

Absolute encoders - singleturn

Standard optical	Sendix 5858 / 5878 (shaft / hollow shaft)	PROFINET IO
Mounting accessory for shaft encoders		Order no.
Coupling	bellows coupling \varnothing 19 mm [0.75"] for shaft 6 mm [0.24"]	8.0000.1102.0606
	bellows coupling \varnothing 19 mm [0.75"] for shaft 10 mm [0.39"]	8.0000.1102.1010
Mounting accessory for hollow shaft encoders		Order no.
Cylindrical pin, long for flange with spring element (flange type 1 + 2)	Dimensions in mm [inch]	8.0010.4700.0000
	with fixing thread 	
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	05.WASCSY4S
	M12 female connector with coupling nut for power supply, 4-pin	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°F]	9000 min ⁻¹ , 7000 min ⁻¹ (continuous)
	IP65 up to T _{max}	7000 min ⁻¹ , 4000 min ⁻¹ (continuous)
	IP67 up to 70°C [158°F]	8000 min ⁻¹ , 6000 min ⁻¹ (continuous)
	IP67 up to T _{max}	6000 min ⁻¹ , 3000 min ⁻¹ (continuous)
Starting torque - at 20°C [68°F]	IP65	< 0.01 Nm
	IP67	< 0.05 Nm
Mass moment of inertia	shaft version	3.0 x 10 ⁻⁶ kgm ²
	hollow shaft version	6.0 x 10 ⁻⁶ kgm ²
Load capacity of shaft	radial	80 N
	axial	40 N
Weight	approx. 0.50 kg [17.64 oz]	
Protection acc. to EN 60529	housing side	IP67
	shaft side	IP65, opt. IP67
Working temperature range	-40°C ... +85°C [-40°F ... +185°F]	
Material	shaft/hollow shaft	stainless steel
	flange	aluminum
	housing	zinc die-cast
Shock resistance acc. to EN 60068-2-27	2500 m/s ² , 6 ms	
Vibration resistance acc. to EN 60068-2-6	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 IO

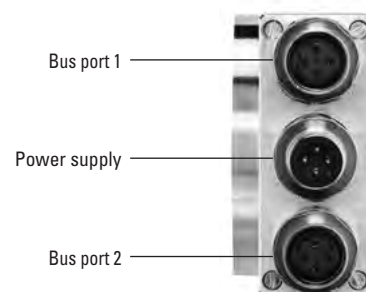
The complete encoder profile according to profile encoder version 4.1 as well as the identification & maintenance functionality version 1.16 has been implemented. IM blocks 0, 1, 2, 3 and 4 are supported.

The **M**edia **R**edundancy **P**rotocol 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 connector, 4-pin					
			Signal:	Transmit data+	Receive data+	Transmit data -	Receive data -	
C	2 (3 x M12 connector)	Bus port 1	Signal:	Transmit data+	Receive data+	Transmit data -	Receive data -	
			Abbreviation:	TxD+	RxD+	TxD-	RxD-	
			Pin:	1	2	3	4	
		Power supply	Signal:	Voltage +	-	Voltage -	-	
			Abbreviation:	+ V	-	0 V	-	
			Pin:	1	2	3	4	
		Bus port 2	Signal:	Transmit data+	Receive data+	Transmit data -	Receive data -	
			Abbreviation:	TxD+	RxD+	TxD-	RxD-	
			Pin:	1	2	3	4	



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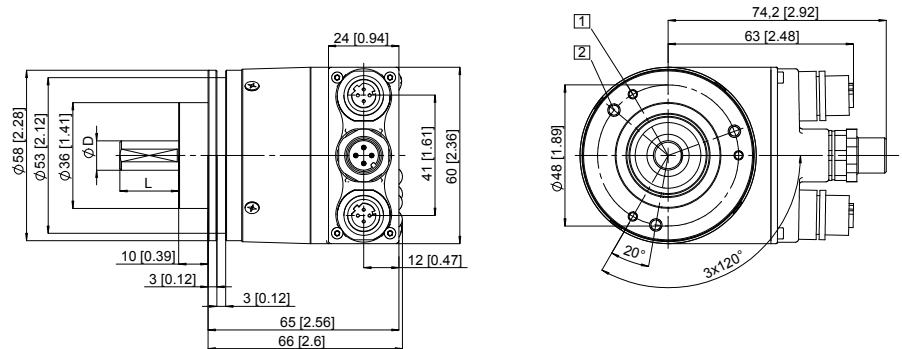
Dimensions shaft version, with removable bus terminal cover

Dimensions in mm [inch]

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

- 1 3 x M3, 6 [0.24] deep
- 2 3 x M4, 8 [0.32] deep

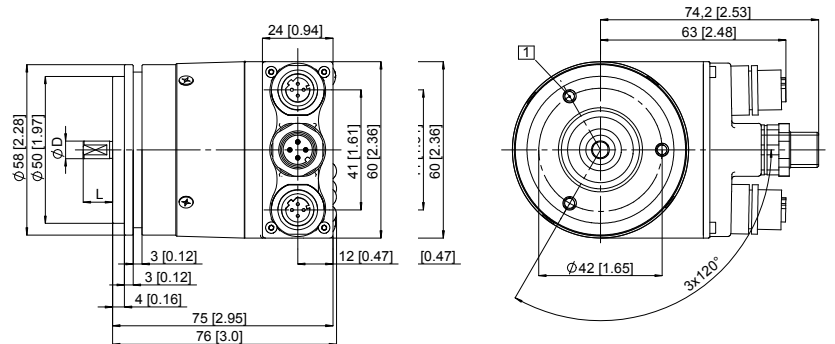
D	Fit	L
6 [0.24]	h7	10 [0.39]
10 [0.39]	f7	20 [0.79]
1/4"	h8	7/8"
3/8"	h8	7/8"



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

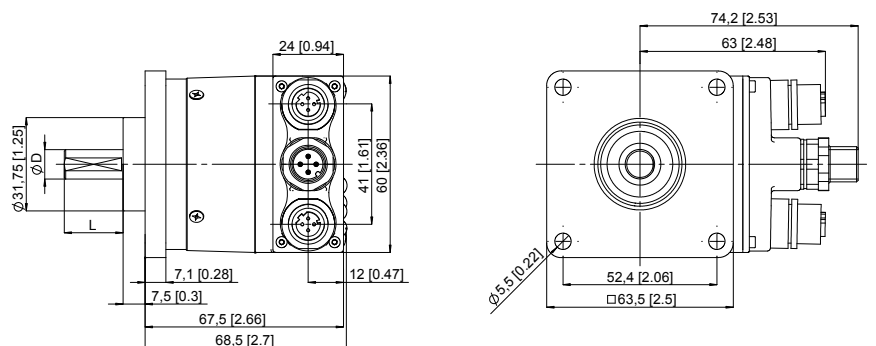
- 1 3 x M4, 6 [0.24] deep

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"



Square flange, \square 63.5 [2.5] Flange type 5 and 7

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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Standard optical

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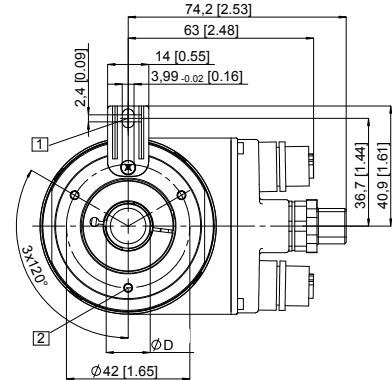
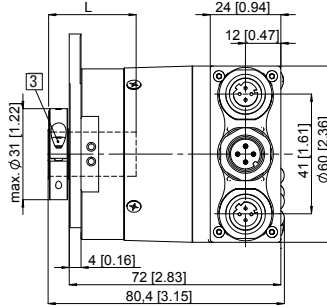
PROFINET IO

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, $\varnothing 4$ [0.16]
- 2 3 x M3, 5.5 [0.22] deep
- 3 Recommended torque for the clamping ring 0.6 Nm

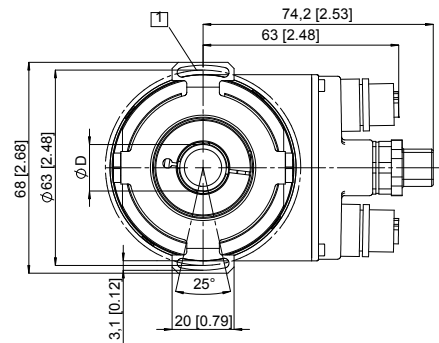
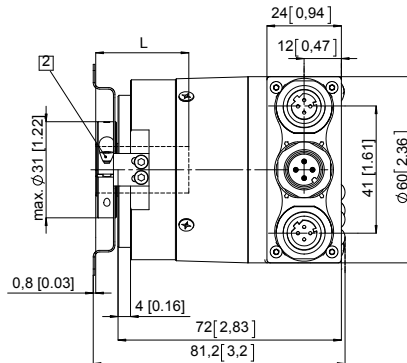


D	Fit	L
10 [0.39]	H7	30 [1.18]
12 [0.47]	H7	30 [1.18]
14 [0.55]	H7	30 [1.18]
15 [0.59]	H7	30 [1.18]
3/8"	H7	30 [1.18]
1/2"	H7	30 [1.18]

L = insertion depth max. blind hollow shaft

Flange with stator coupling, $\varnothing 63$ [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

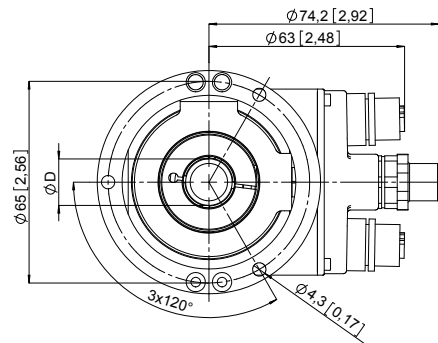
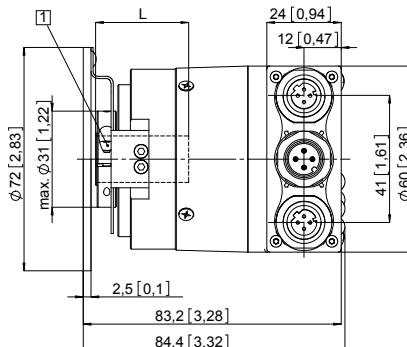


D	Fit	L
10 [0.39]	H7	30 [1.18]
12 [0.47]	H7	30 [1.18]
14 [0.55]	H7	30 [1.18]
15 [0.59]	H7	30 [1.18]
3/8"	H7	30 [1.18]
1/2"	H7	30 [1.18]

L = insertion depth max. blind hollow shaft

Flange with stator coupling, $\varnothing 65$ [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