

KUEBLER - ABSOLUTE-CODED ANGULAR TRANSMITTER SENDIX F5863 / F5883, OPTICAL, SSI, Ø58 MM SERIE F5883

- Housing diameter Ø58 mm
- SSI-Interface
- Total resolution 41 bits
- 100% insensitive to magnetic fields



Product description

Sendix F5863 / F5883 is a series of robust absolute encoded SSI axis sensors for demanding environments. Thanks to its rugged construction with Safety-Lock™ and the fully cast housing, the sensor can also handle the more demanding applications where the requirements are high. 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. Perfect for applications requiring high resolution.

The LED indication facilitates diagnostics of the sensor in place and saves time when troubleshooting.

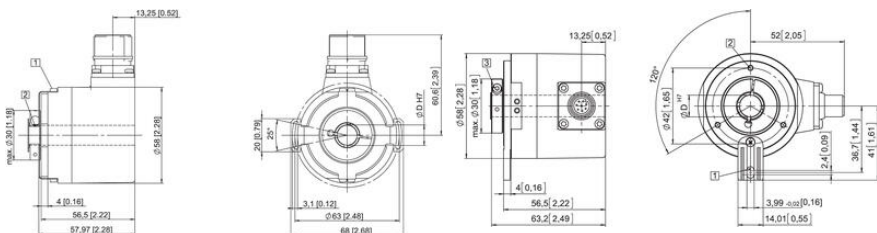
Please refer to the images below for ordering information.

| Order code | | 8.F5863 | | .XXXXX.XXXXX | |
|---|--|--|--|--|--|
| Shaft version | | Type | | a b c d e f g h | |
| a Flange | | c Interface / power supply | | e Code | |
| 1 = clamping flange, IP65 ø 58 mm [2.28"] | | 1 = SSI, BiSS / 5 V DC | | B = SSI, binary | |
| 3 = clamping flange, IP67 ø 58 mm [2.28"] | | 2 = SSI, BiSS / 10 ... 30 V DC | | C = BiSS, binary | |
| 2 = synchro flange, IP65 ø 58 mm [2.28"] | | 3 = SSI, BiSS + 2048 ppr. SinCos / 5 V DC | | G = SSI, gray | |
| 4 = synchro flange, IP67 ø 58 mm [2.28"] | | 4 = SSI, BiSS + 2048 ppr. SinCos / 10 ... 30 V DC | | i Resolution (singleturn) ⁴⁾ | |
| b Shaft (ø x L), with flat | | 5 = SSI, BiSS / 5 V DC, with sensor output | | B = 9 bit ST | |
| 1 = 6 x 10 mm [0.24 x 0.39"] ¹⁾ | | 6 = SSI, BiSS + 2048 ppr. SinCos / 5 V DC, with sensor output | | A = 10 bit ST | |
| 2 = 10 x 20 mm [0.39 x 0.79"] ²⁾ | | 7 = SSI, BiSS + 2048 ppr. RS422 (TTL-comp.) / 5 V DC | | 1 = 11 bit ST | |
| 3 = 1/4" x 7/8" | | 8 = SSI, BiSS + 2048 ppr. RS422 (TTL-comp.) / 10 ... 30 V DC | | 2 = 12 bit ST | |
| 4 = 3/8" x 7/8" | | d Type of connection | | 3 = 13 bit ST | |
| | | 1 = axial cable, 1 m [3.28'] PVC | | 4 = 14 bit ST | |
| | | A = axial cable, special length PVC *) | | 7 = 17 bit ST | |
| | | 2 = radial cable, 1 m [3.28'] PVC | | h Options (service) | |
| | | B = radial cable, special length PVC *) | | 1 = no option | |
| | | 3 = axial M23 connector, 12-pin | | 2 = status LED | |
| | | 4 = radial M23 connector, 12-pin | | 3 = SET button and status LED | |
| | | 5 = axial M12 connector, 8-pin ³⁾ | | | |
| | | 6 = radial M12 connector, 8-pin ³⁾ | | | |
| | | *) Available special lengths (connection types A, B): | | | |
| | | 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.F5863.122A.G323.0030 (for cable length 3 m) | | | |
| | | | | Optional on request | |
| | | | | - Ex 2/22 ⁵⁾ | |
| | | | | - surface protection salt spray tested | |
| | | | | - other singleturn resolutions | |

| Order code | | 8.F5883 . XXXX . XXXX | | | | | | | |
|--|--|--|---|---|---|---|---|---|---|
| Hollow shaft | | Type | a | b | c | d | e | f | g |
| a Flange | | c Interface / power supply | | | | | | | |
| 1 = with spring element, long, IP65 | | 1 = SSI, BiSS / 5 V DC | | | | | | | |
| 2 = with spring element, long, IP67 | | 2 = SSI, BiSS / 10 ... 30 V DC | | | | | | | |
| 3 = with stator coupling, IP65, ø 65 mm [2.56"] | | 3 = SSI, BiSS + 2048 ppr. SinCos / 5 V DC | | | | | | | |
| 4 = with stator coupling, IP67, ø 65 mm [2.56"] | | 4 = SSI, BiSS + 2048 ppr. SinCos / 10 ... 30 V DC | | | | | | | |
| 5 = with stator coupling, IP65, ø 63 mm [2.48"] | | 5 = SSI, BiSS / 5 V DC, with sensor output | | | | | | | |
| 6 = with stator coupling, IP67, ø 63 mm [2.48"] | | 6 = SSI, BiSS + 2048 ppr. SinCos / 5 V DC, with sensor output | | | | | | | |
| b Through hollow shaft | | d Type of connection | | | | | | | |
| 3 = ø 10 mm [0.39"] | | 2 = radial cable, 1 m [3.28'] PVC | | | | | | | |
| 4 = ø 12 mm [0.47"] | | B = radial cable, special length PVC *) | | | | | | | |
| 5 = ø 14 mm [0.55"] | | E = tangential cable, 1 m [3.28'] PVC | | | | | | | |
| 6 = ø 15 mm [0.59"] | | F = tangential cable, special length PVC *) | | | | | | | |
| 8 = ø 3/8" | | 4 = radial M23 connector, 12-pin | | | | | | | |
| 9 = ø 1/2" | | 6 = radial M12 connector, 8-pin ²⁾ | | | | | | | |
| | | *) 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.F5883.542B.G323.0030 (for cable length 3 m) | | | | | | | |
| e Code | | g Resolution (multiturn) ¹⁾ | | | | | | | |
| B = SSI, binary | | 2 = 12 bit MT | | | | | | | |
| C = BiSS, binary | | 6 = 16 bit MT | | | | | | | |
| G = SSI, gray | | 4 = 24 bit MT | | | | | | | |
| f Resolution (singleturn) ¹⁾ | | h Options (service) | | | | | | | |
| B = 9 bit ST | | 1 = no option | | | | | | | |
| A = 10 bit ST | | 2 = status LED | | | | | | | |
| 1 = 11 bit ST | | 3 = SET button and status LED | | | | | | | |
| 2 = 12 bit ST | | | | | | | | | |
| 3 = 13 bit ST | | | | | | | | | |
| 4 = 14 bit ST | | | | | | | | | |
| 7 = 17 bit ST | | | | | | | | | |
| | | Optional on request | | | | | | | |
| | | - Ex 2/22 (not for type of connection E, F) ³⁾ | | | | | | | |
| | | - surface protection salt spray tested | | | | | | | |
| | | - other singleturn resolutions | | | | | | | |

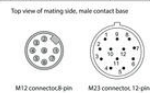
Specifications

| | |
|------------------------|-------------------------------------|
| Connection Thread | Cable, M12, M23 contact |
| Housing diameter | 58 |
| IP Class | IP65, IP67 |
| Mounting | Hollow shaft |
| Output | SSI |
| Resolution Envarv | SSI: 10-17 bit, BiSS: 10-17 |
| Resolution More Yards | SSI: max. 24 bit, BiSS: max. 24 bit |
| Sensor type | Absolute |
| Shaft Diameter max | 15 |
| Shaft Diameter min | 10 |
| Supply Voltage DC Max | 30 |
| Supply Voltage DC Min | 5 |
| Temperature range from | -40 |
| Temperature range to | 85 |
| 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 | Signal: 0 V +V - C+ - C- D+ D- SET DIR Stat N/C N/C H Cable colour: WH BN GN YE GF PK BU RD BK - - - shield |
| Interface | Type of connector | Features | M23 connector |
| 1, 2 | 3, 4 | SET, DIR, Status | Signal: 0 V +V - C+ - C- D+ D- SET DIR Stat N/C N/C H Pin: 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 sensor output | Signal: 0 V +V - C+ - C- D+ D- SET DIR Stat N/C N/C (Stam) (Stam) H Cable colour: WH BN GN YE GF PK BU RD BK - - - shield |
| Interface | Type of connector | Features | M23 connector |
| 5 | 3, 4 | SET, DIR, Status sensor output | Signal: 0 V +V - C+ - C- D+ D- SET DIR Stat N/C N/C (Stam) (Stam) H Pin: 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 or inc. RS422 | Signal: 0 V +V - C+ - C- D+ D- SET DIR A X B B (Stam) (Stam) H Cable colour: WH BN GN YE GF PK BU RD BK VT GF PK RD-BU shield |
| Interface | Type of connector | Features | M23 connector |
| 3, 4, 7, 8 | 3, 4 | SET, DIR, SinCos or inc. RS422 | Signal: 0 V +V - C+ - C- D+ D- SET DIR A X B B (Stam) (Stam) H Pin: 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 or inc. RS422 sensor output | Signal: 0 V +V - C+ - C- D+ D- A X B B (Stam) (Stam) H Cable colour: WH BN GN YE GF PK BU RD BK VT GF PK RD-BU shield |
| Interface | Type of connector | Features | M23 connector |
| 6 | 3, 4 | SinCos or inc. RS422 sensor output | Signal: 0 V +V - C+ - C- D+ D- A X B B (Stam) (Stam) H Pin: 1 2 3 4 5 6 7 8 9 10 11 12 PH |
| Interface | Type of connector | Features | M17 connector |
| 1, 2 | 5, 6 | SET, DIR | Signal: 0 V +V - C+ - C- D+ D- SET DIR H Pin: 1 2 3 4 5 6 7 8 PH |

+V Encoder power supply +V DC
0 V Encoder power supply ground GND (0 V)
0 Vaux / +Vaux Using the sensor outputs of the encoders, the voltage present can be measured and if necessary increased accordingly.
C+ C- Click signal
D+ D- Data signal
A, B Incremental output channel A (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 counted backwards (decreased) when the shaft is turning clockwise.
Stat Status output
PH Plug connector housing (shield)



| 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 | Signal: 0 V +V - C+ - C- D+ D- SET DIR Stat N/C N/C H Cable colour: WH BN GN YE GF PK BU RD BK - - - shield |
| Interface | Type of connector | Features | M23 connector |
| 1, 2 | 3, 4 | SET, DIR, Status | Signal: 0 V +V - C+ - C- D+ D- SET DIR Stat N/C N/C H Pin: 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 sensor output | Signal: 0 V +V - C+ - C- D+ D- SET DIR Stat N/C N/C (Stam) (Stam) H Cable colour: WH BN GN YE GF PK BU RD BK - - - shield |
| Interface | Type of connector | Features | M23 connector |
| 5 | 3, 4 | SET, DIR, Status sensor output | Signal: 0 V +V - C+ - C- D+ D- SET DIR Stat N/C N/C (Stam) (Stam) H Pin: 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 or inc. RS422 | Signal: 0 V +V - C+ - C- D+ D- SET DIR A X B B (Stam) (Stam) H Cable colour: WH BN GN YE GF PK BU RD BK VT GF PK RD-BU shield |
| Interface | Type of connector | Features | M23 connector |
| 3, 4, 7, 8 | 3, 4 | SET, DIR, SinCos or inc. RS422 | Signal: 0 V +V - C+ - C- D+ D- SET DIR A X B B (Stam) (Stam) H Pin: 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 or inc. RS422 sensor output | Signal: 0 V +V - C+ - C- D+ D- A X B B (Stam) (Stam) H Cable colour: WH BN GN YE GF PK BU RD BK VT GF PK RD-BU shield |
| Interface | Type of connector | Features | M23 connector |
| 6 | 3, 4 | SinCos or inc. RS422 sensor output | Signal: 0 V +V - C+ - C- D+ D- A X B B (Stam) (Stam) H Pin: 1 2 3 4 5 6 7 8 9 10 11 12 PH |
| Interface | Type of connector | Features | M17 connector |
| 1, 2 | 5, 6 | SET, DIR | Signal: 0 V +V - C+ - C- D+ D- SET DIR H Pin: 1 2 3 4 5 6 7 8 PH |

+V Encoder power supply +V DC
0 V Encoder power supply ground GND (0 V)
0 Vaux / +Vaux Using the sensor outputs of the encoders, the voltage present can be measured and if necessary increased accordingly.
C+ C- Click signal
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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 counted backwards (decreased) when the shaft is turning clockwise.
Stat Status output
PH Plug connector housing (shield)

