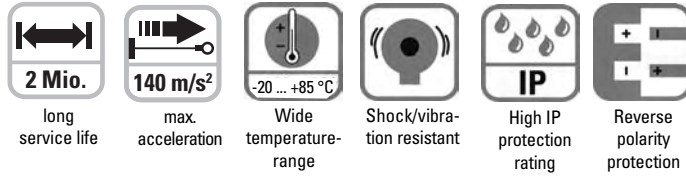


Linear Measuring Technology

Draw wire mechanics with encoder or analogue sensor

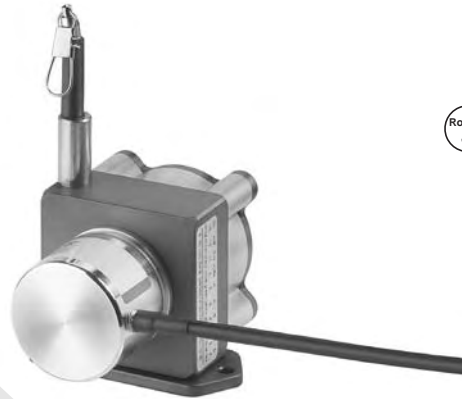


Draw wire encoder A50



Robust

- **Insensitive to the environment**
Titanium-anodised aluminium housing
- **High-resistance wire**
Stainless steel wire
- **Wire exit free from wear**
Diamond-polished ceramic guide
- **Can be used in a wide temperature range without extra charge**
max. -20 ... +85 °C



Dynamic

- **High traverse speed**
- **High acceleration**
Dynamic spring traction by means of a constant force spring, long service life, approx. 2 million complete cycles

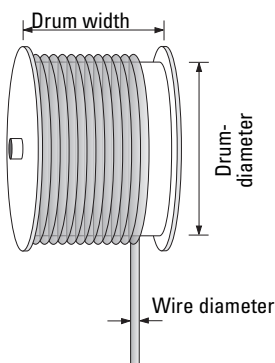
Versatile

- **Suitable for various sensors/encoders**
 - Incremental
 - Analogue
- **Quick mounting**
Fastening by means of 2 screws
- **Flexible connection possibilities**
Cable, M12 connector, radial, axial

Mechanical characteristics (draw wire mechanics):

Measuring range:	250 mm	500 mm	1250 mm
Extension force Fmin:	5.2 N	5.2 N	3.8 N
Fmax:	6.3 N	7.3 N	5.4 N
Max. speed:	8 m/s	8 m/s	10 m/s
Max. acceleration:	85 m/s ²	85 m/s ²	100 m/s ²
Linearity:	analogue output: 0.1 % (of the measuring range) encoder: 0.05 % (of the measuring range)		
Weight:	approx. 330 g (depending on the sensor/encoder used)		
Materials:	housing: titanium-anodised aluminium wire: stainless steel ø 0.5 mm		
Protection (sensor):	IP65 (IP67 on request for encoders)		
Lifetime	> 2 million full cycles		

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.

Linear Measuring Technology

Draw wire mechanics with encoder or analogue sensor



Draw wire encoder A50

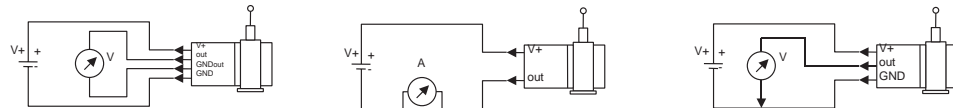
Electrical characteristics (digital output):

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 µA
Max. current consumption:	22.5 mA (no load)	50 mA	–
Reverse polarity protection:	yes	yes	–
Operating temperature:	-20 ... +60 °C	-20 ... +60 °C	-20 ... +85 °C

Connection diagrams:

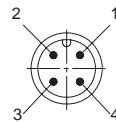


CE compliant according to: EN 61000-6-1, EN 61000-6-4, EN 61000-6-3

Terminal assignment (analogue output):

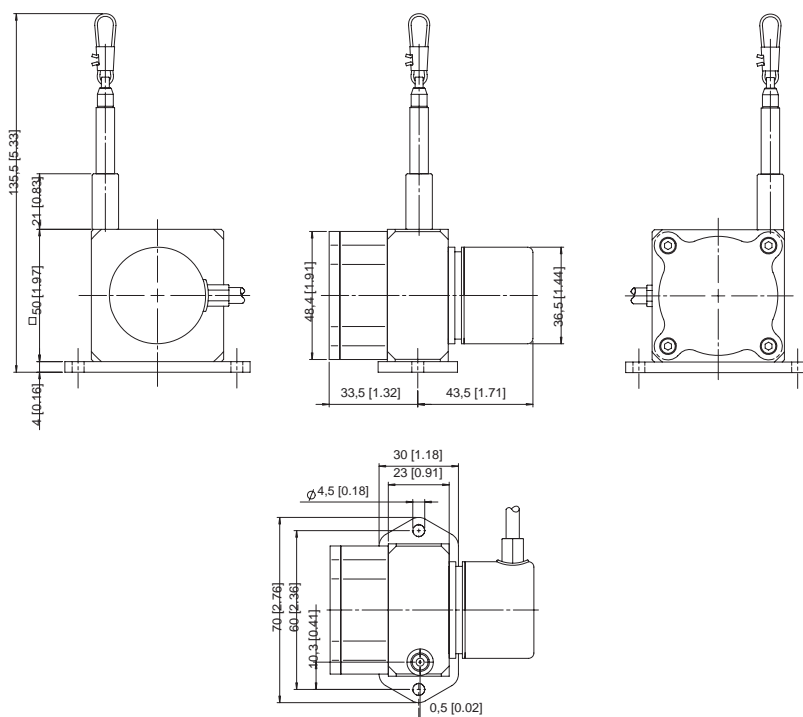
Pin	Cable colour	0 ... 10 V	4 ... 20 mA	1 kOhm
1	brown	V+	V+	V+
2	white	Signal	n. c.	Slider
3	blue	GND	Signal	GND
4	black	GND Sig.	n. c.	n. c.

Connector (analogue output):



Dimensions:

Draw wire mechanics with encoder



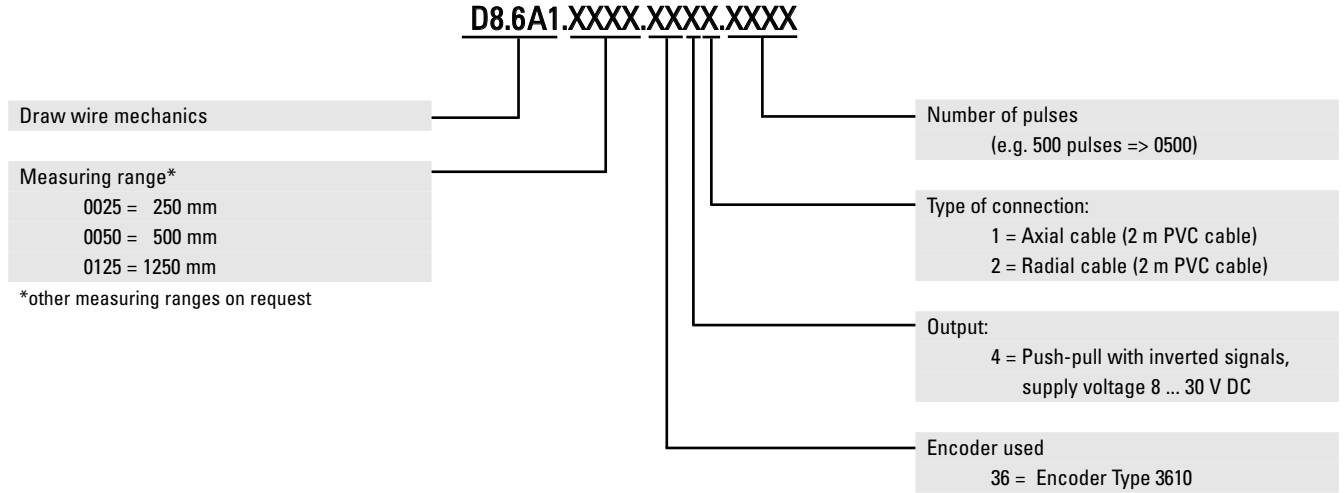
Linear Measuring Technology

Draw wire mechanics with encoder or analogue sensor



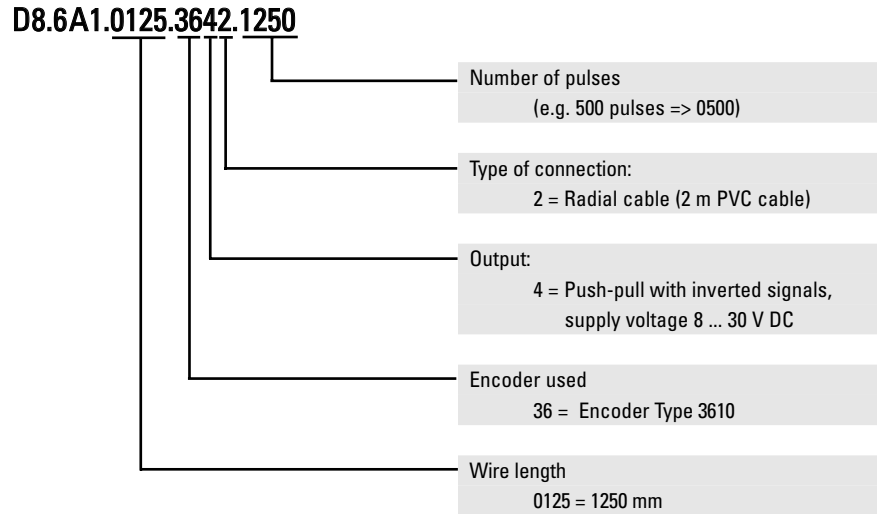
Draw wire encoder A50

Order code with encoder:



Available resolution, drum circumference 125 mm			
Pulses/revolution	125	1250	2500
Pulses/mm	1	10	20
Resolution [mm]	1	0.1	0.05

Recommended standard device with encoder:



Linear Measuring Technology

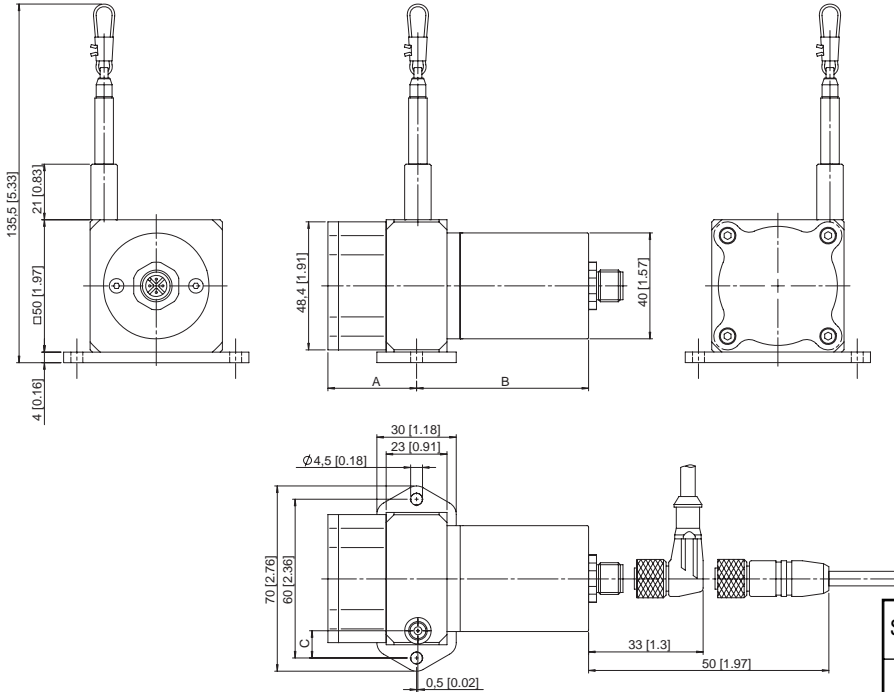
Draw wire mechanics with encoder or analogue sensor



Draw wire encoder A50

Dimensions:

Draw wire mechanics with analogue sensor



Sensor type	Measuring length [mm]	A	B	C
Potentiometer	250	26.5	65	21.6
	500	26.5		21.6
	1250	33.5	10.3	
0 ... 10 V 4 ... 20 mA	250	26.5	78.5	21.6
	500	26.5		21.6
	1250	33.5		10.3

Order code with analogue sensor:

D8.3A1.XXXX.XXXX.0000

Draw wire mechanics

Measuring range*

0025 = 250 mm

0050 = 500 mm

0125 = 1250 mm

*other measuring ranges on request

Type of connection:

1 = Axial cable, length 2 m

3 = 4-pole M12 connector

Analogue sensor output

A11 = 4 ... 20 mA

Supply voltage 12 ... 30 V DC

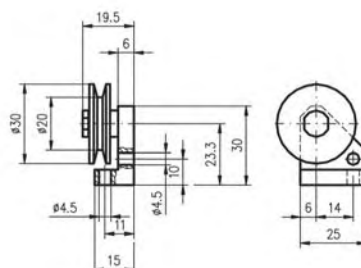
A22 = 0 ... 10 V

Supply voltage 12 ... 30 V DC

A33 = Potentiometer 1 kOhm

Max. supply voltage 30 V DC

Accessories



- Guide pulley for draw-wire encoder
Order code 8.0000.7000.0031