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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 . X X X X . X X 2 X
Shaft version Type (a b c d . e f g h)

a *Flange*
- **1 = clamping flange, IP65 ø 58 mm [2.28"]**
- 3 = clamping flange, IP67 ø 58 mm [2.28"]
- **2 = synchro flange, IP65 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 *Shaft (ø x L), with flat*
- **1 = 6 x 10 mm [0.24 x 0.39"]** 1)
- **2 = 10 x 20 mm [0.39 x 0.79"]** 2)
- 3 = 1/4" x 7/8"
- 4 = 3/8" x 7/8"

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*
- 1 = axial cable, 1 m [3.28'] PVC
- A = axial cable, special length PVC *)
- **2 = radial cable, 1 m [3.28'] PVC**
- B = radial cable, special length PVC *)
- 3 = axial M23 connector, 12-pin
- **4 = radial M23 connector, 12-pin**
- 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.: 8.5853.112A.G323.0030 (for cable length 3 m)

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

f *Resolution* 4)
- A = 10 bit
- 1 = 11 bit
- 2 = 12 bit
- **3 = 13 bit**
- 4 = 14 bit
- 7 = 17 bit
- C = 21 bit 5)

g *Inputs / outputs* 4)
- **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

Order code
Hollow shaft

8.5873 . XXXX . XX2X
Type — 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

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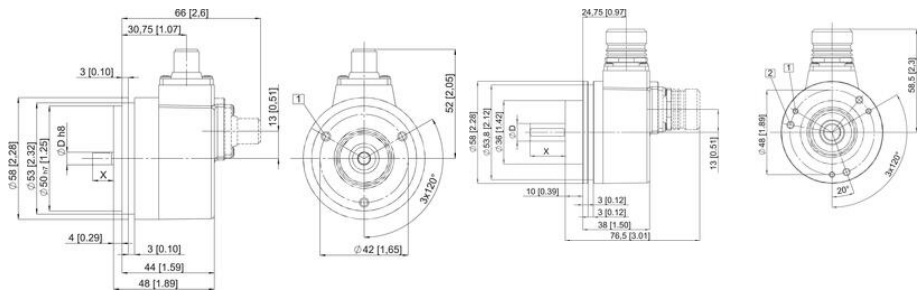
TECHNICAL DATA

Connection	Cable, M12, M23 contact
Housing diameter	58 mm
IP class	IP65, IP67
Mounting	Shoulder
Output	SSI
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	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
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 outputs for voltage)

Signal:	GND	+V	+C	-C	+D	-D	SET	DIR	Stat	N/C	0V sens	$+U_V$ sens	PE
Cable colour:	WH	BN	GN	YE	GY	PK	BU	RD	BK	–	GY-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:	GND	+V	+C	-C	+D	-D	SET	DIR	A	A Inv	B	Binv	PE
Cable colour:	WH	BN	GN	YE	GY	PK	BU	RD	BK	VT	GY-PK	RD-BU	Shield
M23 connector:	1	2	3	4	5	6	7	8	9	10	11	12	PH

For output circuit 6 or 9 and type of connection 1, 2, 3 or 4 (SinCos or Incremental track, sensor outputs for voltage)

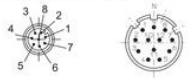
Signal:	GND	+V	+C	-C	+D	-D	O	A	A Inv	B	B Inv	0V sens	$+U_V$ sens	PE
Cable colour:	WH	BN	GN	YE	GY	PK	BU	RD	BK	VT	GY-PK	RD-BU	Shield	
M23 connector:	1	2	3	4	5	6	7	8	9	10	11	12	PH	

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

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

+V: Encoder Power Supply +V DC
GND: Encoder Power Supply Ground (0V)
+C, -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, Ainv: Sine output (incremental)
B, Binv: Cosine output (incremental)

Top view of mating side, male contact base



M12 connector,8-pin M23 connector, 12-pin

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
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 outputs for voltage)

Signal:	GND	+V	+C	-C	+D	-D	SET	DIR	Stat	N/C	0V sens	$+U_V$ sens	PE
Cable colour:	WH	BN	GN	YE	GY	PK	BU	RD	BK	–	GY-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:	GND	+V	+C	-C	+D	-D	SET	DIR	A	A Inv	B	Binv	PE
Cable colour:	WH	BN	GN	YE	GY	PK	BU	RD	BK	VT	GY-PK	RD-BU	Shield
M23 connector:	1	2	3	4	5	6	7	8	9	10	11	12	PH

For output circuit 6 or 9 and type of connection 1, 2, 3 or 4 (SinCos or Incremental track, sensor outputs for voltage)

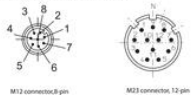
Signal:	GND	+V	+C	-C	+D	-D	O	A	A Inv	B	B Inv	0V sens	$+U_V$ sens	PE
Cable colour:	WH	BN	GN	YE	GY	PK	BU	RD	BK	VT	GY-PK	RD-BU	Shield	
M23 connector:	1	2	3	4	5	6	7	8	9	10	11	12	PH	

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

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

+V: Encoder Power Supply +V DC
GND: Encoder Power Supply Ground (0V)
+C, -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, Ainv: Sine output (incremental)
B, Binv: Cosine output (incremental)

Top view of mating side, male contact base



M12 connector,8-pin M23 connector, 12-pin