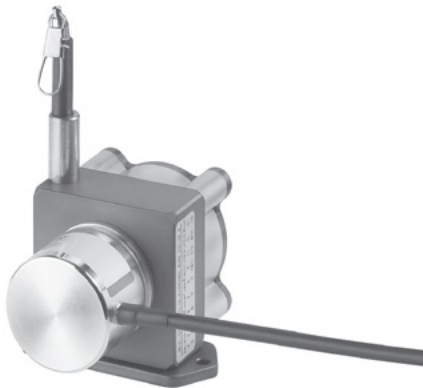


Linear Measuring Technology

Draw wire mechanics with encoder or analogue sensor

Draw wire encoder A50

Measuring length max. 1.25 m



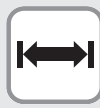
The draw-wire mechanics A50 boast both a compact design and high dynamics.

The draw-wire mechanics may be equipped with encoders with an analogue, incremental or absolute output.

The maximum measuring length is 1.25 m.



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 300 m/s²
- Quick fastening by means of 2 screws
- Various connection possibilities available

Order code with encoder

D8.6A1 . XXXX . XX XX . XXXX
Type a b c d e

a Measuring range

0025 = 250 mm
 0050 = 500 mm
 0125 = 1250 mm
 other measuring ranges on request

b Encoder used

36 = Sendix incremental 3610
 F3 = Sendix absolute F3663, SSI
 F8 = Sendix absolute F3668, CANopen

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 3610, drum circumference 125 mm

	125	1250	2500
Pulses / revolution			
Pulses / mm	1	10	20
Resolution (mm)	1	0.1	0.05

Standard resolutions for draw wire with absolute encoder Sendix F3663 or F3668 CANopen, drum circumference 125 mm

Absolute encoder	F3663	F3668 CANopen
Pulses / revolution	4096 / 12 bit	4096, programmable via the bus / 12 bit
Pulses / mm	32.8	32.8
Resolution (mm)	~ 0.03	~ 0.03

Recommended standard device:

D8.6A1.XXXX.3642.1250

Draw wire with mounted encoder type 3610 incremental (8.3610.2342.1250)

- Push-pull with inverted signals
- Supply voltage 8...30 V DC
- Cable radial 2m
- 1250 PPR

D8.6A1.XXXX.F321.G222

Draw wire with mounted encoder Sendix F3663 (8.F3663.4121.G222)

- SSI Interface
- Supply voltage 10...30 V DC
- SSI Gray Code
- Cable tangential 1m
- Resolution 4096 PPR

D8.6A1.XXXX.F821.2112

Draw wire with mounted encoder Sendix F3668 (8.F3668.4121.2112)

- CANopen Interface
- Supply voltage 10...30 V DC
- Cable tangential 1m
- CANopen Encoder profile V3.2

Linear Measuring Technology

Draw wire mechanics with encoder or analogue sensor Draw wire encoder A50 Measuring length max. 1.25 m

Order code with analogue sensor D8.3A1 . XXXX . XXX X . 0000

Type a b c

- a** *Measuring range*
0025 = 250 mm
0050 = 500 mm
0125 = 1250 mm
other measuring ranges on request
- b** *Analogue sensor output / Power supply*
A11 = 4 ... 20 mA / 12 ... 30 V DC
A22 = 0 ... 10 V / 12 ... 30 V DC
A33 = Potentiometer 1 kOhm / max. 30 V DC
- c** *Type of connection*
1 = cable axial (2 m PVC cable)
3 = M12 connector, 4-pin, axial

Guide pulley for draw-wire encoder

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

Mechanical characteristics (draw wire mechanics):				
Measuring range		250 mm	500 mm	1250 mm
Extension force	F_{min}	6.8 N	3.4 N	4.1 N
	F_{max}	7.9 N	4.0 N	5.4 N
Max. speed		8 m/s	8 m/s	10 m/s
Max. acceleration		200 m/s ²	200 m/s ²	300 m/s ²
Linearity (of the measuring range)	analogue output	0.15 %	0.15 %	0.1 %
	encoder	0.05 %	0.05 %	0.05 %
	Weight	approx. 330 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		

Linear Measuring Technology

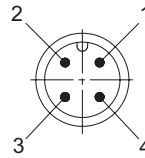
Linear Measuring Technology

Draw wire mechanics with encoder or analogue sensor **Draw wire encoder A50** Measuring length max. 1.25 m

Terminal assignment (analogue output)

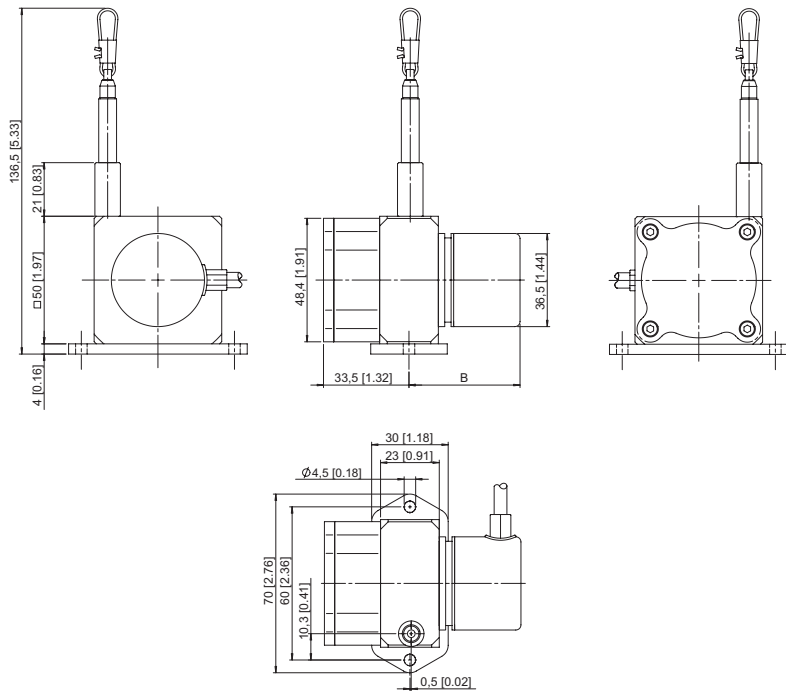
Pin	1	2	3	4
Cable colour	brown	white	blue	black
0 ... 10 V	V+	Signal	GND	GND Sig.
4 ... 20 mA	V+	n. c.	Signal	n. c.
1 kOhm	V+	Slider	GND	n. c.

Connector (analogue output)



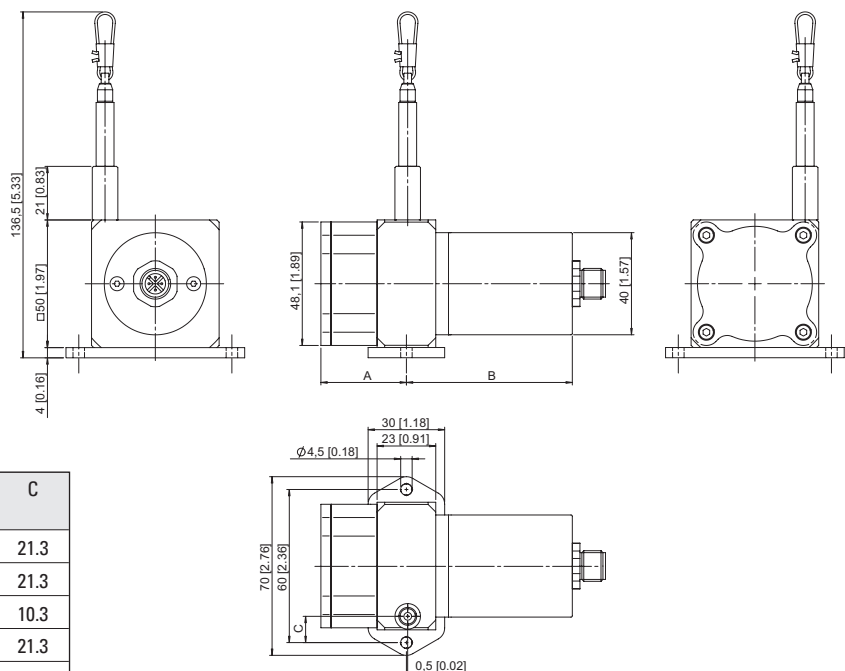
Dimensions

Draw wire mechanics with encoder



Encoder type	Measuring length [mm]	B [mm]
Incremental	250 ... 1250	43
Absolute	250 ... 1250	53.7

Draw wire mechanics with analogue sensor



Sensor type	Measuring length [mm]	A	B	C
Potentiometer	250	26.5	65	21.3
	500	26.5	65	21.3
	1250	33.5	65	10.3
4 ... 20 mA 0 ... 10 V	250	26.5	78.5	21.3
	500	26.5	78.5	21.3
	1250	33.5	78.5	10.3