

KUEBLER - WIRE ENCODERS B80

SERIE D8.XB1

- Max measuring length 3000 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 B80 series comes with analogue, incremental or absolute (SSI / BiSS, CANopen, Profibus, EtherCAT, Profinet or DeviceNet) outputs.

Please refer to the images below for ordering information.

Order code with encoder (incremental, absolute)				Standard variants are represented bold underlined>	
D8.XB1		XXXX	XX	X	XXXX
a		b	c	d	e
a <i>Mechanics</i> 2 = interchangeable installation ¹⁾ 4 = fixed installation ²⁾	b <i>Measuring range</i> 0100 = 1000 mm 0200 = 2000 mm 0300 = 3000 mm	c <i>Encoder used</i> 00 = Sendix 5000 , incremental M3 = Sendix M5863 , absolute F3 = Sendix F5863, absolute 63 = Sendix 5863, absolute M8 = Sendix M5868 , absolute F8 = Sendix F5868 absolute 68 = Sendix 5868, absolute	d <i>Output circuit</i> depends on the encoder used	e <i>Type of connection</i> depends on the encoder used	f <i>Resolution / Protocol / Options</i> 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 %)					

Standard resolutions for draw wire with incremental encoder Sendix 5000			
Drum circumference [mm]	200	200	200
Pulses / revolution [ppr]	200	2000	4000
Pulses / mm	1	10	20
Resolution [mm]	1	0.1	0.05

Standard resolutions for draw wire with absolute encoder Sendix M5863 (12 bit ST) or M5868 (12 bit ST, programmable via bus)	
Drum circumference [mm]	200
Pulses / revolution [ppr]	4096
Pulses / mm	20.5
Resolution [mm]	0.05

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

D8.XB1.XXXX.M1XX.XXXX

Standard variants are represented **bold underlined**

a *Mechanics*

- 2 = interchangeable installation ¹⁾
- 4 = fixed installation** ²⁾

b *Measuring range*

- 0100 = 1000 mm
- 0200 = 2000 mm
- 0300 = 3000 mm

c *Encoder used*

- M1 = Sendix M5861, absolute** ³⁾

d *Output circuit*

depends on the encoder used

e *Type of connection*

depends on the encoder used

f *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.xB1.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 ⁴⁾
D8.xB1.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 ⁴⁾
D8.xB1.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 ⁴⁾
D8.xB1.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 ⁴⁾

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

D8.3B1.XXXX.XXX.X.0000

a *Measuring range*

- 0100 = 1000 mm
- 0200 = 2000 mm
- 0300 = 3000 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 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

The diagrams show two measurement configurations: current measurement (A) and voltage measurement (V). In the current measurement circuit, the sensor is connected in series with the load. In the voltage measurement circuit, the sensor is connected in parallel across the load. Both circuits include a power supply (V+) and a ground connection (GND).

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.

The pinout diagram shows a circular 4-pin connector with pins numbered 1 to 4. Pin 1 is at the top, pin 2 is on the right, pin 3 is at the bottom, and pin 4 is on the left.

Measuring range [mm]	D [mm]
1000	21
2000	35
3000	35

Dimension B depends on the encoder used

Encoder	B
Sendix Incremental (5000)	54.25
D8.481.XXXXX.0000.XXXXX	54.25
Sendix absolute (3863)	66.75
D8.481.XXXXX.6300.XXXXX	66.75
Sendix absolute (3868)	93.25
D8.481.XXXXX.6800.XXXXX	93.25

Sensor type	Measuring length [mm]	B	D
Potentiometer	1000	74	21
	2000	74	21
	3000	102.5	35
4 ... 20 mA	1000	87.5	21
	2000	87.5	21
	3000	102.3	35

