

Linear Measuring Technology

Draw wire mechanics with encoder or analogue sensor

Draw wire encoder C120

Measuring length max. 6 m

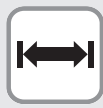


These draw-wire mechanics C120 can be used up to a measuring length of 6 metres.

This draw-wire mechanics may be combined with the proven Kübler Sendix encoders with incremental or absolute interface, as well as with analogue sensors.



Max. acceleration



Long service life



Wide temperature range



High IP value



Reverse polarity protection

Robust

- The titanium-anodised aluminium housing and the stainless steel wires allow for using the mechanics even in harsh conditions
- Wear-free wire exit thanks to diamond- polished ceramic guide

Versatile

- High traverse speed, up to 10 m/s
- High acceleration, up to 140 m/s²
- Quick fastening by means of 2 screws
- Various connection possibilities available

Order code with encoder

D8.4C1 . **0600** . **XXXX** . **XXXX**
Type a b c d e

a *Measuring range*
 0600 = 6000 mm
 other measuring ranges on request

b *Encoder used*
 00 = Sendix incremental 5000
 63 = Sendix absolute 5863
 68 = Sendix absolute 5868

c *Output circuit*
 depends on the encoder used

e *Resolution / Protocol / Options*
 depends on the encoder used

d *Type of connection*
 depends on the encoder used

Standard resolutions for draw wire with incremental encoder Sendix 5000, drum circumference 317.68 mm

	500	2000	
Pulses / revolution			
Pulses / mm	1.6	6.3	
Resolution (mm)	~ 0.63	~ 0.16	

Standard resolutions for draw wire with absolute encoder Sendix 5863 or 5868, drum circumference 317.68 mm

Absolute encoder	5863	5868
Pulses / revolution	2048 / 11 bit	4096, programmable via the bus / 12 bit
Pulses / mm	6.4	12.9
Resolution (mm)	~ 0.16	~ 0.08

Recommended standard device:

D8.4C1.XXXX.0054.2000

Draw wire with mounted encoder Sendix 5000 incremental (8.5000.8354.2000)

- Push-pull with inverted signals
- Supply voltage 10...30 V DC
- M12 connector, 8-pin, radial
- 2000 pulses per revolution.

D8.4C1.XXXX.6324.G123

Draw wire with mounted encoder Sendix 5863 (8.5863.1224.G123)

- SSI Interface
- Supply voltage 10...30 V DC
- SSI Gray Code
- M23 connector, 12-pin, radial
- Resolution 2048 PPR
- SET button and status LED

D8.4C1.XXXX.6822.2113

Draw wire with mounted encoder Sendix 5868 (8.5868.1222.2113)

- CANopen Interface
- Supply voltage 10...30 V DC
- M12 connector
- CANopen Encoder profile V3.2
- SET button

D8.4C1.XXXX.6832.3113

Draw wire with mounted encoder Sendix 5868 (8.5868.1232.3113)

- Profibus Interface
- Supply voltage 10...30 V DC
- M12 connector
- Profibus Encoder profile Class2
- SET button

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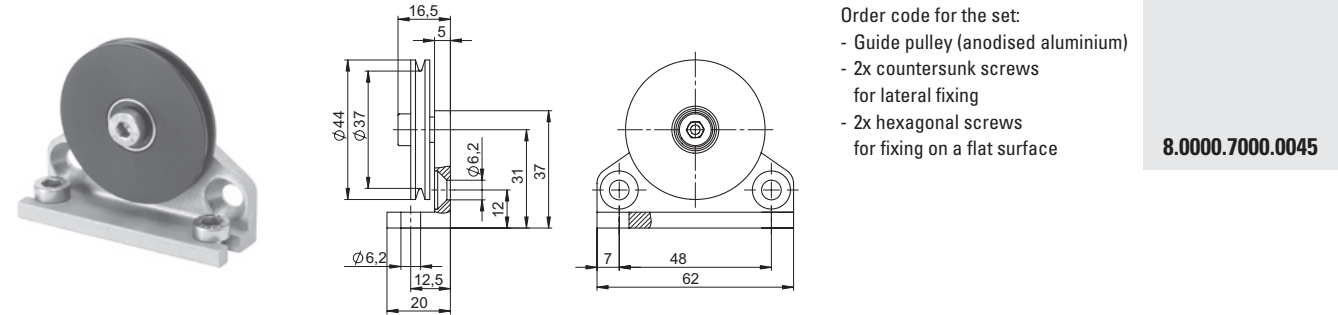
Draw wire mechanics with encoder or analogue sensor **Draw wire encoder C120** **Measuring length max. 6 m**

Order code with analogue sensor **D8.3C1 . 0600 . XXX X . 0000**

Type a b c

- | | | |
|--|--|---|
| <p>a Measuring range
0600 = 6000 mm
other measuring ranges on request</p> | <p>b Analogue sensor output / Supply voltage
A11 = 4 ... 20 mA / 12 ... 30 V DC
A22 = 0 ... 10 V / 12 ... 30 V DC
A33 = Potentiometer 1 kOhm / max. 30 V DC</p> | <p>c Type of connection
1 = cable axial (2 m PVC cable)
3 = M12 connector, 4-pin</p> |
|--|--|---|

Guide pulley for draw-wire encoder



Order code for the set:
- Guide pulley (anodised aluminium)
- 2x countersunk screws for lateral fixing
- 2x hexagonal screws for fixing on a flat surface

8.0000.7000.0045

Mechanical characteristics (draw wire mechanics):	
Measuring range	6000 mm
Extension force	F_{min} 8.8 N
	F_{max} 12.3 N
Max. speed.	10 m/s
Max. acceleration	140 m/s ²
Linearity	analogue output 0.1 % (of the measuring range)
	encoder 0.05 % (of the measuring range)
Weight	approx. 1600 g (depending on the sensor/encoder used)
Materials	housing: titanium-anodised aluminium wire: stainless steel \varnothing 0.5 mm
Protection (sensor)	IP65 (IP67 on request for encoders)

Operating principle

Construction
The core of a draw wire device is a drum mounted on bearings, onto which a wire is wound. Winding takes place via a spring-loaded device.

Note
Exceeding the maximum extension length of the draw wire will lead to damage to the wire and the mechanics.

Electrical characteristics (digital output)

The electrical characteristics of the draw wire mechanics with digital output can be found in the data sheets of the encoders

Electrical characteristics (analogue output)			
Analogue output	0 ... 10 V	4 ... 20 mA	Potentiometer
Output	0 ... 10 V galvanically isolated, 4 conductors	4 ... 20 mA 2 conductors	1 kOhm
Supply voltage	12 ... 30 V DC	12 ... 30 V DC	max. 30 V DC
Recommended slider current	—	—	< 1 μ A
Max. current consumption	22.5 mA(no load)	50 mA	—
Reverse polarity protection	yes	yes	—
Operating temperature	-20°C ... +60°C	-20°C ... +60°C	-20°C ... +85°C
Connection diagrams			
CE compliant acc. to	EN 61000-6-2, EN 61000-6-3		
RoHS compliant acc. to	EU guideline 2002/95/EG		

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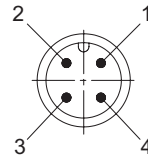
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Terminal assignment (analogue output)

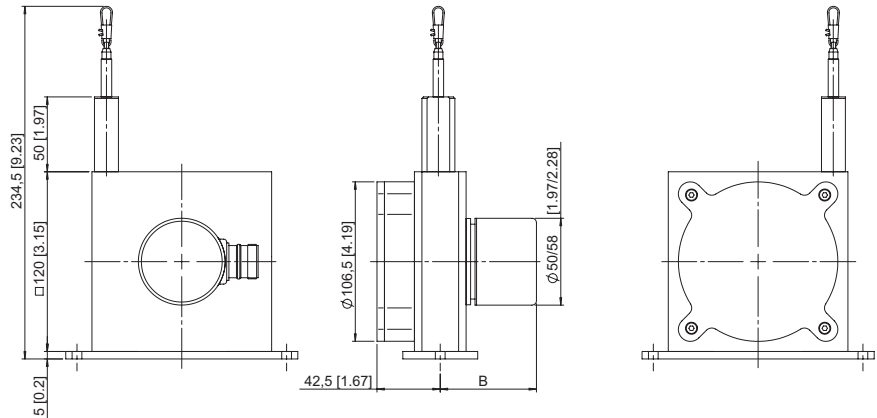
Pin	1	2	3	4
Cable colour	brown	white	blue	black
0 ... 10 V	V+	Signal	GND	GND Sig.
4 ... 20 mA	V+	n. c.	Signal	n. c.
1 kOhm	V+	Slider	GND	n. c.

Connector (analogue output)

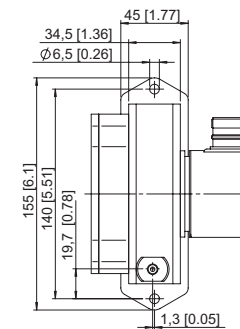


Dimensions

Draw wire mechanics with encoder



Dimension B depends on the encoder used	
Encoder	B
Sendix incremental (5000) D8.4C1.XXXX.00XX.XXXX	54.25
Sendix absolute (5863) D8.4C1.XXXX.63XX.XXXX	66.75
Sendix absolute (5868) D8.4C1.XXXX.68XX.XXXX	93.25



Draw wire mechanics with analogue sensor

