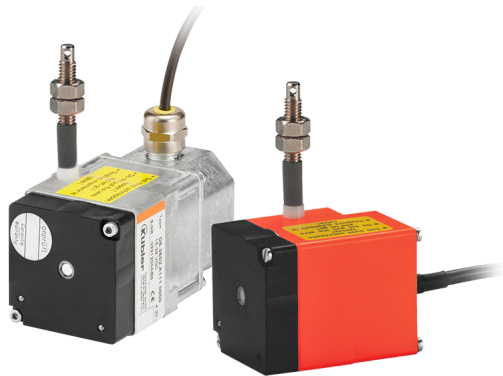


# Linear measuring technology

**Draw-wire encoder A40 / A41**    **Compact-Line**    **Measuring length A40 max. 1 m**  
**Measuring length A41 max. 2 m**



The draw-wire encoders A40 and A41 with analog output is characterized by its compact design. They are available with a potentiometer, voltage or current output.



Analog output



Wide temperature range



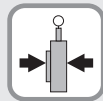
High protection level



Reverse polarity protection



Easy mounting



Compact design

## Compact and simple

- Measuring length up to 2000 mm.
- For applications with a low traversing speed.
- Easy to install.
- Robust zinc die-cast housing.

**Order code**    **D5.350X.AXX.X.0000**  
**draw-wire encoder**    Type    **a**    **b**    **c**

**a** Measuring range

- 1 = 1000 mm
- 2 = 2000 mm

**b** Output circuit

- 11 = analog output 4 ... 20 mA
- 22 = analog output 0 ... 10 V DC power supply 15 ... 28 V DC
- 33 = potentiometer output 10 kΩ

**c** Type of connection

- 1 = cable 2 m [6.56'] for measuring range 1000 mm: axial for measuring range 2000 mm: radial
- 2 = radial M12 connector, 4-pin (only available for measuring range 2000 mm)

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

### Guide pulley

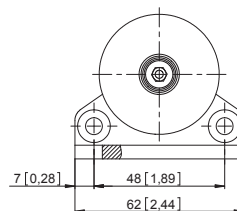
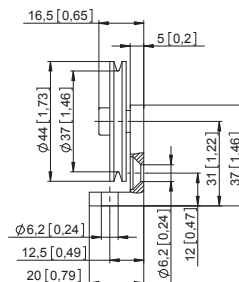


Technical data:

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

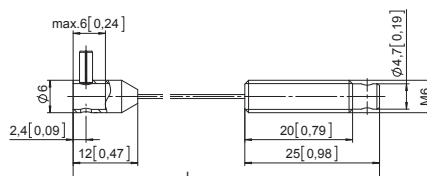
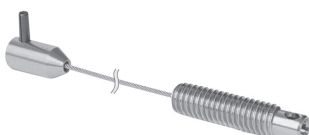
Scope of delivery:

- 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']
- 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 encoder A40 / A41</b>	<b>Compact-Line</b>	<b>Measuring length A40 max. 1 m</b> <b>Measuring length A41 max. 2 m</b>
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Connection technology		Order no.
<b>Cordset, pre-assembled</b>	M12 female connector with coupling nut, 4-pin, A coded, straight single ended 2 m [6.56'] PUR cable	<b>05.00.6061.6211.002M</b>
<b>Connector, self-assembly</b>	M12 female connector with coupling nut, 4-pin, A coded, straight (plastic)	<b>05.B8141-0</b>
	M12 male connector with external thread, 4-pin, A coded, straight (metal/plastic)	<b>005.BS8141-0</b>
	M12 female connector with coupling nut, 4-pin, A coded, right-angle (plastic)	<b>05.B8241-0</b>

Additional connectors can be found in the connection technology section or in the connection technology area of our website at: [www.kuebler.com/connection\\_technology](http://www.kuebler.com/connection_technology).

## Technical data

Mechanical characteristics (draw-wire mechanics)		
Measuring range	1000 mm (A40)	2000 mm (A41)
Speed max.	0.8 m/s	1 m/s
Acceleration max.	43.1 m/s <sup>2</sup>	43.1 m/s <sup>2</sup>
Working temperature	0°C ... 50°C [+32°F ... +122°F]	-10°C ... +80°C [+14°F ... +176°F]
Protection (sensor) acc. to EN 60529	IP50	IP65
Weight	approx. 200 g [7.06 oz]	approx. 320 g [11.29 oz]
Extension force $F_{min}$	2 N	
Repeat accuracy	±0.15 mm	
Linearity	±0.35 %	
Material	housing plastic / zinc die-cast	wire stainless-steel $\varnothing$ 0.45 mm plastic-coated

Electrical characteristics			
Analog output	0 ... 10 V	4 ... 20 mA	potentiometer 10 k $\Omega$
Power supply	15 ... 28 V DC	–	–
Operating range	–	15 ... 28 V DC	max. 48 V DC
Temperature range	0°C ... 50°C [+32°F ... +122°F]	0°C ... 50°C [+32°F ... +122°F]	0°C ... 50°C [+32°F ... +122°F]
Load	max. 500 $\Omega$	max. 500 $\Omega$	–
CE compliant acc. to	EMC guideline 2014/30/EU RoHS guideline 2011/65/EU		

## Terminal assignment

Analog sensor <b>A11</b> (0 ... 20 mA)			R/I converter				
		Signal:	+V	I <sub>out</sub>	n.c.	n.c.	
	Cable	Core color:	BN	WH	GN		
	M12 connector, 4-pin	Pin:	1	2	3	4	
Analog sensor <b>A22</b> (0 ... 10 V DC)			R/U converter				
		Signal:	+V	0 V	U <sub>out</sub>	n.c.	
	Cable	Core color:	BN	WH	GN		
	M12 connector, 4-pin	Pin:	1	2	3	4	
Analog sensor <b>A33</b> (Potentiometer 10 k $\Omega$ )			Potentiometer				
		Signal:	+V	0 V	Out	n.c.	
	Cable	Core color:	BN	WH	GN		
	M12 connector, 4-pin	Pin:	1	2	3	4	

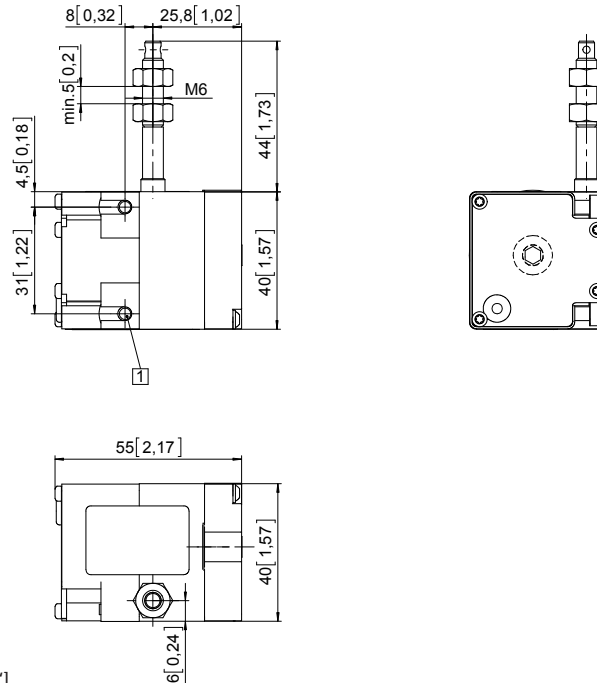
# Linear measuring technology

<b>Draw-wire encoder A40 / A41</b>	<b>Compact-Line</b>	<b>Measuring length A40 max. 1 m</b> <b>Measuring length A41 max. 2 m</b>
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## Dimensions

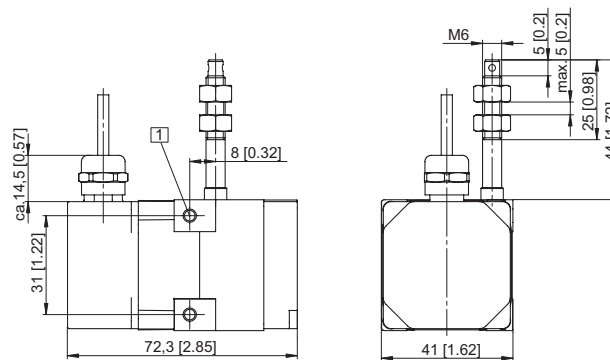
Dimensions in mm [inch]

for measuring range 1000 mm

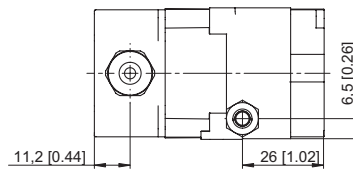


1 2 x M4, max. screw-in depth 8 mm [0.32"]

for measuring range 2000 mm



cable connection



M12 connector

