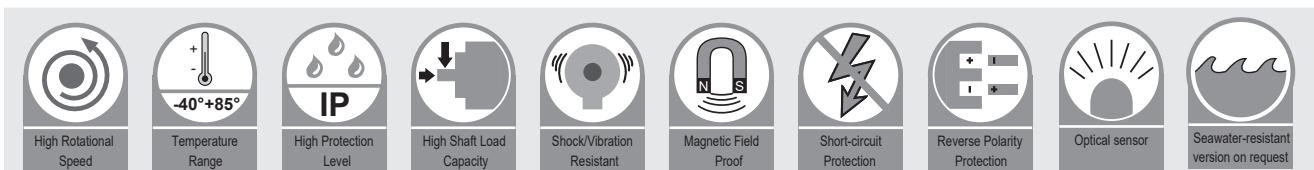# Absolute Encoders — Multiturn

Standard Optical SSI	62-58SX / 58HX

- 58 mm standard housing and flanges
- Singleturn resolution up to 16 bits
- With Preset and DIR function
- SSI interface, plus Incremental signal optional
- Wide temperature range -40°C ... +85°C
- Cathodic corrosion protection (>720 hrs salt sprayresistance)
- IP 67 optional

| High Rotational Speed | Temperature Range | High Protection Level | High Shaft Load Capacity | Shock/Vibration Resistant | Magnetic Field Proof | Short-circuit Protection | Reverse Polarity Protection | Optical sensor | Seawater-resistant version on request |

Highlight:

- Standard industrial housing and flanges
- Wide working temperature range
- SSI+Incremental optional

- Connection via cable, M12 or M23 connector
- With preset function, ease of maintenance and debugging
- Optical sensor technology, singleturn revolution up to 16 bits

Mechanical characteristics

Max. Speed	12000 rpm
Starting torque	≤ 3 Ncm (at 20°C)
Moment of intertia	≤ 30 gcm²
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
Working temperature range	-40°C ... 85°C
Materials	Shaft: Stainless steel (V2A)
	Flange: Aluminum 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	40/60 40/80 40/110
(10^8 revolutions with Fa/Fr)	150 100 55

Interface characteristics SSI

Power supply	5 ... 30 VDC(with HTL output, at least 10V)
Current consumption	50 mA
Interface	SSI
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
Function	Presettable[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

Optional incremental outputs （A/B/Z）

Output	RS-422	HTL
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	Max. 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

(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.

EX characteristics

Standards	EN 60079-0:2012+A11:2013
	EN 60079-7:2015
	EN 60079-31:2014
Type	Ⓔ II 3G Ex ec IIC T6…T4 Gc
	Ⓔ II 3D Ex tc IIIC T85°C, T100°C, T135°C Dc

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Standard Optical SSI	62-58SX / 58HX

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: Lights Up as Alarm Indicator:

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

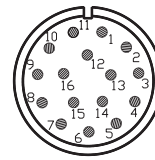| Signal	Ub	GND	+C	-C	+D	-D	SET	DIR	A	/A	B	/B	Z	/Z	Shield
Cable (Colour)	BN	WH	GN	YE	GY	PK	BU	RD	BK	VT	GY/PK	RD/BU	WH/GN	BN/GN	Shield
M12 connector, 8-pin	2	1	3	4	5	6	7	8	-	-	-	-	-	-	
M23 connector, 12-pin	2	1	3	4	5	6	7	8	9	10	11	12	-	-	
M23 connector, 16-pin	11	12	2	1	3	4	9	8	5	6	7	10	13	14	

Top view of connector
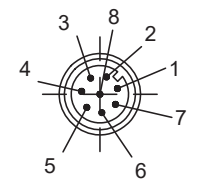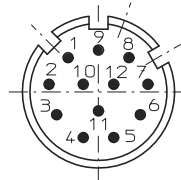
M12 connector, 8-pin   M23 connector, 12-pin   M23 connector, 16-pin

Order Code Shaft version	62-58SX-X X X X-X XX XX X-XX Type ⓘ ⓐ ⓑ ⓒ ⓓ ⓔ ⓕ ⓖ ⓗ ⓙ

ⓐ Flange
1 = Clamping flange，IP65
2 = Clamping flange，IP67
3 = Synchro flange，IP65
4 = Synchro flange，IP67

ⓑ Shaft(ø x L)
2 = ø 6 x 10 mm
5 = ø10 x 20 mm

ⓒ 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 channel Z)
8 = SSI / 5 ... 30 VDC
    HTL 1024 ppr (with channel Z)
9 = SSI / 5 ... 30 VDC
    RS422 2048 ppr (with channel Z)
A = SSI / 5 ... 30 VDC
    HTL 2048 ppr (with channel Z)

* Other incremental pulses on request.

ⓓ 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, axial [3]
9 = M23 connector, 16-pin, radial [3]

ⓔ Code
G = Gray
B = Binary

ⓕ Singleturn resolution
12 = 12 bit
13 = 13 bit
16 = 16 bit

ⓖ Number of revolutions
12 = 12 bit
14 = 14 bit
Customized requirement on demand

ⓗ Function
1 = No additional function
2 = With reset button
    LED indicator

ⓘ Type
N = Industrial type
S = Stainless steel type [4]

ⓙ Certification Type
Blank = CE/UL
EX = 2/22 Zone

3) Only for interface/power supply type 8, type 9 or type A

4) Only for cable or M23 connector

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Standard Optical SSI	62-58SX / 58HX

Order Code hollow version

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

a   Flange
8 = with D-wing spring coupling , IP65

b   Hollow shaft
4 = ø 8 mm
5 = ø10 mm
6 = ø12 mm
7 = ø14 mm (Blind)
8 = ø15 mm (Blind)
3 = ø 6 mm (Blind)
9 = ø 8 mm (Blind)
A = ø10 mm (Blind)
B = ø12 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, 1m[4]
2 = Radial cable, 1m
6 = M23 connector, 12-pin, axial[4]
7 = M23 connector, 12-pin, radial
3 = M23 connector, 12-pin, radial[4]
5 = M12 connector, 8-pin, radial
8 = M23 connector, 16-pin, axial[3][4]
9 = M23 connector, 16-pin, radial[3]

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 LEDindicator

i   Type
N = Industrial type
S = Stainless steel type [5]

j   Certification Type
Blank = CE/UL
EX = 2/22 Zone

3) Only for interface/power supply type 8, type 9 or type A
4) Only for blind hollow shaft encoder
5) Only for cable or M23 connector

Accessories

Connection technology:

Connector, self-assembly	M12, 8-pin self-assembly	E1-1208-0101
	M23, 12-pin self-assembly	E1-3212-0100

Mounting accessory for shaft version:

Coupling	Bellows coupling (aluminium alloy) Ø 25mm for shaft 6 mm	T1-6000-3025-0606
	Bellows coupling (spring steel) Ø 25mm for shaft 10 mm	T1-2000-5025-1010

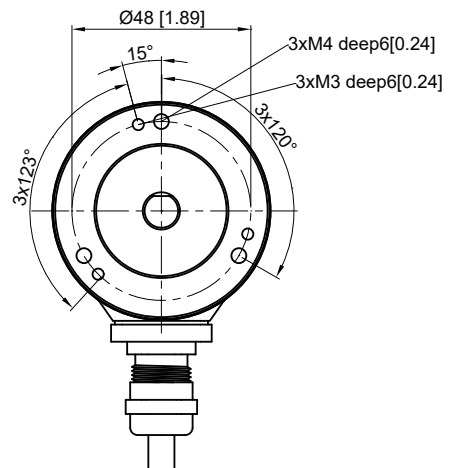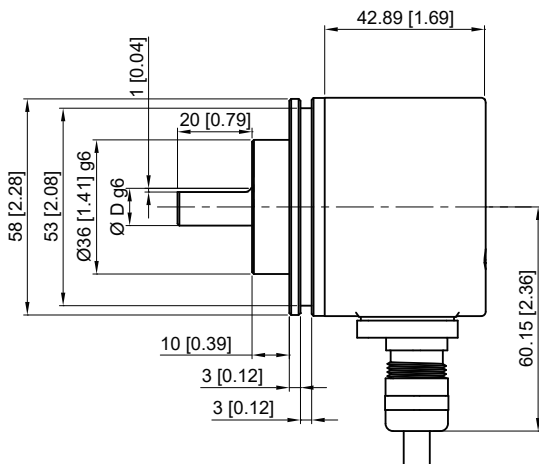Mounting accessory for hollow shaft version:

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

Dimensions

Shaft encoder:
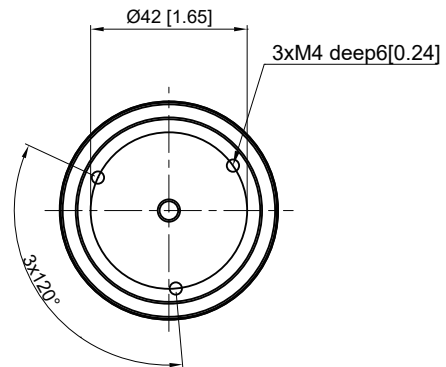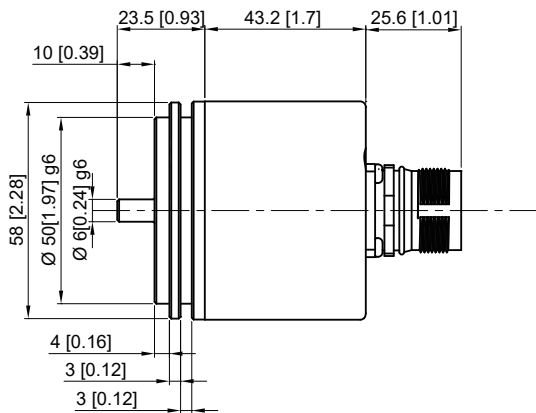type of flange1 or 2 , type of shaft 5, type of connection 7
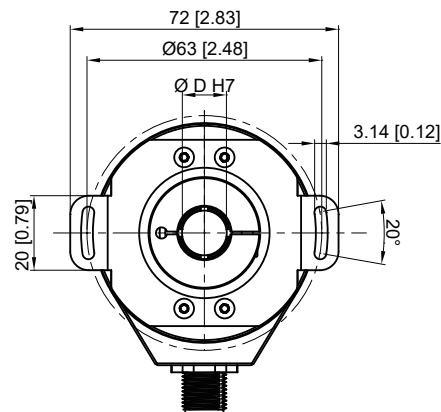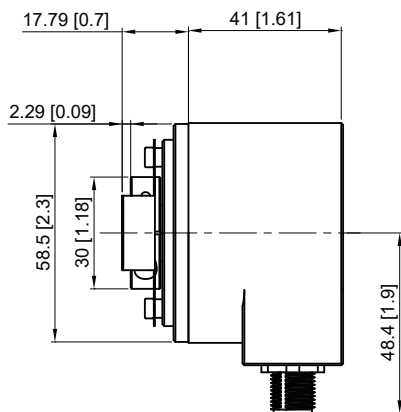
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type of flange 3 or 4 , type of shaft 2, type of connection 6 or 8
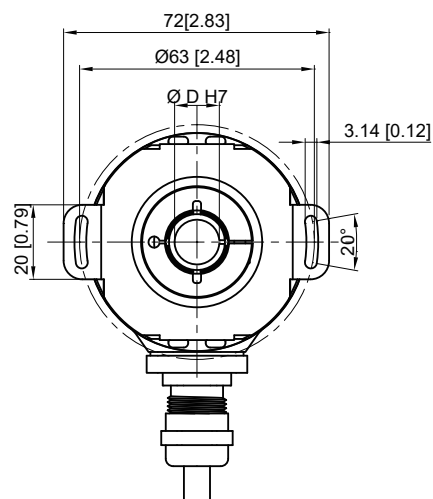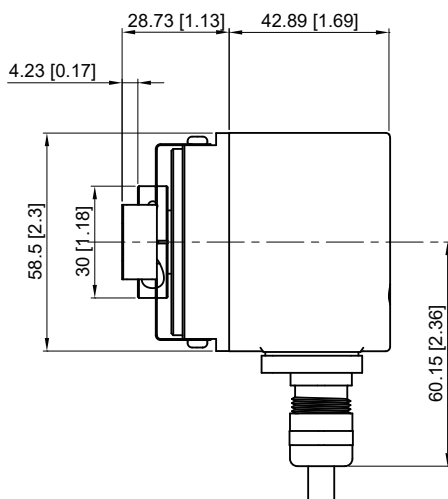
Hollow encoder:

type of flange 8 or 9 , hollow shaft, type of connection 5

type of flange 8 or 9 , Blind hollow shaft, type of connection 2

Blind hollow shaft depth 30 mm

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Other mounting types and accessories on your request,
please send us an email: info@heinlanz.com

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