

# KUEBLER - ABSOLUTE-CODED ANGULAR TRANSMITTER SENDIX 5863/5883, OPTICAL, SSI, Ø58 MM SERIE 5863

- Housing diameter Ø58 mm
- SSI / BiSS
- Safety-Lock™
- High enclosure class



## PRODUCT DESCRIPTION

Sendix 5863/5883 is a multivariate sensor with SSI / BiSS interface in robust design. Thanks to the construction of Safety-Lock™ as well as the fully cast housing, the sensor is able to handle even the more demanding applications where there are high demands on the sensor. The wide temperature range combined with the high enclosure class allows the sensor to be used outdoors as well as applications where large temperature changes occur. Sendix 5863/5883 has LED indication which facilitates diagnosis of the sensor and a set button that facilitates calibration.

Please refer to the images below for ordering information.

| Order code  | 8.5863 . XXXXX . XX2X |  |   |   |   |   |   |   |   |
|---|-----------------------|--|---|---|---|---|---|---|---|
| Shaft version   | Type                  | a  | b | c | d | e   | f | g                                       | h |
| <b>a</b> Flange                                       |                       | <b>d</b> Type of connection  |   |   |   | <b>e</b> Code   |   | <b>g</b> Inputs / outputs <sup>5)</sup> |   |
| 1 = clamping flange, IP65 ø 58 mm [2.28"]             |                       | 1 = axial cable, 1 m [3.28'] PVC   |   |   |   | B = SSI, binary   |   | 2 = SET, DIR input                      |   |
| 3 = clamping flange, IP67 ø 58 mm [2.28"]             |                       | A = axial cable, special length PVC *)                                   |   |   |   | C = BiSS, binary  |   | additional                              |   |
| 2 = synchro flange, IP65 ø 58 mm [2.28"]              |                       | 2 = radial cable, 1 m [3.28'] PVC  |   |   |   | G = SSI, gray   |   | status output                           |   |
| 4 = synchro flange, IP67 ø 58 mm [2.28"]              |                       | B = radial cable, special length PVC *)                                  |   |   |   |   |   |   |   |
| 5 = square flange, IP65 □ 63.5 mm [2.5"]              |                       | 3 = axial M23 connector, 12-pin  |   |   |   | <b>f</b> Resolution <sup>5)</sup>   |   | <b>h</b> Options (service)              |   |
| 7 = square flange, IP67 □ 63.5 mm [2.5"]              |                       | 4 = radial M23 connector, 12-pin   |   |   |   | A = 10 bit ST + 12 bit MT   |   | 1 = no option                           |   |
| 6 = servo flange, IP65 ø 63.5 mm [2.5"] <sup>1)</sup> |                       | 5 = axial M12 connector, 8-pin <sup>4)</sup>                             |   |   |   | 1 = 11 bit ST + 12 bit MT   |   | 2 = status LED                          |   |
| 8 = servo flange, IP67 ø 63.5 mm [2.5"] <sup>1)</sup> |                       | 6 = radial M12 connector, 8-pin <sup>4)</sup>                            |   |   |   | 2 = 12 bit ST + 12 bit MT   |   | 3 = SET button and                      |   |
|   |                       | *) Available special lengths (connection types A, B):                    |   |   |   | 3 = 13 bit ST + 12 bit MT   |   | status LED                              |   |
|   |                       | 2, 3, 5, 8, 10, 15 m [5.56, 9.84, 16.40, 26.25, 32.80, 49.21']           |   |   |   | 4 = 14 bit ST + 12 bit MT   |   |   |   |
|   |                       | order code expansion .XXXX = length in dm                                |   |   |   | 5 = 17 bit ST + 12 bit MT   |   |   |   |
|   |                       | ex.: 8.5863.112A.G323.0030 (for cable length 3 m)                        |   |   |   |   |   |   |   |
| <b>b</b> Shaft (ø x L), with flat                     |                       | <b>c</b> Interface / power supply  |   |   |   | <b>Optional on request</b>  |   |   |   |
| 1 = 6 x 10 mm [0.24 x 0.39"] <sup>2)</sup>            |                       | 1 = SSI, BiSS / 5 V DC   |   |   |   | - Ex 2/22 <sup>6)</sup>   |   |   |   |
| 2 = 10 x 20 mm [0.39 x 0.79"] <sup>3)</sup>           |                       | 2 = SSI, BiSS / 10 ... 30 V DC   |   |   |   | - other singleturn resolutions  |   |   |   |
| 3 = 1/4" x 7/8"                                       |                       | 3 = SSI, BiSS + 2048 ppr. SinCos / 5 V DC                                |   |   |   | - surface protection salt spray tested  |   |   |   |
| 4 = 3/8" x 7/8"                                       |                       | 4 = SSI, BiSS + 2048 ppr. SinCos / 10 ... 30 V DC                        |   |   |   | - seawater resistant (stainless steel V4A)  |   |   |   |
|   |                       | 5 = SSI, BiSS / 5 V DC, with sensor output                               |   |   |   | <b>Salt spray tested / stainless steel V4A as standard types (deliverable as from 1 unit)</b> |   |   |   |
|   |                       | 6 = SSI, BiSS + 2048 ppr. SinCos / 5 V DC, with sensor output            |   |   |   | salt spray tested:  |   |   |   |
|   |                       | 7 = SSI, BiSS + 2048 ppr. RS422 (TTL-comp.) / 5 V DC                     |   |   |   | 8.5863.32X6.XX22-C  |   |   |   |
|   |                       | 8 = SSI, BiSS + 2048 ppr. RS422 (TTL-comp.) / 10 ... 30 V DC             |   |   |   | <b>V4A</b>  |   |   |   |
|   |                       | 9 = SSI, BiSS + 2048 ppr. RS422 (TTL-comp.) / 5 V DC, with sensor output |   |   |   | 1.4404  |   |   |   |
|   |                       |  |   |   |   | stainless steel V4A:  |   |   |   |
|   |                       |  |   |   |   | 8.5863.32X6.XX22-V4A  |   |   |   |

**Order code**  
**Hollow shaft**

**8.5883**  
Type

. **XXXXX** . **XX2X**  
a b c d e f g h

**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"]

**b Through hollow shaft**

- 3 = ø 10 mm [0.39"]
- 4 = ø 12 mm [0.47"]**
- 5 = ø 14 mm [0.55"]
- 8 = ø 3/8"
- 9 = ø 1/2"

*Blind hollow shaft*

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

- 6 = ø 15 mm [0.59"]

**c Interface / power supply**

- 1 = SSI, BiSS / 5 V DC
- 2 = SSI, BiSS / 10 ... 30 V DC**
- 3 = SSI, BiSS + 2048 ppr. SinCos / 5 V DC
- 4 = SSI, BiSS + 2048 ppr. SinCos / 10 ... 30 V DC
- 5 = SSI, BiSS / 5 V DC, with sensor output
- 6 = SSI, BiSS + 2048 ppr. SinCos / 5 V DC, with sensor output
- 7 = SSI, BiSS + 2048 ppr. RS422 (TTL-comp.) / 5 V DC
- 8 = SSI, BiSS + 2048 ppr. RS422 (TTL-comp.) / 10 ... 30 V DC
- 9 = SSI, BiSS + 2048 ppr. RS422 (TTL-comp.) / 5 V DC, with sensor output

**d Type of connection**

- 2 = radial cable, 1 m [3.28"] PVC
- B = radial cable, special length PVC \*)
- E = tangential cable, 1 m [3.28"] PVC**
- F = tangential cable, special length PVC \*)
- 4 = radial M23 connector, 12-pin**
- 6 = radial M12 connector, 8-pin <sup>2)</sup>

\*) Available special lengths (connection types B, F):  
2, 3, 5, 8, 10, 15 m [5.56, 9.84, 16.40, 26.25, 32.80, 49.21']  
order code expansion .XXXX = length in dm  
ex.: 8.5883.542B.G323.0030 (for cable length 3 m)

**e Code**

- B = SSI, binary
- C = BiSS, binary
- G = SSI, gray**

**f Resolution <sup>1)</sup>**

- A = 10 bit ST + 12 bit MT
- 1 = 11 bit ST + 12 bit MT
- 2 = 12 bit ST + 12 bit MT
- 3 = 13 bit ST + 12 bit MT**
- 4 = 14 bit ST + 12 bit MT
- 7 = 17 bit ST + 12 bit MT

**g Inputs / outputs <sup>1)</sup>**

- 2 = SET, DIR input**  
additional  
status output

**h Options (service)**


- 1 = no option
- 2 = status LED
- 3 = SET button and  
status LED**

*Optional on request*

- Ex 2/22 (not for type of connection E, F) <sup>3)</sup>
- other singleturn resolutions
- surface protection salt spray tested
- seawater resistant (stainless steel V4A)

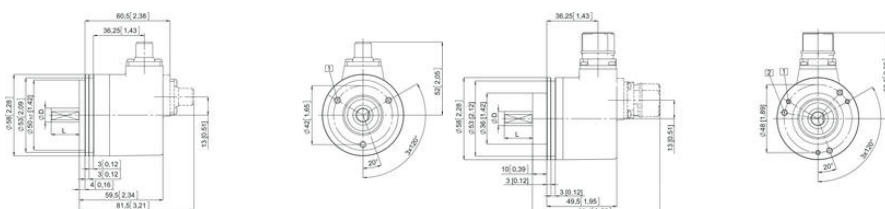
*Salt spray tested / stainless steel V4A as standard types (deliverable as from 1 unit)*

 salt spray tested:  
8.5883.24X6.XX22-C  
8.5883.25X6.XX22-C

 stainless steel V4A:  
8.5883.24X6.XX22-V4A

## TECHNICAL DATA

|                             |                         |
|-----------------------------|-------------------------|
| Connection                  | Cable, M12, M23 contact |
| Housing diameter            | 58 mm                   |
| IP class                    | IP65, IP67              |
| Mounting                    | Shoulder                |
| Output                      | SSI                     |
| Resolution MT               | Max. 12 bit             |
| Sensor type                 | Absolute                |
| Shaft diameter max          | 10 mm                   |
| Shaft diameter min          | 6 mm                    |
| Supply voltage dc max       | 30 V DC                 |
| Supply voltage dc min       | 5 V DC                  |
| Temperature operational max | 90 °C                   |
| Temperature operational min | -40 °C                  |
| Version                     | Multiturn               |



| Interface | Type of connector | Features   | Cable isolate unused wires individually before initial start-up                             |
|-----------|-------------------|--|---|
| 1,2       | 1, 2, A, B, E, F  | SET, DIR, Status<br>Signal:<br>Cable colour                      | 0 V +V C+ C- D+ D- D+ D- SET DIR Stat N/C N/C H<br>WH BN GN YE GF PK BU RD BK - - - (short) |
| Interface | Type of connector | Features   | M23 connector   |
| 1,2       | 3,4               | SET, DIR, Status<br>Signal:<br>Pin                               | 0 V +V C+ C- D+ D- SET DIR Stat N/C N/C H<br>1 2 3 4 5 6 7 8 9 10 11 12 PH                  |
| Interface | Type of connector | Features   | Cable isolate unused wires individually before initial start-up                             |
| 5         | 1, 2, A, B, E, F  | SET, DIR, Status<br>Sensor output<br>Signal:<br>Cable colour     | 0 V +V C+ C- D+ D- D+ D- SET DIR Stat N/C N/C H<br>WH BN GN YE GF PK BU RD BK - - - (short) |
| Interface | Type of connector | Features   | M23 connector   |
| 5         | 3,4               | SET, DIR, Status<br>Sensor output<br>Signal:<br>Pin              | 0 V +V C+ C- D+ D- SET DIR Stat N/C N/C H<br>1 2 3 4 5 6 7 8 9 10 11 12 PH                  |
| Interface | Type of connector | Features   | Cable isolate unused wires individually before initial start-up                             |
| 3,4,7,8   | 1, 2, A, B, E, F  | SET, DIR, SinCos<br>or inc. RS422<br>Signal:<br>Cable colour     | 0 V +V C+ C- D+ D- D+ D- DIR A X B B H<br>WH BN GN YE GF PK BU RD BK VT G1 PH RD BU (short) |
| Interface | Type of connector | Features   | M23 connector   |
| 3,4,7,8   | 3,4               | SET, DIR, SinCos<br>or inc. RS422<br>Signal:<br>Pin              | 0 V +V C+ C- D+ D- SET DIR A X B B H<br>1 2 3 4 5 6 7 8 9 10 11 12 PH                       |
| Interface | Type of connector | Features   | Cable isolate unused wires individually before initial start-up                             |
| 6         | 1, 2, A, B, E, F  | SinCos a. inc. RS422<br>Sensor output<br>Signal:<br>Cable colour | 0 V +V C+ C- D+ D- D+ D- DIR A X B B H<br>WH BN GN YE GF PK BU RD BK VT G1 PH RD BU (short) |
| Interface | Type of connector | Features   | M23 connector   |
| 6         | 3,4               | SinCos a. inc. RS422<br>Sensor output<br>Signal:<br>Pin          | 0 V +V C+ C- D+ D- D+ D- DIR A X B B H<br>1 2 3 4 5 6 7 8 9 10 11 12 PH                     |
| Interface | Type of connector | Features   | M12 connector   |
| 1,2       | 5,6               | SET, DIR<br>Signal:<br>Pin                                       | 0 V +V C+ C- D+ D- SET DIR H<br>1 2 3 4 5 6 7 8 PH  |

+V Encoder power supply +V DC  
 0V Encoder power supply ground GND 0V  
 0 Vmax / Vmin Using the sensor outputs of the encodes the voltage present can be measured and if necessary increased accordingly.  
 C+ C- Clock signal  
 D+ D- Data signal  
 A, B Incremental output channel A (cosine)  
 B, B Incremental output channel B (sine)  
 SET Set input. The current position becomes defined as position zero.  
 DIR Direction input. If this input is active, output values are covered backwards (decrease) when the shaft is turning clockwise.  
 Stat Status output  
 PH Plug connector housing (short)

