

Linear measuring technology

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

D5.55	02	. XX XX	. XXXX
Type	a	b c d	e

- | | | | |
|--|--|--|---|
| <p>a Measuring range
02 = 2000 mm</p> | <p>b Encoder used
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</p> | <p>c Output circuit
depends on the encoder used</p> | <p>e Resolution / Protocol / Options
depends on the encoder used</p> |
| | | <p>d Type of connection
depends on the encoder used</p> | |

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	-

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Order code with encoder (analog, scalable with limit switch function)	<table border="1" style="margin: auto; border-collapse: collapse;"> <tr> <td style="padding: 2px 5px;">D</td> <td style="padding: 2px 5px;">5.55</td> <td style="padding: 2px 5px;">02</td> <td style="padding: 2px 5px;">.</td> <td style="padding: 2px 5px;">M1</td> <td style="padding: 2px 5px;">XX</td> <td style="padding: 2px 5px;">.</td> <td style="padding: 2px 5px;">XXXX</td> </tr> <tr> <td style="font-size: 8px;">Type</td> <td style="font-size: 8px;">a</td> <td style="font-size: 8px;">b</td> <td style="font-size: 8px;">c</td> <td style="font-size: 8px;">d</td> <td style="font-size: 8px;">e</td> <td colspan="2"></td> </tr> </table>	D	5.55	02	.	M1	XX	.	XXXX	Type	a	b	c	d	e		
D	5.55	02	.	M1	XX	.	XXXX										
Type	a	b	c	d	e												

- | | | | |
|---|---|---|--|
| a <i>Measuring range</i>
02 = 2000 mm | b <i>Encoder used</i>
M1 = Sendix M3661, absolute, analog ¹⁾ | 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 | | | |

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.
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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'] 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
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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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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

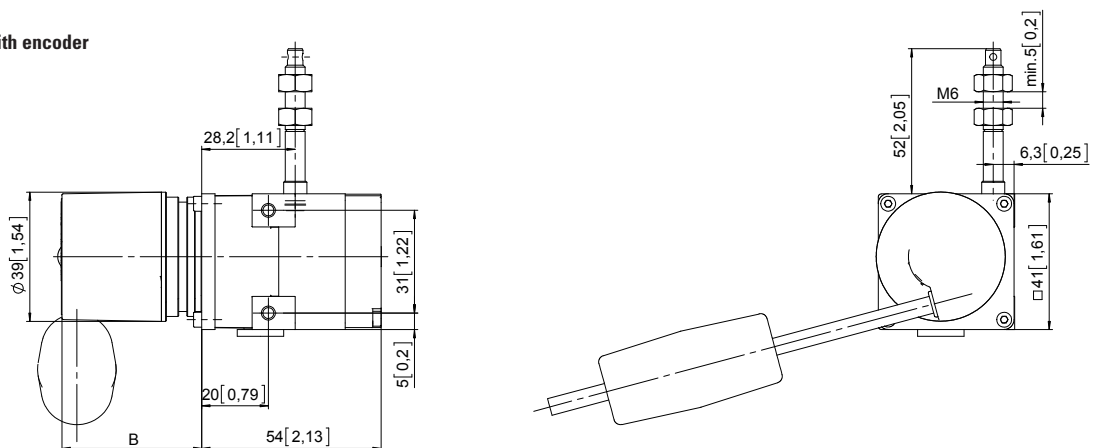
Electrical characteristics (encoder)
The electrical characteristics can be found in the data sheets of the encoders.

Approvals
CE compliant in accordance with
EMC Directive 2014/30/EU
RoHS Directive 2011/65/EU

Dimensions

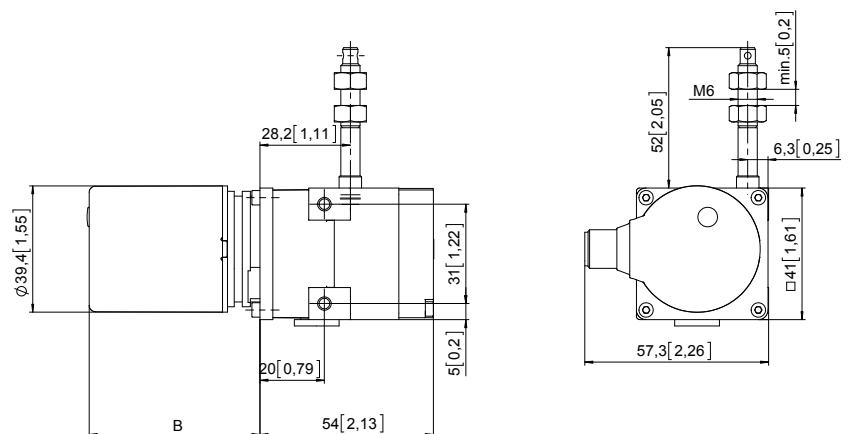
Dimensions in mm [inch]

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]