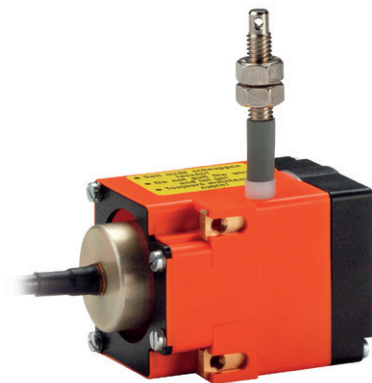


# Linear measuring technology

<b>Draw-wire encoder A40</b>	<b>Compact-Line</b>	<b>Measuring length max. 2 m</b>
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The draw wire system A40 with incremental encoder excels with its compact construction.



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

### Compact and simple

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

<b>Order code</b>	<b>D5.2</b>	<b>XXX</b>	<b>. 24</b>	<b>XX</b>	<b>. 1000</b>
<b>draw-wire encoder</b>	Type	<b>a</b>		<b>b</b>	
<b>a</b> Steel wire, length		<b>b</b> Output circuit / supply voltage			
501 = 1000 mm		21 = Push-pull with inverted signal / 5 ... 24 V DC			
102 = 2000 mm		41 = Push-pull with inverted signal / 8 ... 30 V DC			
		<b>Stock types</b>			
		D5.2102.2421.1000		D5.2501.2421.1000	
		D5.2102.2441.1000		D5.2501.2441.1000	

Accessories for draw-wire encoder	Dimensions in mm [inch]	Order no.
<b>Guide pulley</b>  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 	<b>8.0000.7000.0045</b>
<b>Extension cable</b> (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']	<b>8.0000.7000.0033</b> <b>8.0000.7000.0034</b> <b>8.0000.7000.0035</b> <b>8.0000.7000.0032</b>

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## Technical data

Mechanical characteristics (draw-wire mechanics)	
<b>Measuring range</b>	up to 2000 mm
<b>Absolute accuracy</b>	±0.1 % for the whole measuring range
<b>Repetition accuracy</b>	±0.15 mm per direction of travel
<b>Resolution (incremental)</b>	0.1 mm standard encoder with 1000 ppr
<b>Speed max.</b>	800 mm/s
<b>Acceleration max.</b>	43 m/s <sup>2</sup>
<b>Required force</b>	approx. 10 N (on wire)
<b>Material</b>	housing reinforced plastic wire stainless steel ø 0.45 mm
<b>Weight</b>	approx. 210 g [7.41 oz]

Electrical characteristics (encoder)		
<b>Output circuits</b>	Push-pull	Push-pull
<b>Supply voltage</b>	5 ... 24 V DC	8 ... 30 V DC
<b>Current consumption (no load)</b>	max. 50 mA	max. 50 mA
<b>Permissible load / channel</b>	max. +/- 50 mA	max. +/- 50 mA
<b>Pulse rate</b>	max. 160 kHz	max. 160 kHz
<b>Switching level</b>	HIGH min. +V - 2.5 V LOW max. 0.5 V	min. +V - 3.0 V max. 2.5 V
<b>Rising edge time t<sub>r</sub></b>	max. 1 µs	max. 1 µs
<b>Falling edge time t<sub>f</sub></b>	max. 1 µs	max. 1 µs
<b>Short-circuit protected outputs</b>	yes	yes

Approvals		
<b>CE compliant</b> in accordance with	EMC Directive	2014/30/EU
	RoHS Directive	2011/65/EU
<b>UKCA compliant</b> in accordance with	EMC Regulations	S.I. 2016/1091
	RoHS Regulations	S.I. 2012/3032

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

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

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

### Terminal assignment of the encoder

Signal	0 V	+V	A	$\bar{A}$	B	$\bar{B}$	0	$\bar{0}$
Core color	WH	BN	GN	YE	GY	PK	BU	RD

Isolate unused outputs before initial start-up.

# Linear measuring technology

<b>Draw-wire encoder A40</b>	<b>Compact-Line</b>	<b>Measuring length max. 2 m</b>
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## Dimensions

Dimensions in mm [inch]

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

