

## KUEBLER - WIRE ENCODERS D135

### SERIE D8.4D1

- Max measuring length 40000 mm
- -20° to +85°C
- Ready speeds up to 10 m / s
- Titan-anodized aluminum housing



### PRODUCT DESCRIPTION

The Kübler wire generators are designed for demanding applications, for example within the machine building segment. The systems are robustly built with aluminum housing resistant to tough environments, they can handle high speed and have long life. The D135 series comes with analogue, incremental or absolute (SSI / BiSS, CANopen, Profibus, EtherCAT, Profinet or DeviceNet) outputs, and up to 42 500mm drag wires.

Please refer to the images below for ordering information.

Order code with encoder (incremental, absolute)		D8.4D1 . XXXX . XX XX . XXXX					Standard variants are represented <b><u>bold underlined</u></b>
		Type	a	b	c	d	e
<b>a</b> Measuring range	<b>b</b> Encoder used						
0800 = 8 000 mm	<b>00 = Sendix 5000, incremental</b>						
1000 = 10 000 mm	<b>M3 = Sendix M5863, absolute</b>						
1200 = 12 000 mm	F3 = Sendix F5863, absolute						
1500 = 15 000 mm	63 = Sendix 5863, absolute						
2000 = 20 000 mm	<b>M8 = Sendix M5868, absolute</b>						
2500 = 25 000 mm	F8 = Sendix F5868 absolute						
3000 = 30 000 mm	68 = Sendix 5868, absolute						
3500 = 35 000 mm							
4000 = 40 000 mm							
4250 = 42 500 mm							
				<b>c</b> Output circuit			
				depends on the encoder used			
				<b>d</b> Type of connection			
				depends on the encoder used			
				<b>e</b> Resolution / Protocol / Options			
				depends on the encoder used			
							<i>Optional on request</i>
							- Other measuring ranges
							- Cable diameter 1 mm
							- Eyelet or M4 wire fastening instead of wire clip
							- Modified cable and/or connector orientation
							- Modified cable outlet direction
							- Sensor protection level IP67
							- Improved linearity (0.02 %)
<b>Standard resolutions for draw wire with incremental encoder Sendix 5000</b>				<b>Standard resolutions for draw wire with absolute encoder Sendix M5863 (12 bit ST) or M5868 (12 bit ST, programmable via bus)</b>			
Drum circumference [mm]	333.33	333.33	333.33	Drum circumference [mm]	333.33		
Pulses / revolution [ppr]	1000	2000	4000	Pulses / revolution [ppr]	4096		
Pulses / mm	3	6	12	Pulses / mm	12.3		
Resolution [mm]	0.33	0.17	0.08	Resolution [mm]	0.08		

## Order code with encoder (analog, scalable with limit switch function)

**D8.4D1** . **XXXX** . **M1XX** . **XXXX**  
 Type                      **a**                      **b** **c** **d**                      **e**

Standard variants are represented **bold underlined**

**a** *Measuring range*  
 0800 = 8 000 mm  
 1000 = 10 000 mm  
 1200 = 12 000 mm  
 1500 = 15 000 mm  
 2000 = 20 000 mm  
 2500 = 25 000 mm  
 3000 = 30 000 mm  
 3500 = 35 000 mm  
 4000 = 40 000 mm  
 4250 = 42 500 mm

**b** *Encoder used*  
**M1 = Sendix M5861, absolute** <sup>1)</sup>

**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
- Cable diameter 1 mm
- Eyelet or M4 wire fastening instead of wire clip
- Modified cable and/or connector orientation
- Modified cable outlet direction
- Sensor protection level IP67

### Recommended standard variants (with encoder analog, scalable with limit switch function)

Order no. draw wire encoder	Mounted encoder	Interface	Power supply	Type of connection	Resolution / Protocol	Option
D8.xD1.xxxx.M134.3512	Sendix M5861 (8.M5861.3534.3512)	Analog, 4 ... 20 mA	10 ... 30 V DC	radial M12 connector	12 Bit / 4 ... 20 mA	scalable with limit switch function <sup>2)</sup>
D8.xD1.xxxx.M144.4512	Sendix M5861 (8.M5861.3544.4512)	Analog, 0 ... 10 V	15 ... 30 V DC	radial M12 connector	12 Bit / 0 ... 10 V	scalable with limit switch function <sup>2)</sup>
D8.xD1.xxxx.M134.3612	Sendix M5861 (8.M5861.3534.3612)	Analog, 4 ... 20 mA	10 ... 30 V DC	radial M12 connector	12 Bit / 4 ... 20 mA	scalable without limit switch function <sup>2)</sup>
D8.xD1.xxxx.M144.4612	Sendix M5861 (8.M5861.3544.4612)	Analog, 0 ... 10 V	15 ... 30 V DC	radial M12 connector	12 Bit / 0 ... 10 V	scalable without limit switch function <sup>2)</sup>

## Order code with analog sensor (scaled to measuring range)

**D8.3D1** . **XXXX** . **XXX** **X** . **0000**  
 Type                      **a**                      **b** **c**

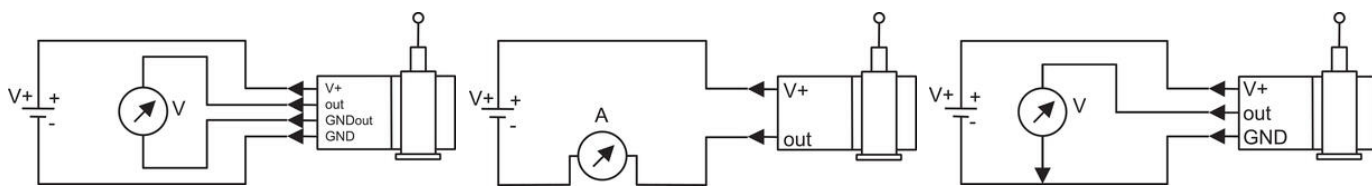
**a** *Measuring range*  
 0800 = 8 000 mm  
 1000 = 10 000 mm  
 1500 = 15 000 mm  
 2000 = 20 000 mm  
 2500 = 25 000 mm  
 3000 = 30 000 mm  
 3500 = 35 000 mm  
 4000 = 40 000 mm

**b** *Analog sensor output / power supply*  
 A11 = 4 ... 20 mA / 12 ... 30 V DC  
 A22 = 0 ... 10 V / 12 ... 30 V DC  
 A33 = potentiometer 1 kΩ / max. 30 V DC

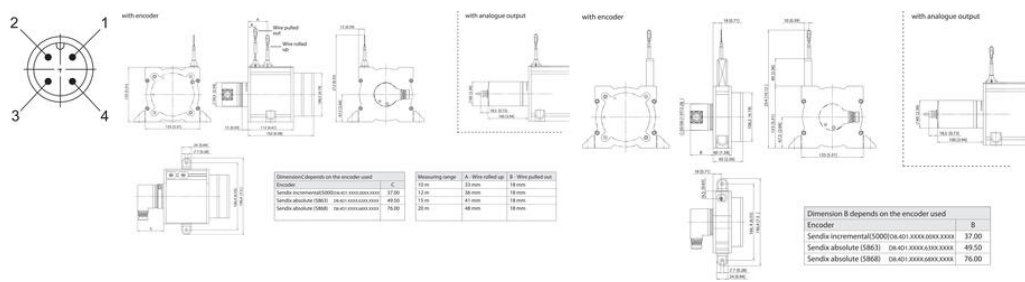
**c** *Type of connection*  
 1 = axial cable, 2 m [6.56'] PVC  
 3 = axial M12 connector, 4-pin

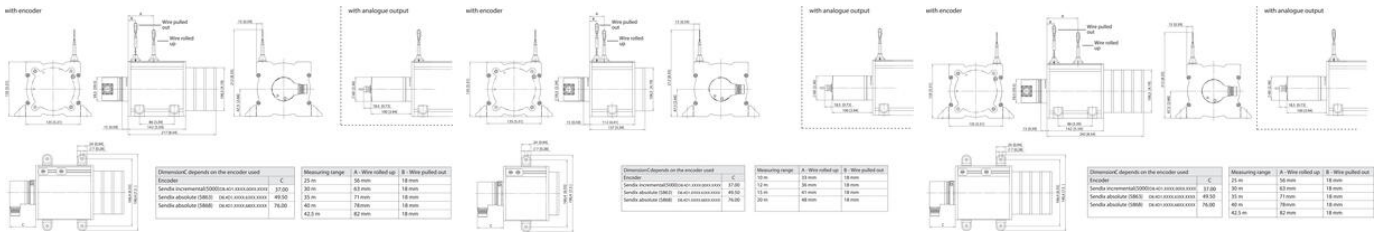
*Optional on request*

- Other measuring ranges
- Cable diameter 1 mm
- Eyelet or M4 wire fastening instead of wire clip
- Modified cable and/or connector orientation
- Modified cable outlet direction
- Sensor protection level IP67
- Improved linearity (0.02 %)
- Increased temperature range -40°C ... +85°C and -20°C ... +120°C



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





Dimension C depends on the encoder used	
Encoder	C
Sendix incremental (S500) (0x-011-XXXX-XXXX-XXXX)	37.00
Sendix absolute (S563) (0x-011-XXXX-XXXX-XXXX)	49.50
Sendix absolute (S566) (0x-011-XXXX-XXXX-XXXX)	76.00

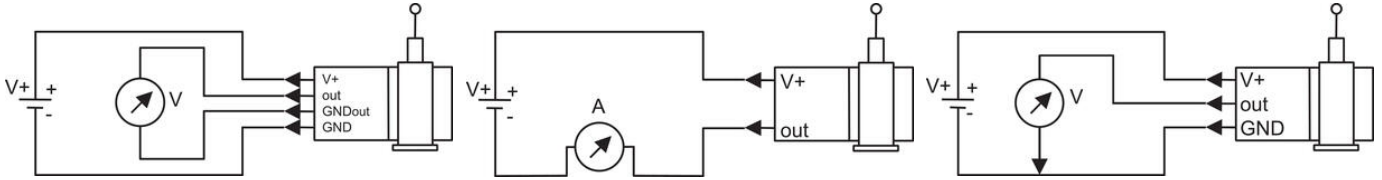
Measuring range		
A: Wire rolled up	B: Wire pulled out	
10 mm	18 mm	
20 mm	18 mm	
30 mm	18 mm	
40 mm	18 mm	
62.5 mm	18 mm	

Dimension A depends on the encoder used	
Encoder	A
Sendix incremental (S500) (0x-011-XXXX-XXXX-XXXX)	37.00
Sendix absolute (S563) (0x-011-XXXX-XXXX-XXXX)	49.50
Sendix absolute (S566) (0x-011-XXXX-XXXX-XXXX)	76.00

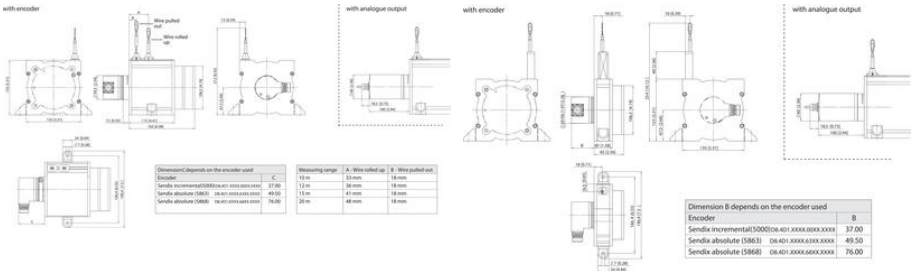
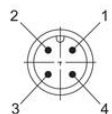
Measuring range		
A: Wire rolled up	B: Wire pulled out	
10 mm	18 mm	
20 mm	18 mm	
30 mm	18 mm	
40 mm	18 mm	
62.5 mm	18 mm	

Dimension B depends on the encoder used	
Encoder	B
Sendix incremental (S500) (0x-011-XXXX-XXXX-XXXX)	37.00
Sendix absolute (S563) (0x-011-XXXX-XXXX-XXXX)	49.50
Sendix absolute (S566) (0x-011-XXXX-XXXX-XXXX)	76.00

Measuring range		
A: Wire rolled up	B: Wire pulled out	
25 mm	18 mm	
30 mm	18 mm	
35 mm	18 mm	
40 mm	18 mm	
42.5 mm	18 mm	



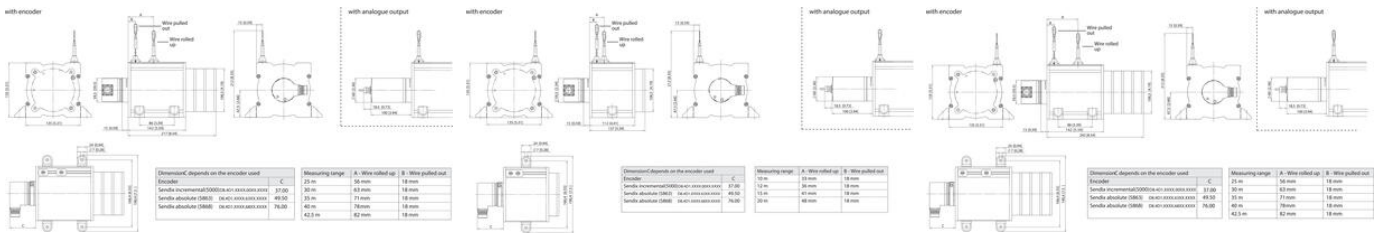
Pin	1	2	3	4
Cable colour	brown	white	blue	black
0...10V	V+	Signal	GND	GND Sig.
4...20 mA	V+	n. c.	Signal	n. c.
1kOhm	V+	Slider	GND	n. c.



Dimension C depends on the encoder used	
Encoder	C
Sendix incremental (S500) (0x-011-XXXX-XXXX-XXXX)	37.00
Sendix absolute (S563) (0x-011-XXXX-XXXX-XXXX)	49.50
Sendix absolute (S566) (0x-011-XXXX-XXXX-XXXX)	76.00

Measuring range		
A: Wire rolled up	B: Wire pulled out	
10 mm	18 mm	
20 mm	18 mm	
30 mm	18 mm	
40 mm	18 mm	
62.5 mm	18 mm	

Dimension B depends on the encoder used	
Encoder	B
Sendix incremental (S500) (0x-011-XXXX-XXXX-XXXX)	37.00
Sendix absolute (S563) (0x-011-XXXX-XXXX-XXXX)	49.50
Sendix absolute (S566) (0x-011-XXXX-XXXX-XXXX)	76.00



Dimension C depends on the encoder used	
Encoder	C
Sendix incremental (S500) (0x-011-XXXX-XXXX-XXXX)	37.00
Sendix absolute (S563) (0x-011-XXXX-XXXX-XXXX)	49.50
Sendix absolute (S566) (0x-011-XXXX-XXXX-XXXX)	76.00

Measuring range		
A: Wire rolled up	B: Wire pulled out	
10 mm	18 mm	
20 mm	18 mm	
30 mm	18 mm	
40 mm	18 mm	
62.5 mm	18 mm	

Dimension A depends on the encoder used	
Encoder	A
Sendix incremental (S500) (0x-011-XXXX-XXXX-XXXX)	37.00
Sendix absolute (S563) (0x-011-XXXX-XXXX-XXXX)	49.50
Sendix absolute (S566) (0x-011-XXXX-XXXX-XXXX)	76.00

Measuring range		
A: Wire rolled up	B: Wire pulled out	
10 mm	18 mm	
20 mm	18 mm	
30 mm	18 mm	
40 mm	18 mm	
62.5 mm	18 mm	

Dimension B depends on the encoder used	
Encoder	B
Sendix incremental (S500) (0x-011-XXXX-XXXX-XXXX)	37.00
Sendix absolute (S563) (0x-011-XXXX-XXXX-XXXX)	49.50
Sendix absolute (S566) (0x-011-XXXX-XXXX-XXXX)	76.00

Measuring range		
A: Wire rolled up	B: Wire pulled out	
25 mm	18 mm	
30 mm	18 mm	
35 mm	18 mm	
40 mm	18 mm	
42.5 mm	18 mm	