

Absolute encoders – singleturn

Standard optical	Sendix F5858 / F5878 (shaft / hollow shaft)	EtherNet/IP
------------------	---	-------------



The Sendix F58 singleturn is a particularly high resolution optical encoder without gears and with 100 percent magnetic insensitivity.

16 bits total resolution, shaft up to 10 mm, blind hollow shaft up to 15 mm and certified EtherNet/IP functionality.



EtherNet/IP™



Safety-Lock™



High rotational speed



Temperature range
-40°C ... +80°C



High protection level
IP65



High shaft load capacity



Shock / vibration resistant



Magnetic field proof



Reverse polarity protection



Optical sensor

Up-to-the-minute EtherNet/IP functionality

- Fast, easy commissioning and configuration possible thanks to cyclic services.
- Low RPI time, of 1 ms minimum – makes the encoder suitable for time-critical applications up to an update frequency of 1000 Hz.
- Faster encoder start after applying the power – increases plant performance.

Reliable and insensitive

- Sturdy bearing construction in Safety-Lock™ Design for resistance against vibration and installation errors.
- Thanks to the implementation of DLR (Device Level Ring) a single cable break does not lead to plant stoppage.
- Wide temperature range, -40°C ... +80°C.

Order code Shaft version

8.F5858 . XXAN . A2 2 2
Type

a Flange

- 1 = clamping flange, IP65 ø 58 mm [2.28"]
- 2 = synchro flange, IP65 ø 58 mm [2.28"]
- 5 = square flange, IP65 □ 63.5 mm [2.5"]

b Shaft (ø x L), with flat

- 1 = 6 x 10 mm [0.24 x 0.39"]
- 2 = 10 x 20 mm [0.39 x 0.79"]
- 3 = 1/4" x 7/8"
- 4 = 3/8" x 7/8"

c Interface / Power supply

- A = EtherNet IP / 10 ... 30 V DC

e Fieldbus profile

- A2 = EtherNet/IP

d Type of connection

- N = 3 x axial M12 connector, 4-pin

Optional on request

- Ex 2/22

Order code Hollow version

8.F5878 . XXAN . A2 2 2
Type

a Flange

- 1 = with spring element long, IP65
- 3 = with stator coupling, IP65 ø 65 mm [2.56"]
- 5 = with stator coupling, IP65 ø 63 mm [2.48"]

b Blind hollow shaft

(insertion depth max. 30 mm [1.18"])

- A = ø 10 mm [0.39"]
- B = ø 12 mm [0.47"]
- C = ø 14 mm [0.55"]
- D = ø 15 mm [0.59"]
- E = ø 3/8"
- F = ø 1/2"

c Interface / Power supply

- A = EtherNet IP / 10 ... 30 V DC

e Fieldbus profile

- A2 = EtherNet/IP

d Type of connection

- N = 3 x axial M12 connector, 4-pin

Optional on request

- Ex 2/22

Absolute encoders – singleturn

Standard optical	Sendix F5858 / F5878 (shaft / hollow shaft)	EtherNet/IP
-------------------------	--	--------------------

General information about EtherNet/IP

EtherNet/IP conformance tested acc. to	version CT-12 of 11. Dez. 2014
EtherNet/IP specification	Vol 2, Ed 1.17
CIP specification	Vol 1, Ed 3.16

The following functionalities are integrated

Adjustable parameters

- Preset
- Count direction
- Resolution
- Unity of speed
- IP address
- Position
- Diagnosis
- Position limit
- Warning messages

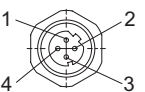
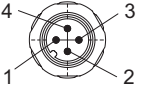
Objects (CIP Objects)

- Identity Object
- Message Router
- Assembly Object
- Connection Manager
- Position Sensor Object
- Qos Object
- Port Object
- TCP / IP Interface Object
- EtherNet Link Object

EtherNet/IP features

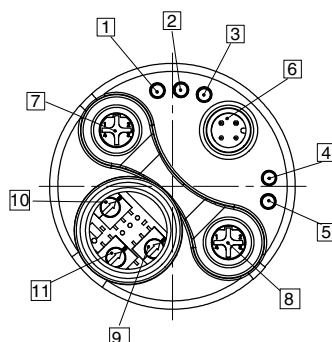
- DLR (Device Level Ring) possible
- Qos (Quality of Service) possible
- ACD (Address Conflict Detection)
- Multicast and unicast capability

Terminal assignment bus

Interface	Type of connection	Function	M12 connector, 4-pin					
A	N (3 x M12 connector)	Bus Port 1	Signal:	Transmit data+	Receive data+	Transmit data -	Receive data -	 D coded
			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 -	 D coded
			Abbreviation:	TxD+	RxD+	TxD-	RxD-	
			Pin:	1	2	3	4	

Rear side connections and display elements

- 1 LED: Link 1
- 2 LED: Mod.
- 3 LED: Net.
- 4 LED: Encoder
- 5 LED: Link 2
- 6 Power
- 7 Port 1
- 8 Port 2
- 9 Switch: x1
- 10 Switch: x100
- 11 Switch: x10



Absolute encoders – singleturn

Standard optical	Sendix F5858 / F5878 (shaft / hollow shaft)	EtherNet/IP
------------------	---	-------------

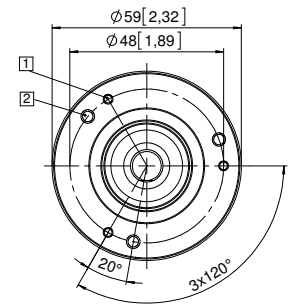
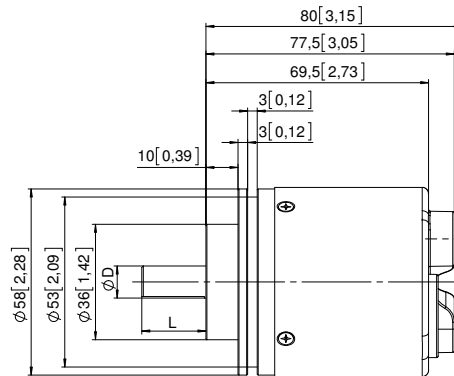
Dimensions shaft version

Dimensions in mm [inch]

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

- 1 3 x M3, 6 [0.24] deep
- 2 3 x M4, 8 [0.31] deep

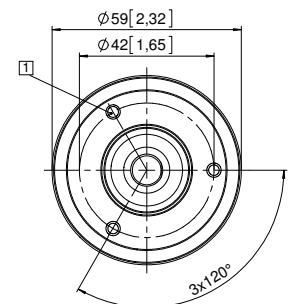
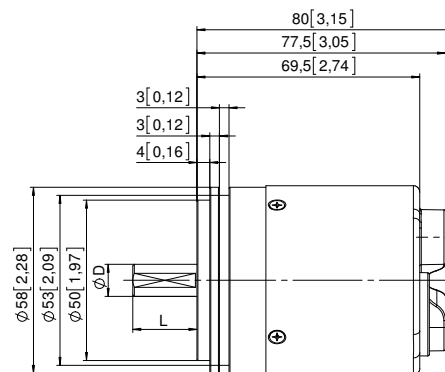
D	Fit	L
6 [0.24]	h7	10 [0.39]
10 [0.39]	f7	20 [0.79]
1/4"	h8	7/8"
3/8"	h8	7/8"



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

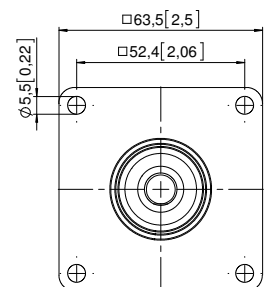
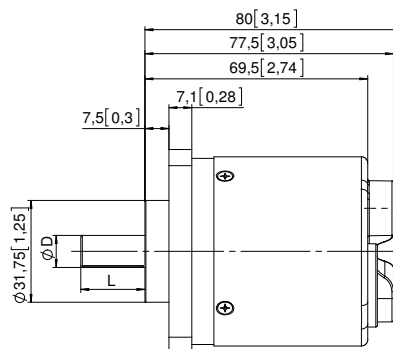
- 1 3 x M3, 6 [0.24] deep

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

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"



Absolute encoders – singleturn

Standard optical	Sendix F5858 / F5878 (shaft / hollow shaft)	EtherNet/IP
------------------	---	-------------

Dimensions hollow shaft version

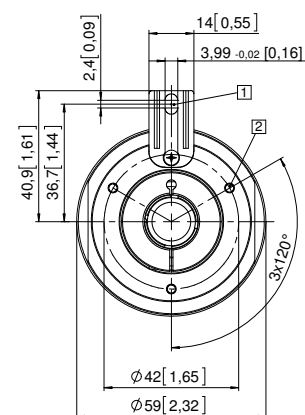
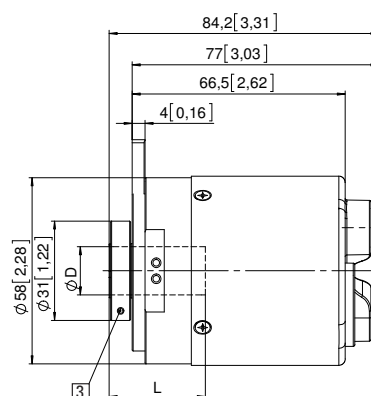
Dimensions in mm [inch]

Flange with spring element, long Flange type 1

- 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

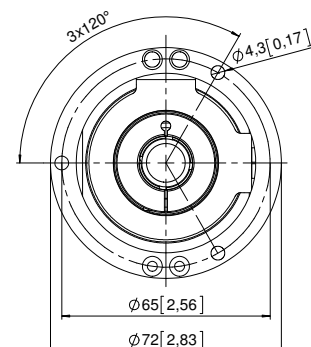
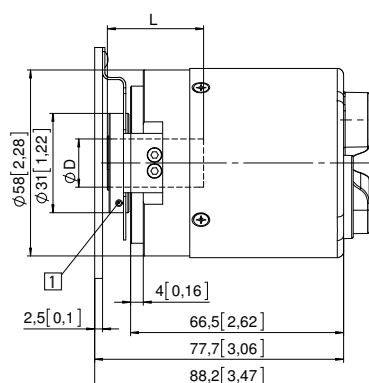


Flange with stator coupling, $\varnothing 65$ [2.56] Flange type 3

- 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



Flange with stator coupling, $\varnothing 63$ [2.48] Flange type 5

- 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

