

# KUEBLER - ABSOLUTE-CODED ANGULAR TRANSMITTER SENDIX 5853/5873, OPTICAL, SSI, Ø58 MM SERIE 5853

- Housing diameter Ø58 mm
- SSI-Interface
- High shock resistance
- High degree of enclosure



## PRODUCT DESCRIPTION

Sendix 5853/5873 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. 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	8.5853	.XXXX	.XX2X	
Shaft version	Type	a b c d	e f g h	
<b>a Flange</b>	<b>1 = clamping flange, IP65</b> ø 58 mm [2.28"] 3 = clamping flange, IP67 ø 58 mm [2.28"] <b>2 = synchro flange, IP65</b> ø 58 mm [2.28"] 4 = synchro flange, IP67 ø 58 mm [2.28"] 5 = square flange, IP65 □ 63.5 mm [2.5"] 7 = square flange, IP67 □ 63.5 mm [2.5"]	<b>c Interface / power supply</b> 1 = SSI, BiSS / 5 V DC <b>2 = SSI, BiSS / 10 ... 30 V DC</b> 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	<b>e Code</b> B = SSI, binary C = BiSS, binary <b>G = SSI, gray</b>	<b>g Inputs / outputs<sup>4)</sup></b> <b>2 = SET, DIR input</b> additional status output
<b>b Shaft (ø x L), with flat</b> <b>1 = 6 x 10 mm [0.24 x 0.39"]<sup>1)</sup></b> <b>2 = 10 x 20 mm [0.39 x 0.79"]<sup>2)</sup></b> 3 = 1/4" x 7/8" 4 = 3/8" x 7/8"	<b>d Type of connection</b> 1 = axial cable, 1 m [3.28'] PVC A = axial cable, special length PVC *) <b>2 = radial cable, 1 m [3.28'] PVC</b> B = radial cable, special length PVC *) 3 = axial M23 connector, 12-pin <b>4 = radial M23 connector, 12-pin</b> 5 = axial M12 connector, 8-pin <sup>3)</sup> 6 = radial M12 connector, 8-pin <sup>3)</sup>	<b>f Resolution<sup>4)</sup></b> A = 10 bit 1 = 11 bit 2 = 12 bit <b>3 = 13 bit</b> 4 = 14 bit 7 = 17 bit C = 21 bit <sup>5)</sup>	<b>h Options (service)</b> 1 = no option 2 = status LED <b>3 = SET button and status LED</b>  Optional on request - Ex 2/22 <sup>6)</sup> - surface protection salt spray tested - other resolutions	
*) 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.: 8.5853.112A.G323.0030 (for cable length 3 m)				

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

**8.5873**  
Type

**. X X X X . X X 2 X**  
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  $\varnothing$  65 mm [2.56"]
- 4 = with stator coupling, IP67  $\varnothing$  65 mm [2.56"]
- 5 = with stator coupling, IP65  $\varnothing$  63 mm [2.48"]**
- 6 = with stator coupling, IP67  $\varnothing$  63 mm [2.48"]
- E = with stator coupling, IP65 mounting without screws <sup>1)</sup>
- F = with stator coupling, IP67 mounting without screws <sup>1)</sup>
- G = with stator coupling, IP65  $\varnothing$  72 mm [2.83"] <sup>1)</sup>
- H = with expanding coupling, IP65  $\varnothing$  65 mm [2.56"] <sup>1)</sup>

**b Through hollow shaft**

- 3 =  $\varnothing$  10 mm [0.39"]
- 4 =  $\varnothing$  12 mm [0.47"]**
- 5 =  $\varnothing$  14 mm [0.55"]
- 6 =  $\varnothing$  15 mm [0.59"]
- 8 =  $\varnothing$  3/8"
- 9 =  $\varnothing$  1/2"

*Tapered shaft*

- K =  $\varnothing$  10 mm [0.39"]

**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.: 8.5873.542B.G323.0030 (for cable length 3 m)

**e Code**

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

**f Resolution <sup>3)</sup>**

- A = 10 bit
- 1 = 11 bit
- 2 = 12 bit
- 3 = 13 bit**
- 4 = 14 bit
- 7 = 17 bit
- C = 21 bit <sup>4)</sup>

**g Inputs / outputs <sup>3)</sup>**

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

**h Options (service)**

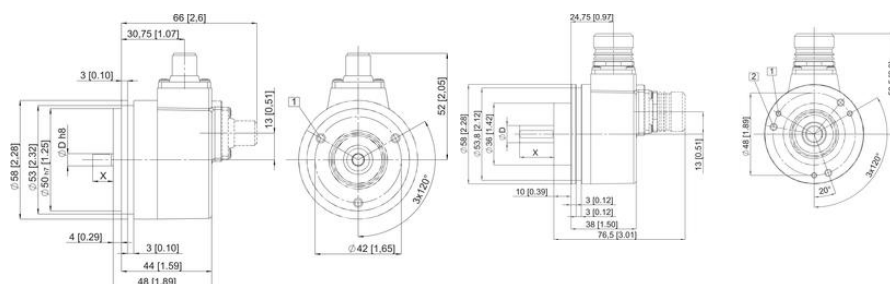
- 1 = no option
- 2 = status LED
- 3 = SET button and status LED**

*Optional on request*

- Ex 2/22 (not with type of connection E or F) <sup>5)</sup>
- surface protection  
salt spray tested
- other resolutions

## TECHNICAL DATA

<b>Connection</b>	Cable, M12, M23 contact
<b>Housing diameter</b>	58 mm
<b>IP class</b>	IP65, IP67
<b>Mounting</b>	Shoulder
<b>Output</b>	SSI
<b>Sensor type</b>	Absolute
<b>Shaft diameter max</b>	10 mm
<b>Shaft diameter min</b>	6 mm
<b>Supply voltage dc max</b>	30 V DC
<b>Supply voltage dc min</b>	5 V DC
<b>Temperature operational max</b>	90 °C
<b>Temperature operational min</b>	-40 °C
<b>Version</b>	Singleturn



For output circuit 1 or 2 and type of connection 1, 2, 3 or 4 (2 control inputs, 1 status output)

Signal	GND	+V	+C	-C	+D	D	SET	DIR	Stat	N/C	N/C	N/C	PE
Cable colour:	WH	BN	GN	YE	GY	PK	BU	RD	BK	-	-	-	Shield
M12 connector:	1	2	3	4	5	6	7	8	9	10	11	12	PH

For output circuit 3 and type of connection 1, 2, 3 or 4 (2 control inputs, 1 status output, sensor outputs for voltage)

Signal	GND	+V	+C	-C	+D	D	SET	DIR	Stat	N/C	0V sense	+5V sense	PE
Cable colour:	WH	BN	GN	YE	GY	PK	BU	RD	BK	-	Gr-PK	RD-BU	Shield
M12 connector:	1	2	3	4	5	6	7	8	9	10	11	12	PH

For output circuit 3, 4, 7 or 8 and type of connection 1, 2, 3 or 4 (2 control inputs, incremental track M12 or SinCos)

Signal	GND	+V	+C	-C	+D	D	SET	DIR	A	A Inv	B	B Inv	PE
Cable colour:	WH	BN	GN	YE	GY	PK	BU	RD	BK	VT	Gr-PK	RD-BU	Shield
M12 connector:	1	2	3	4	5	6	7	8	9	10	11	12	PH

For output circuit 5 or 9 and type of connection 1, 2, 3 or 4 (SinCos or incremental track, sensor outputs for voltage)

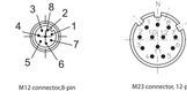
Signal	GND	+V	+C	-C	+D	D	A	A Inv	B	B Inv	0V sense	+5V sense	PE
Cable colour:	WH	BN	GN	YE	GY	PK	BU	RD	BK	VT	Gr-PK	RD-BU	Shield
M12 connector:	1	2	3	4	5	6	7	8	9	10	11	12	PH

For output circuit 1 or 2 and type of connection 5 or 12 (2 control inputs)

Signal	GND	+V	+C	-C	+D	D	SET	DIR	Shut&PE
M12 connector:	1	2	3	4	5	6	7	8	PH

- +V: Encoder Power Supply +V DC
- GND: Encoder Power Supply Ground (0V)
- +C: Clock signal
- +D, D: Data signal
- SET: Set input. The current position is set to zero
- DIR: Direction input. If this input is active, the output values are counted backwards (decreased when the shaft is turning clockwise)
- Stat: Status output
- PE: Protective earth
- PH: Plug connector housing (shield)
- A, A Inv: Sine output (incremental)
- B, B Inv: Cosine output (incremental)

Top view of mating side, male contact base



M12 connector, 8 pin

M12 connector, 12 pin