Standard
stainless steel, optical

Sendix 5006 / 5026 (shaft / hollow shaft)

Push-pull / RS422

The incremental Sendix encoders 5006 / 5026 in stainless steel offers optimum material resistance and thus virtually unlimited durability.

The high-grade seals, the IP66/IP67 level of protection as well as the wide temperature range additionally ensure impermeability and ruggedness.

Safety-Lock™ | High rotational speed | Temperature range -40°... +85°C | High protection level IP | High shaft load capacity | Shock / vibration resistant | Magnetic field proof | Short-circuit proof | Reverse polarity protection | Optical sensor

Durable and sealed

- Protection rating IP66/IP67.
- Rugged stainless steel housing.
- Wide temperature range -40 ... +85°C.
- Sturdy bearing construction in Safety Lock™ Design for resistance against vibration and installation errors.

Flexible in use

- Compatible with all common US and european standards.
- Power supply 5 ... 30 V DC, various interface options, max. 5000 pulses per revolution.
- Compact dimensions: outer diameter 50 mm, installation depth max. 47 mm.

Order code Shaft version

8.5006 . X X X 4 . XXXX
Type — a b c d — e

a *Flange*
7 = clamping flange ø 58 mm [2.28"]
A = synchro flange ø 58 mm [2.28"]
C = square flange □63.5 mm [2.5"]

b *Shaft (ø x L), with flat*
1 = ø 6 x 10 mm [0.24 x 0.39"]
3 = ø 10 x 20 mm [0.39 x 0.79"]
8 = ø 3/8" x 7/8"

c *Output circuit / power supply*
2 = push-pull (7272 compatible with inverted signal) / 5 ... 30 V DC
5 = push-pull (with inverted signal) / 10 ... 30 V DC
4 = RS422 (with inverted signal) / 5 V DC

d *Type of connection*
4 = radial M12 connector, 8-pin

e *Pulse rate*
1, 5, 10, 12, 36, 100, 200, 250, 256, 360, 400, 500, 512, 600, 800, 1000, 1024, 1200, 2000, 2048, 2500, 3600, 4096, 5000
(e.g. 100 pulses => 0100)

Optional on request
- other pulse rates
- Ex 2/22
- seawater resistant (stainless steel V4A)

Stainless steel V4A as standard types (deliverable as from 1 unit)
V4A 1.4404 — 8.5006.73X4.XXXX-V4A

Order code Hollow shaft

8.5026 . X X X 2 . XXXX
Type — a b c d — e

a *Flange*
1 = with spring element, long
C = with stator coupling, ø 63 mm

b *Through hollow shaft*
2 = ø 1/4"
4 = ø 3/8"
3 = ø 10 mm [0.39"]
5 = ø 12 mm [0.47"]
6 = ø 1/2"
8 = ø 15 mm [0.59"]

c *Output circuit / power supply*
2 = push-pull (7272 compatible, with inverted signal) / 5 ... 30 V DC
5 = push-pull (with inverted signal) / 10 ... 30 V DC
4 = RS422 (with inverted signal) / 5 V DC

d *Type of connection*
2 = radial M12 connector, 8-pin

e *Pulse rate*
1, 5, 10, 12, 36, 100, 200, 250, 256, 360, 400, 500, 512, 600, 800, 1000, 1024, 1200, 2000, 2048, 2500, 3600, 4096, 5000
(e.g. 100 pulses => 0100)

Optional on request
- other pulse rates
- Ex 2/22
- seawater resistant (stainless steel V4A)

Stainless steel V4A as standard types (deliverable as from 1 unit)
V4A 1.4404 — 8.5026.18X2.XXXX-V4A

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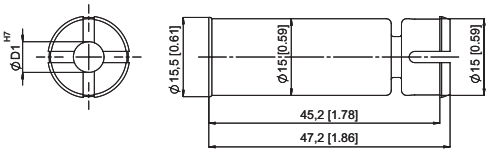
Mounting accessory for hollow shaft encoders

Dimensions in mm [inch]

Isolation / adapter inserts for hollow shaft encoders

Thermal and electrical isolation of the encoders (Temperature range -40 ... +115°C [-40°F ... +239°F])
Isolation inserts prevent currents from passing through the encoder bearings. These currents can occur when using inverter controlled three-phase or AC vector motors and considerably shorten the service life of the encoder bearings. In addition the encoder is thermally isolated as the plastic does not transfer the heat to the encoder.



Tip:
By using these adapter inserts you can achieve six different hollow shaft diameters, all on the basis of the encoder 8.5026.X8X2.XXXX.

D1	Isolation insert	Order no.
6 mm [0.24"]		**8.0010.4021.0000**
8 mm [0.32"]		**8.0010.4020.0000**
10 mm [0.39"]		**8.0010.4023.0000**
12 mm [0.47"]		**8.0010.4025.0000**
1/4"		**8.0010.4022.0000**
3/8"		**8.0010.4024.0000**
1/2"		**8.0010.4026.0000**

Further accessories can be found in the accessories section or in the accessories area of our website at: www.kuebler.com/accessories.
Additional connectors can be found in the connection technology section or in the connection technology area of our website at: www.kuebler.com/connection_technology.

Technical data

Electrical characteristics

Output circuit	**RS422** (TTL compatible))	**Push-pull**	**Push-pull** (7272 compatible)
Power supply	5 V DC (±5 %)	10 ... 30 V DC	5 ... 30 V DC
Current consumption with inverted signal (no load)	typ. 40 mA max. 90 mA	typ. 50 mA max.100 mA	typ. 50 mA max.100 mA
Permissible load / channel	max. +/- 20 mA	max. +/- 20 mA	max. +/- 20 mA
Pulse frequency	max. 300 kHz	max. 300 kHz	max. 300 kHz
Signal level HIGH LOW	min. 2.5 V max. 0.5 V	min +V - 1.0 V max. 0.5 V	min. +V - 2.0 V max. 0.5 V
Rising edge time t_r	max. 200 ns	max. 1 µs	max. 1 µs
Falling edge time t_f	max. 200 ns	max. 1 µs	max. 1 µs
Short circuit proof outputs [1]	yes [2]	yes	yes
Reverse polarity protection of the power supply	no	yes	no
UL approval	file 224618		
CE compliant acc. to	EMC guideline 2014/30/EU RoHS guideline 2011/65/EU		

Mechanical characteristics

Maximum speed [3]		6000 min^{-1}
Mass moment of inertia		approx. 1.8 x 10^{-6} kgm^2
Starting torque – at 20°C [68°F]		< 0.05 Nm
Weight		approx. 0.4 kg [14.11 oz]
Load capacity of shaft	radial axial	80 N 40 N
Protection acc. to EN 60529		IP66 / IP67

Working temperature		-40°C ... +85°C [-40°F ... +185°F]
Material	housing, flange, shaft connector	stainless steel, 1.4305 (V2A) stainless steel
Shock resistance acc. to EN 60068-2-27		2500 m/s^2, 6 ms
Vibration resistance acc. to EN 60068-2-6		100 m/s^2, 10 ... 2000 Hz

1) If power supply correctly applied.
2) Only one channel allowed to be shorted-out:
at +V = 5 V DC, short-circuit to channel, 0 V, or +V is permitted.
at +V = 5 ... 30 V DC, short-circuit to channel or 0 V is permitted.
3) For continuous operation max. 3000 min^{-1}.

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Terminal assignment

Output circuit	Type of connection	M12 connector, 8-pin									
2, 4, 5	5006: 4	Signal:	0 V	+V	A	$\overline{A}$	B	$\overline{B}$	0	$\overline{0}$	⏚
	5026: 2	Pin:	1	2	3	4	5	6	7	8	PH [1]

+V: Encoder power supply +V DC
0 V: Encoder power supply ground GND (0 V)
A, $\overline{A}$: Incremental output channel A
B, $\overline{B}$: Incremental output channel B
0, $\overline{0}$: Reference signal
PH ⏚: Plug connector housing (shield)

Top view of mating side, male contact base

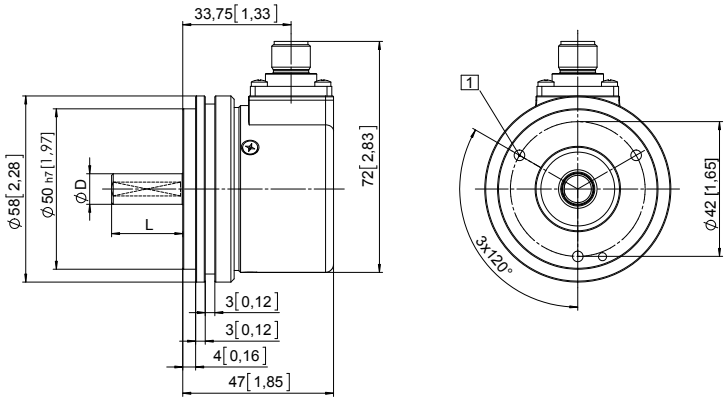
M12 connector, 8-pin

Dimensions shaft version

Dimensions in mm [inch]

Synchro flange, ø 58 [2.28]
Flange type A

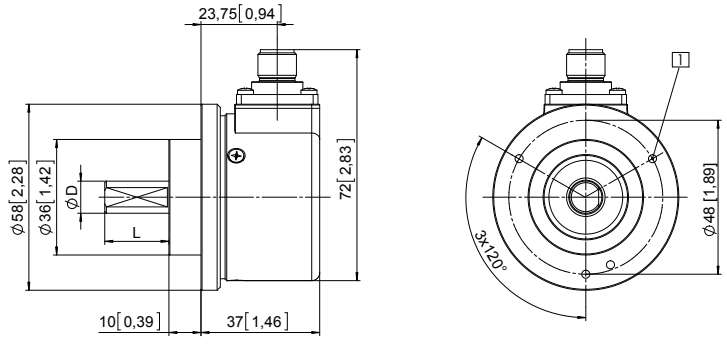
1 3 x M4, 6 [0.24] deep



D	Fit	L
6 [0.24]	h7	10 [0.39]
10 [0.39]	f7	20 [0.79]
3/8"	h8	7/8"

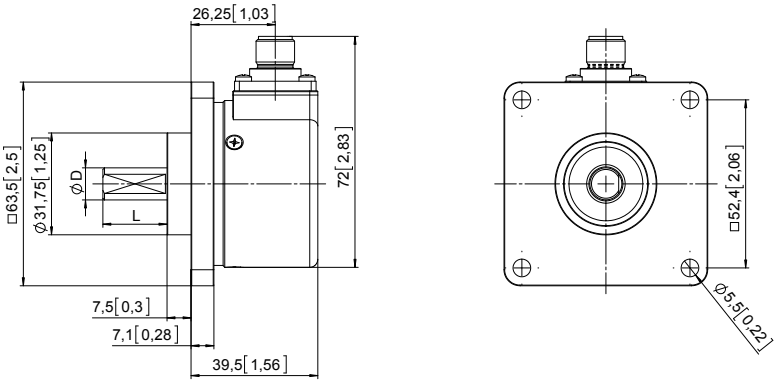
Clamping flange, ø 58 [2.28]
Flange type 7

1 3 x M3, 5.5 [0.22] deep



D	Fit	L
6 [0.24]	h7	10 [0.39]
10 [0.39]	f7	20 [0.79]
3/8"	h8	7/8"

Square flange, ☐ 63.5 [2.5]
Flange type C



D	Fit	L
6 [0.24]	h7	10 [0.39]
10 [0.39]	f7	20 [0.79]
3/8"	h8	7/8"

1) PH = shield is attached to connector housing.

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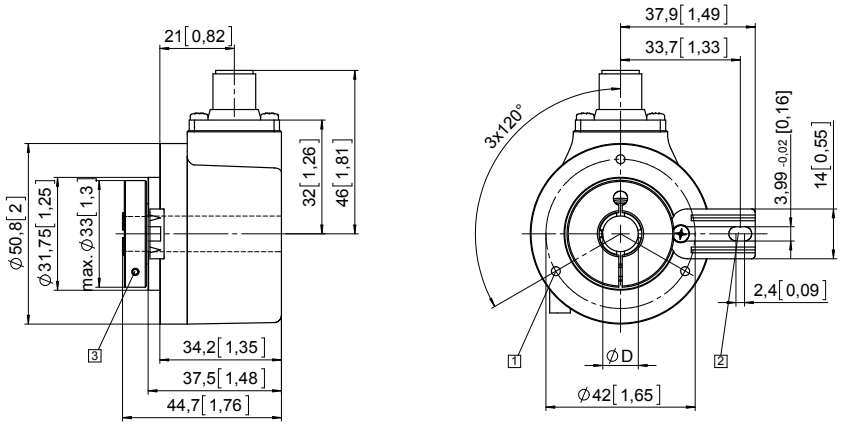
Dimensions hollow shaft version

Dimensions in mm [inch]

Flange with spring element, long
Flange type 1

1 3 x M3, 6 [0.24] deep
2 Slot spring element, recommendation: cylindrical pin DIN 7, ø 4 [0.16]
3 Recommended torque for the clamping ring 0.6 Nm

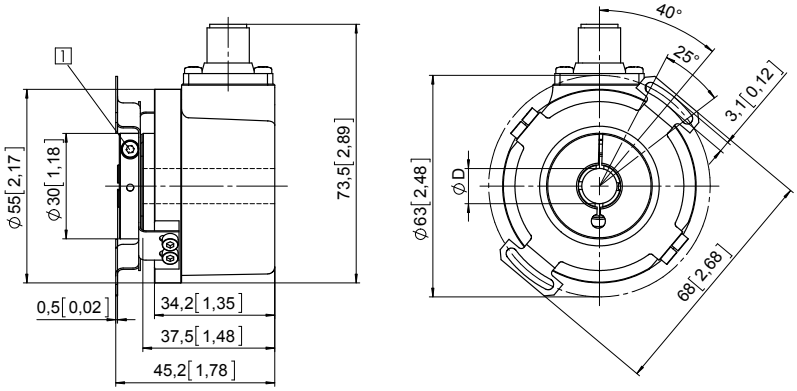
D	Fit
10 [0.39]	H7
12 [0.47]	H7
15 [0.99]	H7
1/4"	H7
3/8"	H7
1/2"	H7



Flange with stator coupling, ø 63 [2.48]
Flange type C

1 Recommended torque for the clamping ring 0.6 Nm

D	Fit
10 [0.39]	H7
12 [0.47]	H7
15 [0.99]	H7
1/4"	H7
3/8"	H7
1/2"	H7



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