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KUEBLER - ABSOLUTE-CODED ANGULAR TRANSMITTER SENDIX F3653 / F3673, OPTICAL, SSI, Ø36 MM

SERIE F3653



- Housing diameter Ø36 mm
- SSI-Interface
- 17 bit resolution
- -40 to +90 ° C working temperature

PRODUCT DESCRIPTION

Sendix F3653 / F3673 is a series of single-axis optical axial and hole axle outputs with SSI interface and a resolution of up to 17 bits, despite its compact size of 36x42 mm. The sensor also has high enclosure class, shock resistance and a wide temperature range. The sensor is therefore very suitable for applications where extreme environments or temperatures can occur, such as mobile applications. The sensor is supplied with a tangential cable, which means that there is no exposed cable input on the sensor, but it is embedded in the housing itself to increase impact on impact and impact. The Sendix F3653 / F3673 is also available in a salt water resistant version.

Please refer to the images below for ordering information.

Order code Shaft version — 8.F3653 (Type) . X(a) X(b) X(c) X(d) . X(e) X(f) 12

a *Flange*
1 = clamping flange, IP67, ø 36 mm [1.42"]
3 = clamping flange, IP65, ø 36 mm [1.42"]
2 = synchro flange, IP67, ø 36 mm [1.42"]
4 = synchro flange, IP65, ø 36 mm [1.42"]

b *Shaft (ø x L), with flat*
1 = ø 6 x 12.5 mm [0.24 x 0.49"]
3 = ø 8 x 15 mm [0.32 x 0.59"]
5 = ø 10 x 20 mm [0.39 x 0.79"]
2 = ø 1/4" x 12.5 mm [0.49"]
4 = ø 3/8" x 5/8"

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 / 5 V DC
8 = SSI, BiSS + 2048 ppr. RS422 / 10 ... 30 V DC

d *Type of connection*
1 = tangential cable, 1 m [3.28] PUR
3 = tangential cable, 5 m [16.40] PUR
F = tangential cable, special length PUR *)
8 = axial M12 connector, 8-pin 1)

*) Available special lengths (connection type F):
2, 3, 8, 10, 15 m [6.56, 9.84, 26.25, 32.80, 49.21']
order code expansion .XXXX = length in dm
ex.: 8.F3653.432F.G312.0030 (for cable length 3 m)

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

f *Resolution*
A = 10 bit
2 = 12 bit
3 = 13 bit
4 = 14 bit
7 = 17 bit

Optional on request
- surface protection salt spray tested
- other resolutions

Order code Hollow shaft 8.F3673 . X X X X . X X 12 (Type; a b c d . e f)

a *Flange*
1 = with spring element, short, IP65
3 = with spring element, long, IP65
2 = with stator coupling, IP65, ø 46 mm [1.81"]

b *Through hollow shaft*
1 = ø 6 mm [0.24"]
3 = ø 8 mm [0.32"]
2 = ø 1/4"
Blind hollow shaft
(insertion depth max. 14.5 mm [0.57"])
4 = 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 / 5 V DC
8 = SSI, BiSS + 2048 ppr. RS422 / 10 ... 30 V DC

d *Type of connection*
1 = tangential cable, 1 m [3.28] PUR
3 = tangential cable, 5 m [16.40] PUR
F = tangential cable, special length PUR *)
8 = axial M12 connector, 8-pin 1)

*) Available special lengths (connection type F):
2, 3, 8, 10, 15 m [6.56, 9.84, 26.25, 32.80, 49.21']
order code expansion .XXXX = length in dm
ex.: 8.F3673.242F.G312.0030 (for cable length 3 m)

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

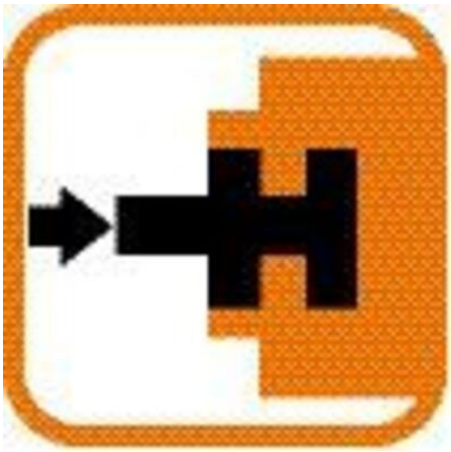
f *Resolution*
A = 10 bit
2 = 12 bit
3 = 13 bit
4 = 14 bit
7 = 17 bit

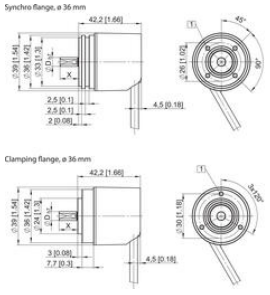
Optional on request
- surface protection salt spray tested
- other resolutions

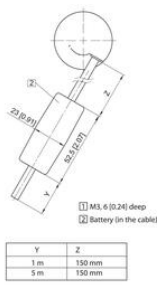
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TECHNICAL DATA

Connection	Cable
Housing diameter	36 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







Terminal assignment

Interface	Type of connection	Features	Cable											
1,2	1, 3	SSI or BiSS, SET, DIR, Status	Signal:	GND	+V	+C	-C	+D	-D	SET	DIR	Stat	PE
			Cable colour:	WH	BN	GN	YE	GY	PK	BU	RD	VT	Shield

Interface	Type of connection	Features	M12 connector									
1,2	5	SSI or BiSS, SET, DIR	Signal:	GND	+V	+C	-C	+D	-D	SET	DIR	Shield/PE
			M12 connector	1	2	3	4	5	6	7	8	PH

Interface	Type of connection	Features	Cable												
3,4	1, 3	SSI or BiSS, SET, DIR, 2048 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

Interface	Type of connection	Features	Cable											
5	1, 3	SSI or BiSS, SET, DIR, Sensor outputs	Signal:	GND	+V	+C	-C	+D	-D	SET	DIR	GND_{Sens}	$+V_{Sens}$	PE
			Cable colour:	WH	BN	GN	YE	GY	PK	BU	RD	VT	RD-BU	Shield

Interface	Type of connection	Features	Cable													
6	1, 3	SSI or BiSS, 2048 SinCos Sensor outputs	Signal:	GND	+V	+C	-C	+D	-D	GND_{Sens}	$+V_{Sens}$	A	A inv	B	B inv	PE
			Cable colour:	WH	BN	GN	YE	GY	PK	BU	RD	BK	VT	GY-PK	RD-BU	Shield

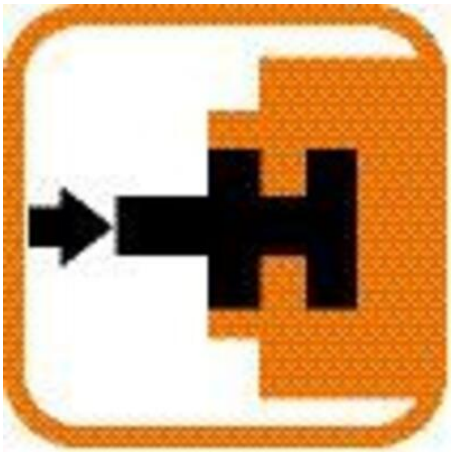
Interface	Type of connection	Features	Cable											
7,8	1, 3	SSI or BiSS, 2048 incr. RS422	Signal:	GND	+V	+C	-C	+D	-D	A	A inv	B	B inv	PE
			Cable colour:	WH	BN	GN	YE	GY	PK	BK	VT	GY-PK	RD-BU	Shield

+V: Encoder power supply +V DC
GND: Encoder power supply ground GND (0V)
+C, -C: Clock signal
+D, -D: Data signal
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
PE: Protective earth
PH: Plug connector housing (Shield)
A, A inv: Incremental output channel A
B, B inv: Incremental output channel B

Top view of mating side, male contact base



M12 connector, 8-pin



Terminal assignment

Interface	Type of connection	Features	Cable											
1, 2	1, 3	SSI or BiSS,	Signal:	GND	+V	+C	-C	+D	-D	SET	DIR	Stat	PE	
		SET, DIR, Status	Cable colour:	WH	BN	GN	YE	GY	PK	BU	RD	VT	Shield	

Interface	Type of connection	Features	M12 connector								
1, 2	5	SSI or BiSS,	Signal:	GND	+V	+C	-C	+D	-D	SET	DIR	Shield/PE
		SET, DIR	M12 connector	1	2	3	4	5	6	7	8	PH

Interface	Type of connection	Features	Cable												
3, 4	1, 3	SSI or BiSS,	Signal:	GND	+V	+C	-C	+D	-D	SET	DIR	A	A inv	B	B inv	PE
		SET, DIR, 2048 SinCos	Cable colour:	WH	BN	GN	YE	GY	PK	BU	RD	BK	VT	GY-PK	RD-BU	Shield

Interface	Type of connection	Features	Cable											
5	1, 3	SSI or BiSS,	Signal:	GND	+V	+C	-C	+D	-D	SET	DIR	GND_{sens}	$+V_{sens}$	PE
		SET, DIR,	Cable colour:	WH	BN	GN	YE	GY	PK	BU	RD	VT	RD-BU	Shield
		Sensor outputs												

Interface	Type of connection	Features	Cable													
6	1, 3	SSI or BiSS,	Signal:	GND	+V	+C	-C	+D	-D	GND_{sens}	$+V_{sens}$	A	A inv	B	B inv	PE
		2048 SinCos	Cable colour:	WH	BN	GN	YE	GY	PK	BU	RD	BK	VT	GY-PK	RD-BU	Shield
		Sensor outputs														

Interface	Type of connection	Features	Cable											
7, 8	1, 3	SSI or BiSS,	Signal:	GND	+V	+C	-C	+D	-D	A	A inv	B	B inv	PE
		2048 incr. RS422	Cable colour:	WH	BN	GN	YE	GY	PK	BK	VT	GY-PK	RD-BU	Shield

+V: Encoder power supply +V DC
GND: Encoder power supply ground GND (0V)
+C, -C: Clock signal
+D, -D: Data signal
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
PE: Protective earth
PH: Plug connector housing (Shield)
A, A inv: Incremental output channel A
B, B inv: Incremental output channel B

Top view of mating side, male contact base



M12 connector, 8-pin