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

SERIE F5863

- 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 Shaft version — 8.F5863 (Type) . XXXX (a b c d) . XXXX (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"]

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

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.F5863.122A.G323.0030 (for cable length 3 m)

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

f Resolution (singleturn) [4)]
B = 9 bit ST
A = 10 bit ST
1 = 11 bit ST
2 = 12 bit ST
3 = 13 bit ST
4 = 14 bit ST
7 = 17 bit ST

g Resolution (multiturn) [4)]
2 = 12 bit MT
6 = 16 bit MT
4 = 24 bit MT

h Options (service)
1 = no option
2 = status LED
3 = SET button and status LED

Optional on request
- Ex 2/22 [5)]
- surface protection salt spray tested
- other singleturn resolutions

Order code Hollow shaft 8.F5883 . X X X X . X X X X (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"]

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"

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

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.F5883.542B.G323.0030 (for cable length 3 m)

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

f *Resolution (singleturn)* [1)]
B = 9 bit ST
A = 10 bit ST
1 = 11 bit ST
2 = 12 bit ST
3 = 13 bit ST
4 = 14 bit ST
7 = 17 bit ST

g *Resolution (multiturn)* [1)]
2 = 12 bit MT
6 = 16 bit MT
4 = 24 bit MT

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) [3)]
- surface protection salt spray tested
- other singleturn resolutions

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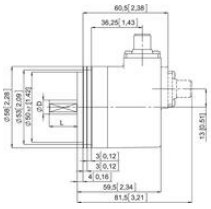
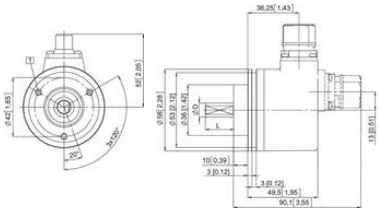
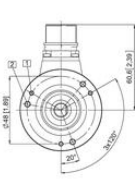
SPECIFICATIONS

Housing diametre	58
IP Class	IP65, IP67
Resolution Envarv	SSI: 10-17 bit, BiSS: 10-17 bit
Resolution More Yards	SSI: max. 24 bit, BiSS: max. 24 bit
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	85

Interface	Type of connection	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	N/C	H
			Cable colour:	WH	BN	GN	YE	GY	PK	BU	RD	BK	-	-	-	shield

Interface	Type of connection	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	N/C	H
			Pin:	1	2	3	4	5	6	7	8	9	10	11	12	PH

Interface	Type of connection	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	0Vsens	+Vsens	H
			Cable colour:	WH	BN	GN	YE	GY	PK	BU	RD	BK	-	GY-PK	RD-BU	shield

Interface	Type of connection	Features	M23 connector													
5	3, 4	SET, DIR, Status sensor output	Signal:	0 V	+V	C+	C-	D+	D-	SET	DIR	Stat	N/C	0Vsens	+Vsens	H
			Pin:	1	2	3	4	5	6	7	8	9	10	11	12	PH

Interface	Type of connection	Features	Cable (isolate unused wires individually before initial start-up)													
3, 4, 7, 8	1, 2, A, B, E, F	SET, DIR, SinCos or incr. RS422	Signal:	0 V	+V	C+	C-	D+	D-	SET	DIR	A	Ā	B	B̄	H
			Cable colour:	WH	BN	GN	YE	GY	PK	BU	RD	BK	VT	GY-PK	RD-BU	shield

Interface	Type of connection	Features	M23 connector													
3, 4, 7, 8	3, 4	SET, DIR, SinCos or incr. RS422	Signal:	0 V	+V	C+	C-	D+	D-	SET	DIR	A	Ā	B	B̄	H
			Pin:	1	2	3	4	5	6	7	8	9	10	11	12	PH

Interface	Type of connection	Features	Cable (isolate unused wires individually before initial start-up)													
6	1, 2, A, B, E, F	SinCos o. incr. RS422 sensor output	Signal:	0 V	+V	C+	C-	D+	D-	A	Ā	B	B̄	0Vsens	+Vsens	H
			Cable colour:	WH	BN	GN	YE	GY	PK	BU	RD	BK	VT	GY-PK	RD-BU	shield

Interface	Type of connection	Features	M23 connector													
6	3, 4	SinCos o. incr. RS422 sensor output	Signal:	0 V	+V	C+	C-	D+	D-	A	Ā	B	B̄	0Vsens	+Vsens	H
			Pin:	1	2	3	4	5	6	7	8	9	10	11	12	PH

Interface	Type of connection	Features	M12 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 Vsens / +Vsens: Using the sensor outputs of the encoder, the voltage present can be measured and if necessary increasedaccordingly.
C+, C-: Clock signal
D+, D-: Data signal
A, Ā: Incremental output channel A (cosine)
B, B̄: 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 (decrease) when the shaft is turning clockwise.
Stat: Status output
PH: Plug connector housing (shield)

Top view of mating side, male contact base


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

Interface	Type of connection	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	N/C	H
			Cable colour:	WH	BN	GN	YE	GY	PK	BU	RD	BK	-	-	-	shield

Interface	Type of connection	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	N/C	H
			Pin:	1	2	3	4	5	6	7	8	9	10	11	12	PH

Interface	Type of connection	Features	Cable (isolate unused wires individually before initial start-up)													
5	1, 2, A, B, E, F	SET, DIR, Status	Signal:	0 V	+V	C+	C-	D+	D-	SET	DIR	Stat	N/C	0Vsens	+Vsens	H
		sensor output	Cable colour:	WH	BN	GN	YE	GY	PK	BU	RD	BK	-	GY-PK	RD-BU	shield

Interface	Type of connection	Features	M23 connector													
5	3, 4	SET, DIR, Status	Signal:	0 V	+V	C+	C-	D+	D-	SET	DIR	Stat	N/C	0Vsens	+Vsens	H
		sensor output	Pin:	1	2	3	4	5	6	7	8	9	10	11	12	PH

Interface	Type of connection	Features	Cable (isolate unused wires individually before initial start-up)													
3, 4, 7, 8	1, 2, A, B, E, F	SET, DIR, SinCos	Signal:	0 V	+V	C+	C-	D+	D-	SET	DIR	A	$\bar{A}$	B	$\bar{B}$	H
		or incr. RS422	Cable colour:	WH	BN	GN	YE	GY	PK	BU	RD	BK	VT	GY-PK	RD-BU	shield

Interface	Type of connection	Features	M23 connector													
3, 4, 7, 8	3, 4	SET, DIR, SinCos	Signal:	0 V	+V	C+	C-	D+	D-	SET	DIR	A	$\bar{A}$	B	$\bar{B}$	H
		or incr. RS422	Pin:	1	2	3	4	5	6	7	8	9	10	11	12	PH

Interface	Type of connection	Features	Cable (isolate unused wires individually before initial start-up)													
6	1, 2, A, B, E, F	SinCos o. Incr. RS422	Signal:	0 V	+V	C+	C-	D+	D-	A	$\bar{A}$	B	$\bar{B}$	0Vsens	+Vsens	H
		sensor output	Cable colour:	WH	BN	GN	YE	GY	PK	BU	RD	BK	VT	GY-PK	RD-BU	shield

Interface	Type of connection	Features	M23 connector													
6	3, 4	SinCos o. Incr. RS422	Signal:	0 V	+V	C+	C-	D+	D-	A	$\bar{A}$	B	$\bar{B}$	0Vsens	+Vsens	H
		sensor output	Pin:	1	2	3	4	5	6	7	8	9	10	11	12	PH

Interface	Type of connection	Features	M12 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 V_{sens} / +V_{sens}: Using the sensor outputs of the encoder, the voltage present can be measured and if necessary increasedaccordingly.
C+, C-: Clock signal
D+, D-: Data signal
A, $\bar{A}$: Incremental output channel A (cosine)
B, $\bar{B}$: 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 (decrease) when the shaft is turning clockwise.
Stat: Status output
PH H: Plug connector housing (shield)

Top view of mating side, male contact base

M12 connector,8-pin

M23 connector, 12-pin