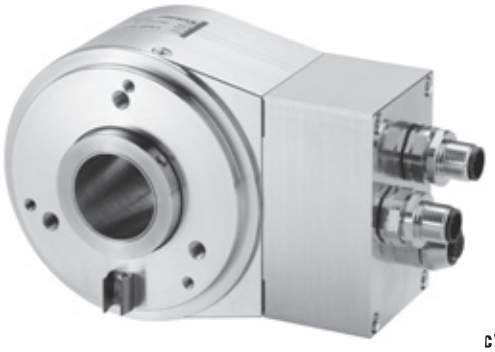
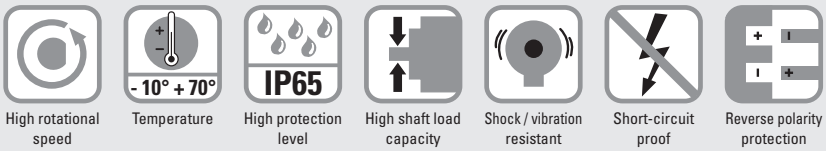
Standard, optical / magnetic | **9080 (Large hollow shaft)** | **Profibus-DP**



The multiturn encoder 9080 with Profibus interface and combined optical / mechanical sensor technology is perfect for Profibus applications, where a large hollow shaft is required.

This through hollow shaft is available with a diameter up to 28 mm. The maximum resolution of the 9080 is 25 bits.



High rotational speed | Temperature | High protection level | High shaft load capacity | Shock / vibration resistant | Short-circuit proof | Reverse polarity protection

Adaptable

- With cable gland or M12 connector
- Hollow shaft of 12 up to 28 mm
- Programmable over the bus

User-friendly

- All relevant parameters programmable
- Wide selection of shafts and fixing options

Order code Hollow shaft

8.9080	.	X	X	3	X	.	3001
Type		a	b	c	d		e

a *Flange*
1 = without mounting aid
2 = with short spring device
3 = with long spring device
4 = with mounting flange
5 = with tether arm long

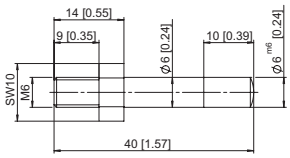
b *Hollow shaft*
1 = ø 12 mm
2 = ø 15 mm
3 = ø 20 mm
4 = ø 24 mm
5 = ø 28 mm
6 = ø 15,875 mm (5/8")
7 = ø 25,4 mm (1")
9 = ø 16 mm
C = ø 25 mm

c *Interface / Power supply*
3 = Profibus-DP / 10 ... 30 V DC

d *Type of connection*
1 = terminal box with with cable gland fitting M16
2 = M12 Profibus connector

e *Fieldbus profile*
3001 = Profibus Class 2

Mounting accessory for hollow shaft encoders

Cylindrical pin long for torque stops		With fixing thread	**8.0010.4700.0003**

Connection technology

Connector, self-assembly (straight)	Coupling M12 for Bus in	**05.BMWS 8151-8.5**
	Connector M12 for Bus out	**05.BMSWS 8151-8.5**
	Connector M12 for supply voltage	**05.B8141-0**
Cordset, pre-assembled, PUR cable	M12 cordset 6 m for Bus in	**05.00.6011.3211.006M**
	M12 cordset 6 m for Bus out	**05.00.6011.3411.006M**
	M12 cordset 2 m for supply voltage	**05.00.6061.6211.002M**

Further accessories can be found in the Accessories section or in the Accessories area of our website at: www.kuebler.com/accessories.
Additional connectors can be found in the Connection Technology section or in the Connection Technology area of our website at: www.kuebler.com/connection_technology.

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Mechanical characteristics	
Max. speed	6 000 min^{-1}, 3 000 min^{-1} (continuous)
Rotor moment of inertia	ca. 72 x 10^{-6} kgm^2
Starting torque	< 0.2 Nm
Weight	approx. 0.9 kg
Protection EN 60529	IP65
EX approval for hazardous areas	optional Zone 2 and 22
Working temperature range	-10°C ... +70°C
Materials hollow shaft	stainless steel H7
Shock resistance acc. EN 60068-2-27	2500 m/s^2, 6 ms
Vibration resistance acc. EN 60068-2-6	100 m/s^2, 10 ... 2000 Hz

General electrical characteristics	
Power supply (U_B)	10 ... 30 V DC
Power consumption	290 mA
Recommended fuse	T 0.315 A
Linearity	± 1/2 LSB (±1 LSB at 13, 14, 25 bit resolution)
Code	Binary
Interface	RS485
Protocol	Profibus-DP, encoder profile class 2
Baud rate	max. 12 Mbit/s
Device adress	adjustable with DIP-switches
CE compliant acc. to	EN 61000-6-2, EN 61000-6-4, EN 61000-6-3
Performance against magnetic influence acc. to	EN 61000-4-8, Severity level 5
UL approval	File 224618
RoHS compliant acc. to	EU guideline 2002/95/EG

Profibus Encoder-Profile V1.1

Profibus Encoder-Profile V1.1 The PROFIBUS-DP device profile describes the functionality of the communication and the user-specific component within the PROFIBUS field bus system. For encoders, the encoder profile is definitive. Here the individual objects are defined independent of the manufacturer.

Furthermore, the profiles offer space for additional manufacturer-specific functions; this means that PROFIBUS-compliant device systems can be used now with the guarantee that they are ready for the future too.

The following parameters can be programmed:

- Direction of rotation
- Scaling factor
  – number of pulse/rotation
  – total resolution
- Preset value
- Diagnostics mode

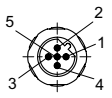
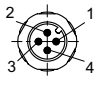
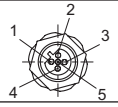
The following functionality is integrated:

- Galvanic isolation of the Fieldbus stage with DC/DC converter
- Line driver according to RS485 max. 12 MB
- Addressing by means of rotary switches
- Diagnostics LED
- Full Class 1 and Class2 functionality

Terminal assignment terminal box

Interface	Type of connection	Features	Terminal box												
3	1	–	Signal:	ENC.		BUS IN			BUS OUT			ENC.		Shield	
				+V DC	0 V	0 V	B	A	A	B	0 V	0 V	+V DC	⏚	
			Terminal:	1	2	3	4	5	6	7	8	9	10	11	12

Terminal assignment M12 connector

Interface	Type of connection	Function	M12 connector						
3	2	Bus in	Signal:	–	BUS-A	–	BUS-B	–	
			Pin:	1	2	3	4	5	
		Power supply	Signal:	+V	–	0 V	–		
			Pin:	1	2	3	4		
		Bus out	Signal:	BUS_VDC	BUS-A	BUS_GND	BUS-B	⏚	
			Pin:	1	2	3	4	5	

1) For shaft version only (at shaft end)

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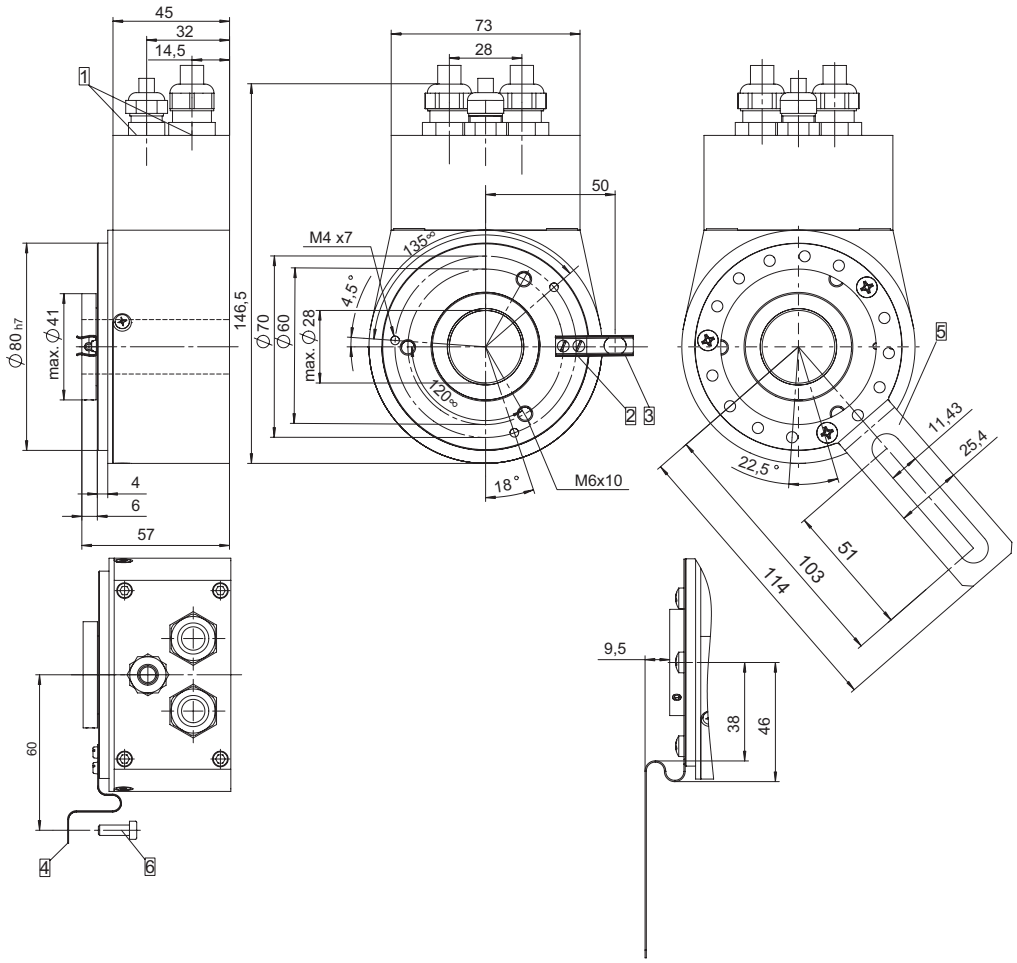
Dimensions

Cable connection

1 Cable gland fitting
2 Spring device short (flange Nr. 2) for cyl. pin DIN 6325, ø 6 mm
3 Spring device long (flange Nr. 3) for cyl. pin DIN 6325, ø 6 mm
4 Mounting flange (flange Nr. 4)
5 Tether arm long (flange Nr. 5)
6 Slotted hole for screw M4



Mounting advice:

The flanges and shafts of the encoder and drive should not both be rigidly coupled together at the same time!

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