

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
a Flange		c Interface / power supply	
1 = clamping flange, IP65 ø 58 mm [2.28"]		1 = SSI, BiSS / 5 V DC	
3 = clamping flange, IP67 ø 58 mm [2.28"]		2 = SSI, BiSS / 10 ... 30 V DC	
2 = synchro flange, IP65 ø 58 mm [2.28"]		3 = SSI, BiSS + 2048 ppr. SinCos / 5 V DC	
4 = synchro flange, IP67 ø 58 mm [2.28"]		4 = SSI, BiSS + 2048 ppr. SinCos / 10 ... 30 V DC	
5 = square flange, IP65 □ 63.5 mm [2.5"]		5 = SSI, BiSS / 5 V DC, with sensor output	
7 = square flange, IP67 □ 63.5 mm [2.5"]		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 Shaft (ø x L), with flat		d Type of connection	e Code
1 = 6 x 10 mm [0.24 x 0.39"]¹⁾		1 = axial cable, 1 m [3.28'] PVC	B = SSI, binary
2 = 10 x 20 mm [0.39 x 0.79"]²⁾		A = axial cable, special length PVC *)	C = BiSS, binary
3 = 1/4" x 7/8"		2 = radial cable, 1 m [3.28'] PVC	G = SSI, gray
4 = 3/8" x 7/8"		B = radial cable, special length PVC *)	
		3 = axial M23 connector, 12-pin	f Resolution⁴⁾
		4 = radial M23 connector, 12-pin	A = 10 bit
		5 = axial M12 connector, 8-pin ³⁾	1 = 11 bit
		6 = radial M12 connector, 8-pin ³⁾	2 = 12 bit
			3 = 13 bit
			4 = 14 bit
			7 = 17 bit
			C = 21 bit ⁵⁾
			g Inputs / outputs⁴⁾
			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 ⁶⁾
			- 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

.XXXX.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"]
- E = with stator coupling, IP65 mounting without screws ¹⁾
- F = with stator coupling, IP67 mounting without screws ¹⁾
- G = with stator coupling, IP65 ø 72 mm [2.83"] ¹⁾
- H = with expanding coupling, IP65 ø 65 mm [2.56"] ¹⁾

b Through hollow shaft

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

Tapered shaft

- K = ø 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 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.: 8.5873.542B.G323.0030 (for cable length 3 m)

e Code

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

f Resolution ³⁾

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

g Inputs / outputs ³⁾

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

h Options (service)

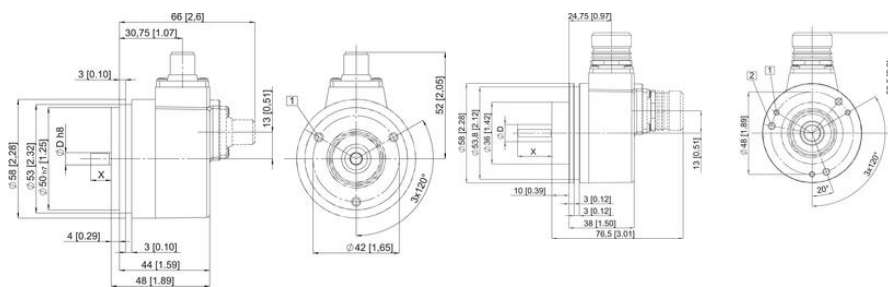
- 1 = no option
- 2 = status LED
- 3 = SET button and status LED**

Optional on request

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

SPECIFICATIONS

Housing diametre	58
IP Class	IP65, IP67
Shaft Diameter max	10
Shaft Diameter min	6
Supply Voltage DC Max	30
Supply Voltage DC Min	5
Temperature range from	-40
Temperature range to	90



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

Signal:	GN	+V	+C	-C	+D	-D	SET	DIR	Stat	N/C	N/C	N/C	PE
Cable colour:	WH	BN	GN	VE	GY	PK	BU	RD	BK	-	-	-	Shield
M23 connector:	1	2	3	4	5	6	7	8	9	10	11	12	PH

For output circuit 5 and type of connection 1, 2, 3 or 4 (2 control inputs, 1 status output, sensor output for voltage)

Signal:	GN	+V	+C	-C	+D	-D	SET	DIR	Stat	N/C	Dir sens.	+V sens.	PE
Cable colour:	WH	BN	GN	VE	GY	PK	BU	RD	BK	-	CP-PK	RD-BU	Shield
M23 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 RS422 or SinCos)

Signal:	GN	+V	+C	-C	+D	-D	SET	DIR	A	B	Blwr	PE	
Cable colour:	WH	BN	GN	VE	GY	PK	BU	RD	BK	VT	CP-PK	RD-BU	Shield
M23 connector:	1	2	3	4	5	6	7	8	9	10	11	12	PH

For output circuit 8 or 9 and type of connection 1, 2, 3 or 4 (2 control inputs, incremental track, sensor output for voltage)

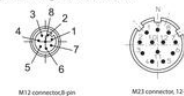
Signal:	GN	+V	+C	-C	+D	-D	A	B	Blwr	PE			
Cable colour:	WH	BN	GN	VE	GY	PK	BU	RD	BK	VT	CP-PK	RD-BU	Shield
M23 connector:	1	2	3	4	5	6	7	8	9	10	11	12	PH

For output circuit 1 or 2 and type of connection 5 or 6 (2 control inputs)

Signal:	GN	+V	+C	-C	+D	-D	SET	DIR	Stat/PE
M23 connector:	1	2	3	4	5	6	7	8	PH

- +V: Encoder Power Supply +V DC
- GN: Encoder Power Supply Ground (0V)
- +C: Clock signal
- 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 (decrease) when the shaft is turning clockwise.
- Stat: Status output
- PE: Protective earth
- PH: Plug connector housing (shield)
- A, Blwr: Sine output (incremental)
- B: Sine output (incremental)

Top view of mating side, male contact base



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	+15v sense	PE
Cable colour	WH	BN	GN	YE	GY	PK	BU	RD	BK	-	GY/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 RS422 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	GY/PK	RD/BU	Shield
M12 connector	1	2	3	4	5	6	7	8	9	10	11	12	PH

For output circuit 3 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	+15v sense	PE
Cable colour	WH	BN	GN	YE	GY	PK	BU	RD	BK	VT	GY/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 3 or 4 (2 control inputs)

Signal	GND	+V	+C	-C	+D	-D	SET	DIR	Stat/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
 -C Data 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 (decrease 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