
depends on the encoder used
- d** *Type of connection*
depends on the encoder used
- e** *Resolution / Protocol / Options*
depends on the encoder used

Recommended standard variants (with encoder analog, scalable with limit switch function)

| Order no. draw-wire encoder | Mounted encoder | Interface | Power supply | Type of connection | Resolution / Protocol | Option |
|-----------------------------|----------------------------------|---------------------|----------------|----------------------|-----------------------|--|
| D5.5502.M134.3512 | Sendix M3661 (8.M3661.4134.3512) | Analog, 4 ... 20 mA | 10 ... 30 V DC | radial M12 connector | 12 Bit / 4 ... 20 mA | scalable with limit switch function ²⁾ |
| D5.5502.M144.4512 | Sendix M3661 (8.M3661.4144.4512) | Analog, 0 ... 10 V | 15 ... 30 V DC | radial M12 connector | 12 Bit / 0 ... 10 V | scalable with limit switch function ²⁾ |
| D5.5502.M134.3612 | Sendix M3661 (8.M3661.4134.3612) | Analog, 4 ... 20 mA | 10 ... 30 V DC | radial M12 connector | 12 Bit / 4 ... 20 mA | scalable without limit switch function ²⁾ |
| D5.5502.M144.4612 | Sendix M3661 (8.M3661.4144.4612) | Analog, 0 ... 10 V | 15 ... 30 V DC | radial M12 connector | 12 Bit / 0 ... 10 V | scalable without limit switch function ²⁾ |

Accessories for draw-wire encoder Dimensions in mm [inch] Order no.

Guide pulley



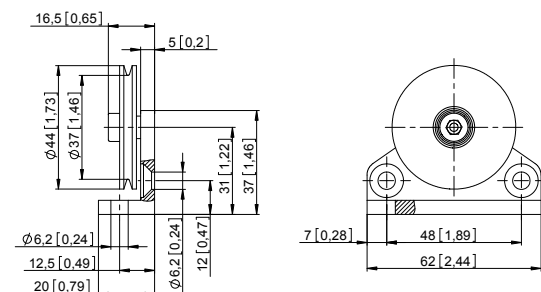
Technical data:

- mounting bracket (anodized alum.)
- guide pulley (plastic POM)
- ball bearing (type 696-2R5)


Scope of delivery:

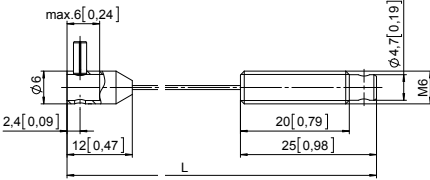
- 2 x countersunk screws for lateral fixing
- 2 x hexagonal screws for fixing on a flat surface

8.0000.7000.0045



Extension cable (further on request)





Steel wire 2 m [6.56'] **8.0000.7000.0033**

Steel wire 5 m [16.40'] **8.0000.7000.0034**

Steel wire 10 m [32.81'] **8.0000.7000.0035**

Paraleine 2 m [6.56'] **8.0000.7000.0032**

Cables and connectors Order no.

| | | |
|----------------------------|--|-----------------------------|
| Preassembled cables | M12 female connector with coupling nut, 5-pin, A coded, straight single ended 2 m [6.56'] PVC cable | 05.00.6081.2211.002M |
| Connectors | M12 female connector with coupling nut, 5-pin, A coded, straight (metal) | 8.0000.5116.0000 |
| | M12 female connector with coupling nut, 5-pin, A coded, straight (metal/plastic) | 05.B-8151-0/9 |
| | M12 female connector with coupling nut, 5-pin, A coded, right-angle (plastic) | 05.B-8251-0/9 |

Further Kübler cables and connectors can be found at: kuebler.com/connection-technology

1) With ccw option.
2) Delivery condition: unscaled.
Description for scaling and limit switch function see data sheet M3661.

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| | | |
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| Draw-wire encoder A41 | Compact-Line | Measuring length max. 2 m |
|------------------------------|---------------------|----------------------------------|

Technical data

| Mechanical characteristics (draw-wire mechanics) | |
|--|---|
| Measuring range | up to 2000 mm |
| Speed max. | 1000 mm/s |
| Acceleration max. | 43,1 m/s ² (9,8 m/s ² at -40 °C ... +80 °C) |
| Working temperature | -10 °C ... +80 °C [+14 °F ... +176 °F] on request -40 °C ... +80 °C [-40 °F ... +176 °F] |
| Weight | approx. 200 g [7.06 oz] |
| Required force | ≥ 2 N (on wire) |
| Linearity | ±0.35 % for the whole measuring range |
| Repetition accuracy | ±0.15 mm per direction of travel |
| Material | housing zinc die-cast wire stainless steel ø 0.45 mm |

Electrical characteristics (encoder)

The electrical characteristics can be found in the data sheets of the encoders.

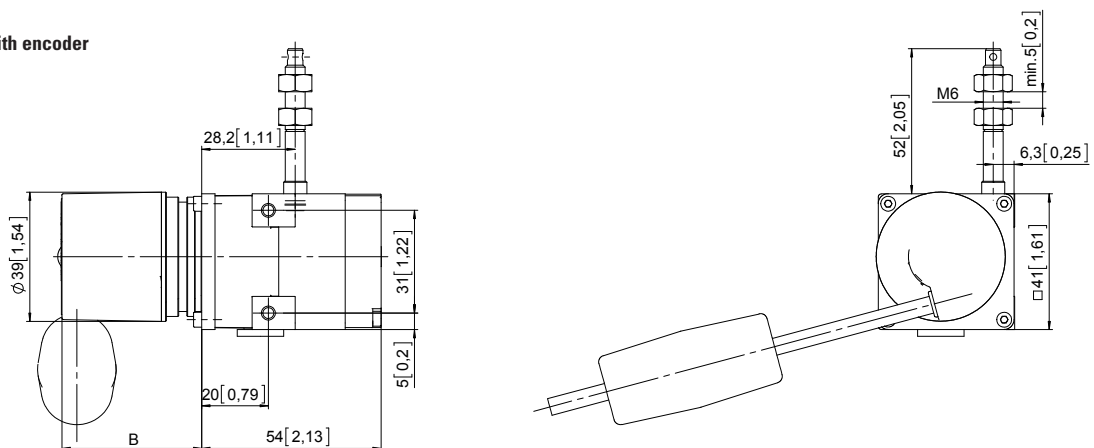
Approvals

| | | |
|--|----------------|--|
| CE compliant in accordance with | | |
| EMC Directive | 2014/30/EU | |
| RoHS Directive | 2011/65/EU | |
| UKCA compliant in accordance with | | |
| EMC Regulations | S.I. 2016/1091 | |
| RoHS Regulations | S.I. 2012/3032 | |

Dimensions

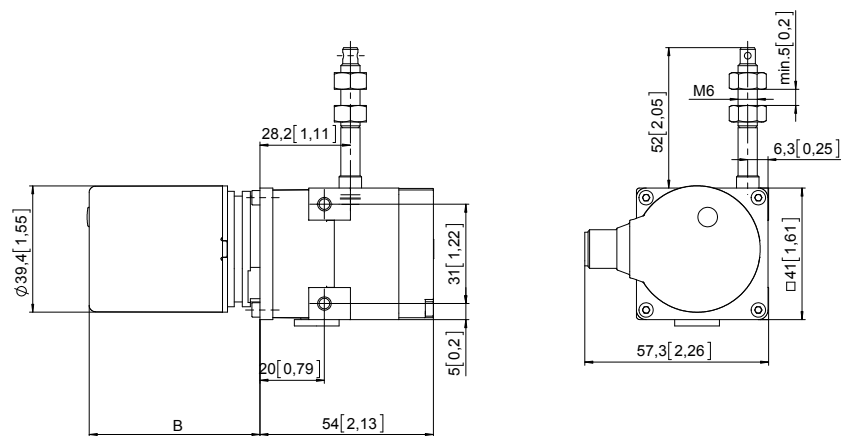
Dimensions in mm [inch]

Draw-wire mechanics with encoder (tangential cable)



| Dimension B depends on the encoder used | |
|--|-----------------|
| Encoder | B |
| Sendix absolute (M366x) D5.5502.Mxxx.xxxx | 50.25 [1.98] |
| Sendix absolute (F366x) D5.5502.Fxxx.xxxx | 39.70 [1.56] |

Draw-wire mechanics with encoder (M12 connector)



| Dimension B depends on the encoder used | |
|---|-----------------|
| Encoder | B |
| Sendix absolute (F3663, SSI) D5.5502.Fxxx.xxxx | 42.20 [1.66] |
| Sendix absolute (F3668, CANopen) D5.5502.Fxxx.xxxx | 42.20 [1.66] |
| Sendix absolute (M3661, analog) D5.5502.Mxxx.xxxx | 53.25 [2.10] |