

Standard optical

Sendix 5858 / 5878 (shaft / hollow shaft)

PROFINET 10



The singleturn encoders 5858 and 5878 with PROFINET interface and optical sensor technology are ideal for use in all applications with a PROFINET interface.

The encoder supports the IRT mode and is therefore ideal for realtime applications.

























High rotational

Temperature range

High shaft load capacity

resistant

protection

salt spray-tested optional

Surface protection

Reliable

- · Ideally suited for all PROFINET applications thanks to the use of encoder profile 4.1.
- · Perfect for use in harsh outdoor environments, as a result of IP67 protection and rugged housing construction.

Flexible

- Easy setting of a preset value using a control bit (telegram 860).
- IRT-Mode.
- Cycle time ≥ 1 ms.
- Firmware updater allows for easy expansion of characteristics without having to disassemble the encoder.

Order code **Shaft version**

8.5858

XXC2 **a b e a**

e

C2|12

If for each parameter of an encoder the underlined preferred option is selected, then the delivery time will be 10 working days for a maximum of 10 pieces Ots. up to 50 pcs. of these types generally have a delivery time of 15 working days.



a Flange

1 = clamping flange, IP65 ø 58 mm [2.28"] 3 = clamping flange, IP67 ø 58 mm [2.28"]

2 = synchro flange, IP65 ø 58 mm [2.28"] 4 = synchro flange, IP67 ø 58 mm [2.28"]

5 = square flange, IP65 □ 63.5 mm [2.5"] 7 = square flange, IP67 □ 63.5 mm [2.5"] **b** Shaft (ø x L), with flat

1 = 6 x 10 mm [0.24 x 0.39"] 1) 2 = 10 x 20 mm [0.39 x 0.79"] 2)

3 = 1/4" x 7/8"

4 = 3/8" x 7/8"

C Interface / power supply C = PROFINET 10 / 10 ... 30 V DC

Type of connection removable bus terminal cover

2 = 3 x M12 connector, 4-pin

e Field bus profile C2= PROFINET IO

Optional on request

- Ex 2/22

- surface protection salt spray tested

Order code **Hollow shaft**

8.5878 Type

XIXICI2 0000 C212 **(2)**

If for each parameter of an encoder the underlined preferred option is selected, then the delivery time will be 10 working days for a maximum of 10 pieces. Ots. up to 50 pcs. of these types generally have a delivery time of 15 working days.



a Flange

1 = with spring element, long, IP65

2 = with spring element, long, IP67

3 =with stator coupling, IP65 ø 65 mm [2.56"]

4 = with stator coupling, IP67 ø 65 mm [2.56"]

5 = with stator coupling, IP65 ø 63 mm [2.48"] 6 = with stator coupling, IP67 ø 63 mm [2.48"]

Blind hollow shaft (insertion depth max. 30 mm [1.18"]) = ø 10 mm [0.39"]

4 = ø 12 mm [0.47"]

 $5 = \emptyset 14 \text{ mm } [0.55"]$ $6 = \emptyset 15 \text{ mm } [0.59"]$

 $8 = \emptyset 3/8"$ $9 = \emptyset 1/2"$ Interface / power supply C = PROFINET 10 / 10 ... 30 V DC

Type of connection removable bus terminal cover 2 = 3 x M12 connector, 4-pin

e Field bus profile C2= PROFINET 10

> Optional on request - Ex 2/22

surface protection salt spray tested

¹⁾ Preferred type only in conjunction with flange type 2.

²⁾ Preferred type only in conjunction with flange type 1.



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Mounting accessory for shaft encoders		Order no.
Coupling	bellows coupling ø 19 mm [0.75"] for shaft 6 mm [0.24"] bellows coupling ø 19 mm [0.75"] for shaft 10 mm [0.39"]	8.0000.1102.0606 8.0000.1102.1010
Mounting accessory for hollow shaft encoders	Dimensions in mm [inch]	Order no.
Cylindrical pin, long for flange with spring element (flange type 1 + 2)	with fixing thread 8[0.31] 5[0.2] 5w7 [0.28] 30[1,18]	8.0010.4700.0000
Connection technology		Order no.
Cordset, pre-assembled	M12 male connector with external thread for port 1 and port 2, 4-pin 2 m [6.56'] PUR cable	05.00.6031.4411.002M
	M12 female connector with coupling nut for power supply, 4-pin 2 m [6.56'] PUR cable	05.00.6061.6211.002M
Connector, self-assembly (straight)	M12 male connector with external thread for port 1 and port 2, 4-pin M12 female connector with coupling nut for power supply, 4-pin	05.WASCSY4S 05.B8141-0

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.

Technical data

Mechanical	characteristics		
Maximum speed	IP65 up to 70°C [158 IP65 up to T IP67 up to 70°C [158 IP67 up to T	max PF]	9000 min ⁻¹ , 7000 min ⁻¹ (continuous) 7000 min ⁻¹ , 4000 min ⁻¹ (continuous) 8000 min ⁻¹ , 6000 min ⁻¹ (continuous) 6000 min ⁻¹ , 3000 min ⁻¹ (continuous)
Starting torque		P65 P67	< 0.01 Nm < 0.05 Nm
Mass moment	of inertia shaft versi hollow shaft versi		3.0 x 10 ⁻⁶ kgm ² 6.0 x 10 ⁻⁶ kgm ²
Load capacity		dial kial	80 N 40 N
Weight	Weight		approx. 0.50 kg [17.64 oz]
Protection acc	. to EN 60529		
	housing si	ide	IP67
	shaft si	ide	IP65, opt. IP67
Working tempe	erature range		-40°C +85°C [-40°F +185°F]
Material	shaft/hollow sh flan	ige	stainless steel aluminum
housing		zinc die-cast	
Shock resistan	Shock resistance acc. to EN 60068-2-27		2500 m/s ² , 6 ms
Vibration resists	ance acc. to EN 60068-2	2-6	100 m/s ² , 55 2000 Hz

Electrical characteristics			
Power supply	10 30 V DC		
Power consumption (no load)	max. 200 mA		
Reverse polarity protection of the power supply	yes		
UL approval	file no. E224618		
CE compliant acc. to	EMC guideline 2014/30/EU RoHS guideline 2011/65/EU		

Interface characteristics PROFINET IO	
Resolution	1 65535 (16 bit), scalable default: 8192 (13 bit)
Protocol	PROFINET IO

Link 1 and 2, LED (green / yellow)				
Two colored	green	active link		
	yellow	data transfer		

Error LED (red) / PWR LED (green) Functionality see manual



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General information about PROFINET IO

The PROFINET encoder implements the encoder profile 4.1. (according to the specification Encoder Version 4.1 Dec 2008")

It permits scaling and preset values, as well as many other additional parameters to be programmed via the PROFINET bus.

When switching on, all parameters are loaded from an EEPROM, where they were saved previously to protect them against power-failure, or taken over by the controller in the start-up phase.

Position, speed and many other states of the encoder can be transmitted.

PROFINET 10

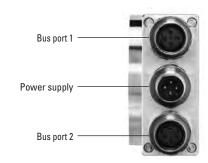
The complete encoder profile according to profile encoder version 4.1 as well as the identification & maintenance functionality version 1.16 has been implemented. IM blocks 0, 1, 2, 3 and 4 are supported.

The <u>Media Redundancy Protocol</u> is implemented here.

Basically, the advantage of MRP is that the functionality of the components, which are wired in a ring structure, is maintained in case of a failure or of a breakage of the wires in any location.

Terminal assignment bus

Interface	Type of connection	Function	M12 connecto	M12 connector, 4-pin					
		Bus port 1	Signal:	Transmit data+	Receive data+	Transmit data -	Receive data -	√ 2) <	
			Abbreviation:	TxD+	RxD+	TxD-	RxD-		D coded
			Pin:	1	2	3	4	(a)	
		Power	Signal:	Voltage +	-	Voltage –	-	(a)	
С	2	supply	Abbreviation:	+ V	-	0 V	-	(3 0)	
	(3 x M12 connector)		Pin:	1	2	3	4	(4)	
		Bus port 2	Signal:	Transmit data+	Receive data+	Transmit data -	Receive data -	√ 2	
			Abbreviation:	TxD+	RxD+	TxD-	RxD-	(0 3)	D coded
			Pin:	1	2	3	4	(4)	





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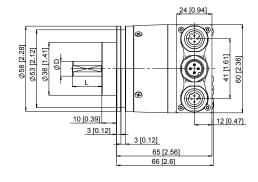
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Dimensions shaft version, with removable bus terminal cover

Clamping flange, ø 58 [2.28] Flange type 1 and 3

1 3 x M3, 6 [0.24] deep

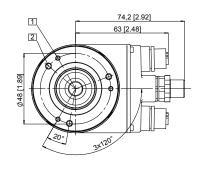
2 3 x M4, 8 [0.32] deep



24 [0.94]

60 [2.36]

12 [0.47]

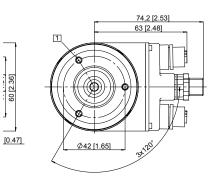


D	Fit	L
6 [0.24]	h7	10 [0.39]
10 [0.39]	f7	20 [0.79]
1/4"	h8	7/8"
3/8"	h8	7/8"

Synchro flange, ø 58 [2.28] Flange type 2 and 4

1 3 x M4, 6 [0.24] deep

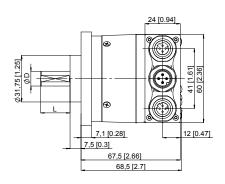
		\$58[2.28 \$50[1.97 \$D
]		1



D	Fit	L
6 [0.24]	h7	10 [0.39]
10 [0.39]	f7	20 [0.79]
1/4"	h8	7/8"
3/8"	h8	7/8"
5,0		.,0

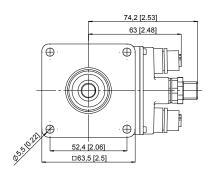
Square flange,

63.5 [2.5] Flange type 5 and 7



3 [0.12] 3 [0.12]

75 [2.95] 76 [3.0]



D	Fit	L
6 [0.24]	h7	10 [0.39]
10 [0.39]	f7	20 [0.79]
1/4"	h8	7/8"
3/8"	h8	7/8"



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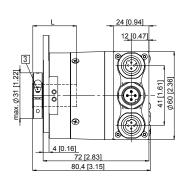
Dimensions hollow shaft version (blind hollow shaft), with removable bus terminal cover

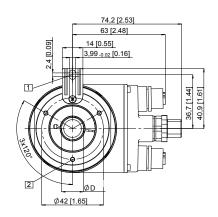
Dimensions in mm (inch

Flange with spring element, long Flange type 1 and 2

- 1 Slot spring element, recommendation: cylindrical pin DIN 7, ø 4 [0.16]
- 2 3 x M3, 5.5 [0.22] deep
- 3 Recommended torque for the clamping ring 0.6 Nm

D	Fit	L	
10 [0.39]	H7	30 [1.18]	
12 [0.47]	H7	30 [1.18]	
14 [0.55]	H7	30 [1.18]	
15 [0.59]	H7	30 [1.18]	
3/8"	H7	30 [1.18]	
1/2"	H7	30 [1.18]	
I - insertion denth may blind hollow shaft			

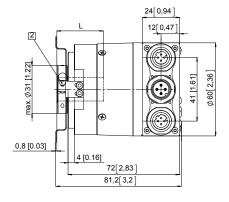


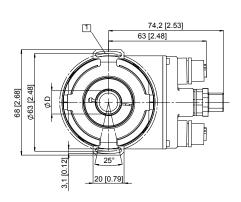


Flange with stator coupling, ø 63 [2.48] Flange type 5 and 6

- 1 Fixing screws DIN 912 M3 x 8 (washer included in delivery)
- 2 Recommended torque for the clamping ring 0.6 Nm

D	Fit	L	
10 [0.39]	H7	30 [1.18]	
12 [0.47]	H7	30 [1.18]	
14 [0.55]	H7	30 [1.18]	
15 [0.59]	H7	30 [1.18]	
3/8"	H7	30 [1.18]	
1/2"	H7	30 [1.18]	
L = insertion depth max. blind hollow shaft			





Flange with stator coupling, ø 65 [2.56] Flange type 3 and 4 $\,$

1 Recommended torque for the clamping ring 0.6 Nm

D	Fit	L
10 [0.39]	H7	30 [1.18]
12 [0.47]	H7	30 [1.18]
14 [0.55]	H7	30 [1.18]
15 [0.59]	H7	30 [1.18]
3/8"	H7	30 [1.18]
1/2"	H7	30 [1.18]
L = insertion depth max, blind hollow shaft		

