

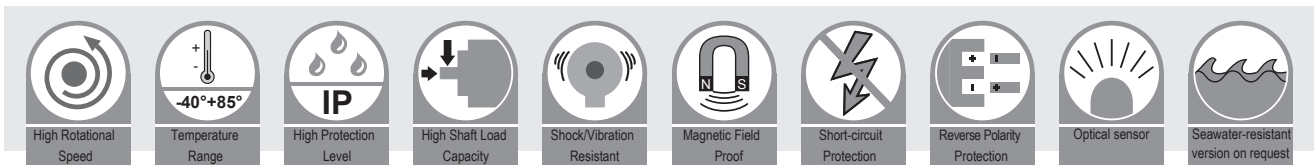
Absolute Encoders — Multiturn

Standard Optical SSI

62-58SX/58HX



- Outdiameter 58 mm , standard industrial design
- Optical sensor technology , resolution up to 16 bits
- Mechanical gear, multi turn system, the number of turns up to 14 bits
- Optional incremental output
- 720 hours test of salt spray corrosion



Highlight:

- Outdiameter 58 mm , match compact with strong
- Temperature -40°C ... +85°C
- High Protection Level IP67
- Optional RS422 or push-pull incremental output

- Blind hollow shaft diameter up to 15mm
- SSI Interface, preset Initial value
- With cable outlet, M23, M12 a variety of ways to choose
- Stainless steel products is available

Mechanical characteristics	
Max. Speed	12000 rpm
Starting torque	≤ 3 Ncm (at 20°C)
Moment of inertia	≤ 30 gcm ²
Shaft load capacity	Axial 40 N ; Radial 110 N
Weight	approx. 0.300 kg
Protection acc. to EN 60 529	IP 65 , (optional IP 67)
Explosion protection Ex (optional)	Zone 2, 22
Working temperature range	-40°C ... 85°C
Materials	Shaft : Stainless steel(V2A) Flange : Aluminium or Stainless steel Housing : Steel or Stainless steel
Shock resistance acc. to EN 60068-2-27	≤ 100 g (6 ms)
Vibration resistance acc. to EN 60068-2-6	≤ 10 g (10 Hz ... 1000Hz)
Mechanical lifetime (Fa/Fr)	40/60 40/80 40/110 150 100 55

Additional incremental output (A/B/Z)		
Output	RS422	HTL Push-pull
Resolution	1024,2048,4096,8192,16384 ppr	
Output channel	A,/A; B,/B; Z,/Z	
Type of output	90° ± 4.5° Square pulse	
Output frequency	200 kHz	
Signal level	high: Min. 2.5 V	Min. +U - 2 V
	Low: Max. 0.5 V	Max. 0.5 V
Short circuit protection	yes	yes

Interface characteristics SSI	
Power supply	5 ... 30 VDC(with HTL output , at least 10V)
Current consumption	50 mA
Interface	SSI synchronous serial interface
Output driver	RS 422
Clock frequency	100 kHz ... 2 MHz
Monoflop time	> 25 µs
Start-up time	< 250 ms
Code	Gray/Binary
Singleturn resolution	Max.16 bits
Number of revolutions	Max.14 bits
Function	Presetable ⁽¹⁾ ; Changable count direction ⁽²⁾
Short circuit protection	yes
Reverse polarity protection	yes
UL approval	E468583
CE compliant acc. to	EN 61000-6-4:2007-09; EN61000-6-2:2005

(1) The encoder can be set to zero at any position by means of a HIGH signal on the SET input. Once the SET function has been triggered, the encoder requires an internal processing time of typ. 300ms; during this time the power supply must not be switched off.

(2) The counter direction can be changed by means of a HIGH signal on the DIR input. If a LOW signal on the DIR input, output values are counted increase when the shaft is turning clockwise. And if a HIGH signal on the DIR input, output values are counted increase when the shaft is turning counter-clockwise.

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LED Status indication

2 LED status indicators can be built-in optionally.

GREEN: Power LED

Lights up when encoder is powered up;
Turns off while SET buttons are pressed and turns on once the buttons are released.

RED: Diagnostics LED:

Measurement system degradation critical (encoder still working as intended)
Memory failure in EEPROM
Incorrect configuration data of the Opto-ASIC

Set buttons

The SET buttons which has the same function as SET input is optional.

Operation mode:

When the current value need to be set to 0, please press the SET button A and B at the same time, keep 1 second at least.

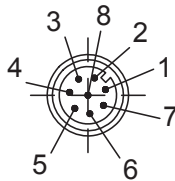


Terminal assignment

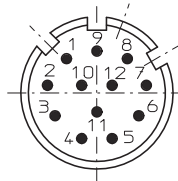
Signal	Ub	GND	+C	-C	+D	-D	SET	DIR	A	/A	B	/B	Z	/Z	Shield
Cable (Colour)	BN	WH	GN	YW	GY	PK	BU	RD	BK	VT	GY/PK	RD/BU	WH/GN	BN/GN	
M12 connector, 8-pin	2	1	3	4	5	6	7	8	-	-	-	-	-	-	
M23 connector, 12-pin	2	1	3	4	5	6	7	8	9	10	11	12	-	-	
M23connector, 16-pin ¹⁾	11	12	2	1	3	4	9	8	5	6	7	10	13	14	

1) Available when with incremental output A, B, Z

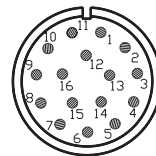
Top view of connector



M12 connector, 8-pin



M23 connector, 12-pin



M23connector, 16-pin

Order Code Shaft version

62-58SX-X X X X-X XX XX X
Type i a b c d e f g h

- a** Flange
 - 1 = Clamping flange, IP65
 - 2 = Clamping flange, IP67
 - 3 = Synchro flange, IP65
 - 4 = Synchro flange, IP67
- b** Shaft(ø x L)
 - 2 = ø 6 x 10 mm
 - 5 = ø10 x 20 mm
- c** Interface / Power supply*
 - 2 = SSI / 5 ... 30 VDC
 - 3 = SSI / 5 ... 30 VDC
RS422 1024 ppr
 - 4 = SSI / 5 ... 30 VDC
HTL 1024 ppr
 - 5 = SSI / 5 ... 30 VDC
RS422 2048 ppr
 - 6 = SSI / 5 ... 30 VDC
HTL 2048 ppr
 - 7 = SSI / 5 ... 30 VDC
RS422 1024 ppr (with incremental Z)
 - 8 = SSI / 5 ... 30 VDC
HTL 1024 ppr (with incremental Z)
 - 9 = SSI / 5 ... 30 VDC
RS422 2048 ppr (with incremental Z)
 - A = SSI / 5 ... 30 VDC
HTL 2048 ppr (with incremental Z)
- d** Type of connection
 - 1 = Axial cable, 1m
 - 2 = Radial cable, 1m
 - 6 = M23 connector, 12-pin, axial
 - 7 = M23 connector, 12-pin, radial
 - 3 = M12 connector, 8-pin, axial
 - 5 = M12 connector, 8-pin, radial
 - 8 = M23 connector, 16-pin, axial³⁾
 - 9 = M23 connector, 16-pin, radial³⁾
- e** Code
 - G = Gray
 - B = Binary
- f** Singleturn resolution
 - 12 = 12 bit
 - 13 = 13 bit
 - 16 = 16 bit
- g** Number of revolutions
 - 12 = 12 bit
 - 14 = 14 bit

Customized requirement on demand
- h** Function
 - 1 = No additional function
 - 2 = With reset button LED indicator
- i** Type
 - N = Industrial type
 - S = Stainless steel type

* Other resolution on demand.

3) Available for output circuit / Power supply 8, 9, A

Absolute Encoders — Multiturn

Standard Optical SSI

62-58SX/58HX

Order Code
hollow version

62-58HX-X X X X-G XX XX X
Type **i a b c d e f g h**

a Flange

8 = with D-wing spring coupling, IP65

b Hollow shaft

4 = \varnothing 8 mm
5 = \varnothing 10 mm
6 = \varnothing 12 mm
7 = \varnothing 14 mm (Blind)
8 = \varnothing 15 mm (Blind)
3 = \varnothing 6 mm (Blind)
9 = \varnothing 8 mm (Blind)
A = \varnothing 10 mm (Blind)
B = \varnothing 12 mm (Blind)

c Interface / Power supply *

2 = SSI / 5 ... 30 VDC
3 = SSI / 5 ... 30 VDC RS422 1024 ppr
4 = SSI / 5 ... 30 VDC HTL 1024 ppr
5 = SSI / 5 ... 30 VDC RS422 2048 ppr
6 = SSI / 5 ... 30 VDC HTL 2048 ppr
7 = SSI / 5 ... 30 VDC RS422 1024 ppr (with incremental Z)
8 = SSI / 5 ... 30 VDC HTL 1024 ppr (with incremental Z)
9 = SSI / 5 ... 30 VDC RS422 2048 ppr (with incremental Z)
A = SSI / 5 ... 30 VDC HTL 2048 ppr (with incremental Z)

d Type of connection

1 = Axial cable, 1m⁴⁾
2 = Radial cable, 1m
6 = M23 connector, 12-pin, axial⁴⁾
7 = M23 connector, 12-pin, radial⁴⁾
3 = M23 connector, 12-pin, radial⁴⁾
5 = M12 connector, 8-pin, radial
8 = M23 connector, 16-pin, axial^{3) 4)}
9 = M23 connector, 16-pin, radial³⁾

e Code

G = Gray
B = Binary

f Singleturn resolution

12 = 12 bit
13 = 13 bit
16 = 16 bit

g Number of revolutions

12 = 12 bit
14 = 14 bit
Customized requirement on demand

h Function

1 = No additional function
2 = With reset button and LED indicator

i Type

N = Industrial type
S = Stainless steel type
(Only the blind for shaft optional)

* Other resolution on demand.

3) Available for output circuit / Power supply 8, 9, A

4) Only available for blind hollow shaft

Accessories

Connection technology:

Connector, self-assembly

M12 self-assembly connector

E1-1208-0101

M23 self-assembly connector

E1-3212-0100

Connector, self-assembly

M12 female connector with coupling nut, 1 m PVC cable

E2-2110-0010

Mounting accessory for shaft version:

Coupling

Bellows coupling (aluminium alloy) \varnothing 25mm for shaft 6 mm

T1-1000-3025-0606

Bellows coupling (spring steel) \varnothing 25mm for shaft 10 mm

T1-2000-5025-1010

Mounting accessory for hollow shaft version:

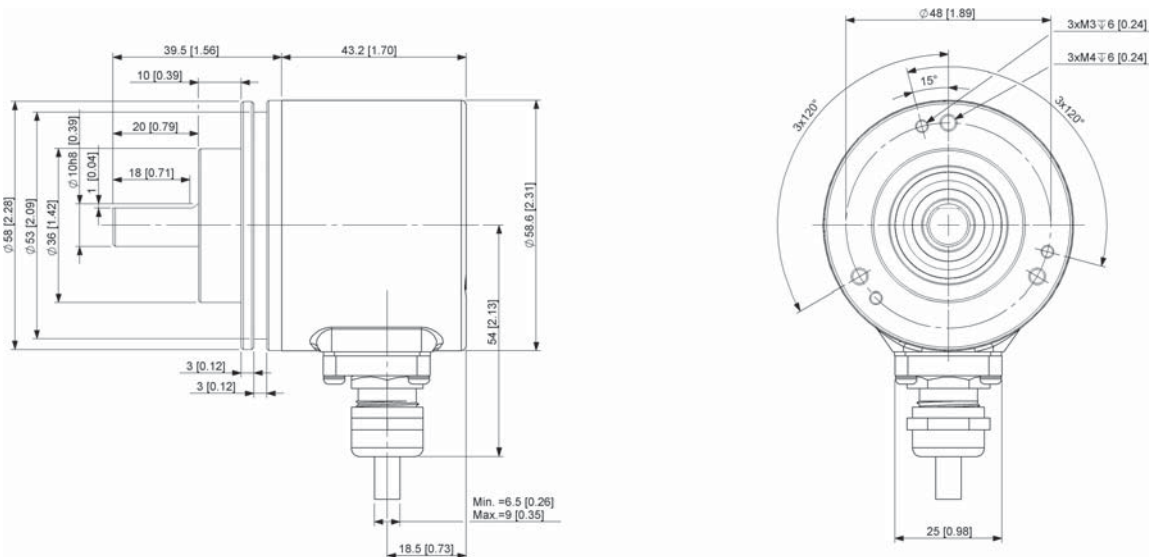
Stator coupling

Further accessories and exact order code please refer to the accessories section.

Dimensions

Shaft encoder:

Clamping flange, \varnothing 10 mm shaft, type of connection 2



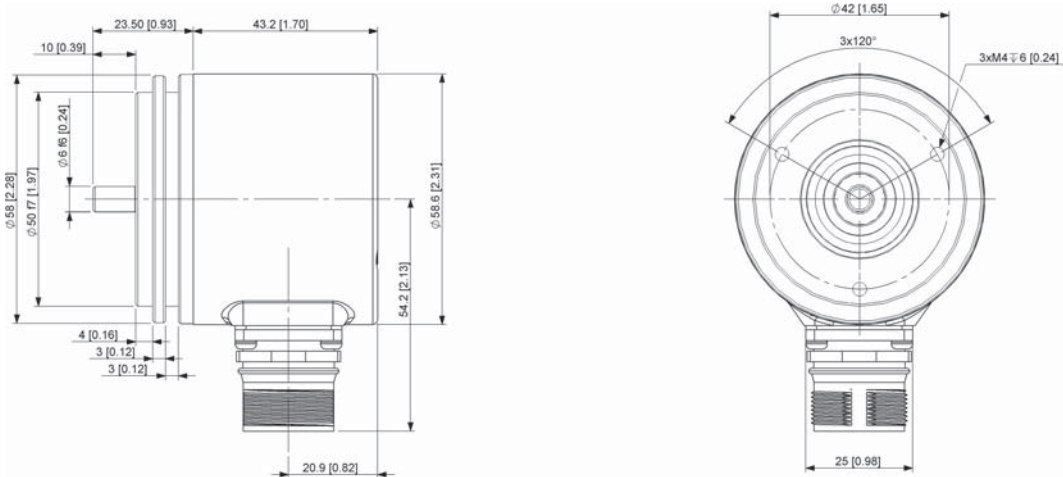
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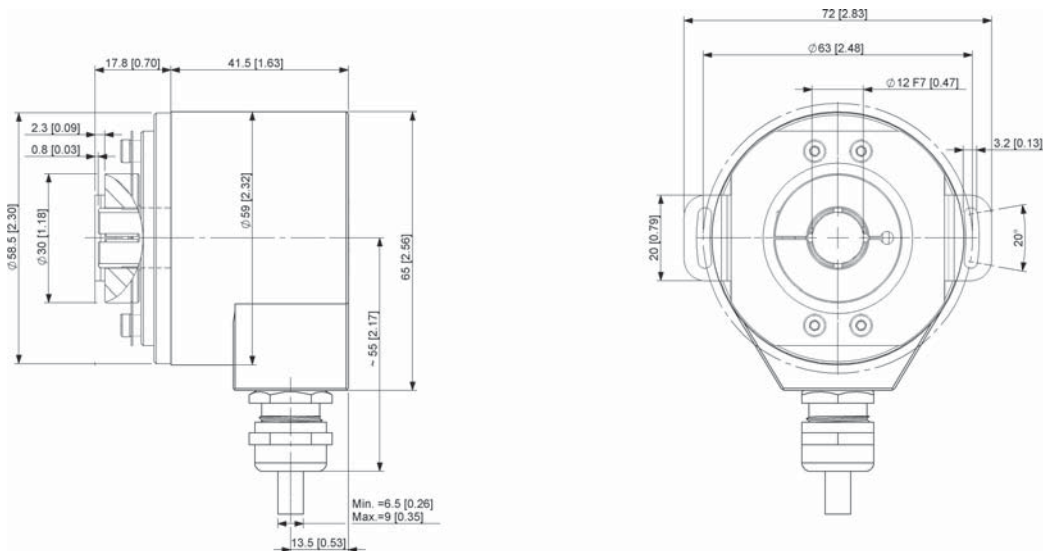
Shaft encoder:

Synchro flange, Ø 6 mm shaft, type of connection 7



Hollow encoder:

With D-wing spring coupling, type of connection 2



Blind hollow shaft depth 30 mm