

Linear measuring technology

**Draw wire mechanics
with encoder or analogue sensor**

Draw wire encoder B75

**Measuring length max. 3 m
Traverse speed max. 0.8 m/s**



The draw wire mechanics B75 can be used up to a measuring length of 3 metres.

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



Compact and versatile

- Compact housing.
- Variable mounting possibilities.
- Low-wear wire exit.

Order code with encoder

D8.15 **03** . **XX** **XX** . **XXXX**
Type **a** **b** **c** **d** **e**

a Measuring range
03 = 3000 mm

b Encoder used
2Z = Sendix incremental 5000
F3 = Sendix absolute F5863
63 = Sendix absolute 5863
F8 = Sendix absolute F5868
68 = Sendix absolute 5868

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

Optional on request
- Other measuring ranges

Standard resolutions for draw wire with incremental encoder Sendix 5000, drum circumference 200 mm

	200	2000	4000
Pulses / revolution	200	2000	4000
Pulses / mm	1	10	20
Resolution (mm)	1	0.1	0.05

Standard resolutions for draw wire with absolute encoder Sendix F5863 / F5868 or 5863 / 5868, drum circumference 200 mm

	F5863 / 5863	F5868 / 5868
Absolute encoder	F5863 / 5863	F5868 / 5868
Pulses / revolution	2048 / 11 bit	4096, programmable via the bus / 12 bit
Pulses / mm	10.24	20.48
Resolution (mm)	-0.1	~ 0.05

Recommended standard devices

Order no. draw wire encoder	Mounted encoder	Interface	Power supply	Type of connection	Resolution / Protocol	Options
D8.1503.2Z54.2000	Sendix 5000 (8.5000.B154.2000)	PushPull with inv. signal	10 ... 30 V DC	1 x radial M12 connector	2000 ppr	no option
D8.1503.F324.G123	Sendix F5863 (8.F5863.2124.G123)	SSI	10 ... 30 V DC	1 x radial M23 connector	SSI-Gray-Code	Set button + Status LED
D8.1503.6324.G123	Sendix 5863 (8.5863.2124.G123)	SSI	10 ... 30 V DC	1 x radial M23 connector	SSI-Gray-Code	Set button + Status LED
D8.1503.F82E.2123	Sendix F5868 (8.F5868.212E.2123)	CANopen	10 ... 30 V DC	1 x radial M12 connector	CANopen encoder profile DS406 V3.2	Set button
D8.1503.6822.2123	Sendix 5868 (8.5868.2122.2123)	CANopen	10 ... 30 V DC	2 x radial M12 connector	CANopen encoder profile DS406 V3.2	Set button
D8.1503.6832.3113	Sendix 5868 (8.5868.2132.3113)	PROFIBUS	10 ... 30 V DC	3 x radial M12 connector	Profibus-DP V0 encoder profile Class 2	Set button
D8.1503.68B2.B212	Sendix 5868 (8.5868.21B2.B212)	EtherCAT	10 ... 30 V DC	3 x radial M12 connector	EtherCAT with CoE 3.2.10	no option
D8.1503.68C2.C212	Sendix 5868 (8.5868.21C2.C212)	PROFINET IO	10 ... 30 V DC	3 x radial M12 connector	PROFINET encoder profile Version 4.1	no option

Order code with analogue sensor

D8.35 **03** . **XXX** **2** . **0000**
Type **a** **b** **c**

a Measuring range
03 = 3000 mm

b Analogue sensor output / power supply
A11 = 4 ... 20 mA / 12 ... 30 V DC
A22 = 0 ... 10 V DC / 12 ... 30 V DC
A33 = potentiometer 10 kΩ / max. 30 V DC

c Type of connection
2 = radial M12 connector, 4 pin
(wire exit direction)

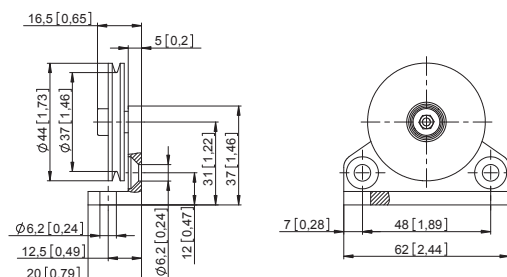
Optional on request
- Other measuring ranges

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Accessories for draw wire encoder	Order no.
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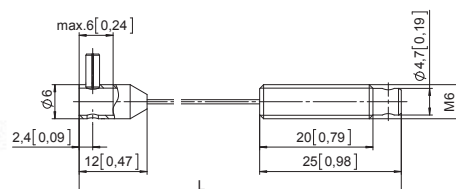
Guide pulley



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

8.0000.7000.0045

Extension cable



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

Connection technology for analogue sensor	Order no.
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Connector, self-assembly (straight)	M12 female connector with coupling nut	8.0000.5116.0000
Cordset, pre-assembled	M12 female connector with coupling nut, 2 m [6.56'] PVC cable	05.00.6081.2211.002M

Technical data

Mechanical characteristics (draw wire mechanics)	
Measuring range	3000 mm
Traversing speed	max. 0.8 m/s
Working temperature	-40°C ... +80°C [-40°F ... +176°F]
Protection acc. to EN 60529	IP65
Weight	approx. 500 g [17.67 oz]
Required force F_{min}	3 N
Linearity	±0.35 %
Repetition accuracy	±0.15 mm
Material	housing plastic / zinc die-cast wire stainless steel ø 0.9 mm, plastic-coated

Electrical characteristics	
Analogue output	0 ... 10 V DC 4 ... 20 mA potentiometer 10 kΩ
Power supply	15 ... 28 V DC – –
Operating range	– 15 ... 28 V DC max. 48 V DC
Load	max. 500 Ω max. 500 Ω –
Temperature range	-40°C ... +80°C [-40°F ... +176°F]
CE compliant acc. to	EMC guideline 2004/108/EC RoHS guideline 2011/65/EU

Terminal assignment (analogue output)

Colour	BN	WH	GN	
Pin M12	1	2	3	4
0 ... 10 V DC	+24 V DC	0 V	U_{out}	n.c.
4 ... 20 mA	+I	-I	n.c.	n.c.
Potentiometer 10 kΩ	Po	Pe	S	n.c.

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.

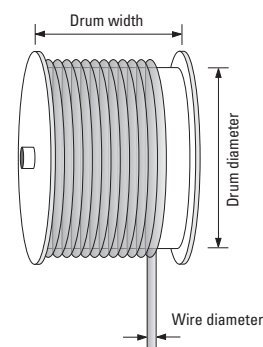
Operating principle

Construction

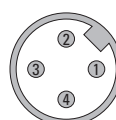
The core of a draw wire device is a drum mounted on bearings, onto which a wire is wound. Winding takes place via a spring-loaded device.

Note

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



Connector (analogue output)



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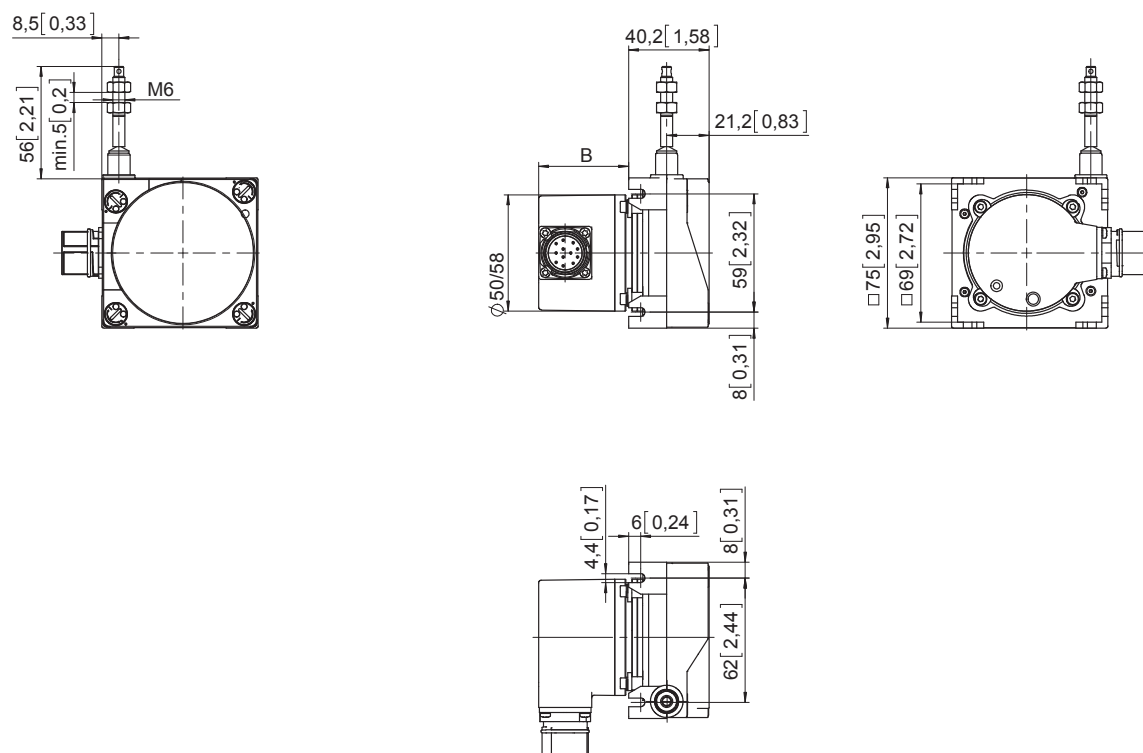
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Dimensions

Dimensions in mm [inch]

With encoder



With analogue sensor

