Standard
Stainless steel, hollow shaft, optical | **5826 (Hollow shaft)** | **Push-Pull / RS422**

Thanks to their stainless-steel housing, the incremental hollow shaft encoders type 5826 are particularly suitable for those applications that make high demands on the composition and properties of the materials used.

Stainless steel encoders are therefore often used in areas subjected to aggressive cleaning materials, as a result of high hygiene requirements.

High rotational speed | Temperature range | High protection level | Shock / vibration resistant | Magnetic field proof | Short-circuit proof | Optical sensor

Custom-fit

- With cable connection
- Through hollow shaft with 10 mm or 12 mm diameter
- Protection up to IP66

Adaptable

- High resolution up to 5000 ppr
- Numerous connection possibilities, thanks to wide range of interfaces and supply voltages

Order code Hollow shaft

8.5826	.	1	X	X	1	.	XXXX
Type		a	b	c	d		e

a *Flange*
1 = with spring element short

b *Hollow shaft*
6 = ø 10 mm [0.39“]
8 = ø 12 mm [0.47“]

c *Output circuit / Power supply*
1 = RS422 (with inverted signal) / 5 V DC
7 = RS422 (with inverted signal) / 5 ... 30 V DC
4 = RS422 (with inverted signal) / 10 ... 30 V DC
5 = Push-Pull (without inverted signal) / 5 ... 30V DC
2 = Push-Pull (without inverted signal) / 10 ... 30 V DC
6 = Push-Pull (with inverted signal) / 5 ... 30 V DC
3 = Push-Pull (with inverted signal) / 10 ... 30 V DC

d *Type of connection*
1 = radial cable, 1 m [3.28‘] PVC cable

e *Pulse rate*
25, 50, 60, 100, 125, 200, 250, 256, 300, 360, 500, 512, 600, 720, 800, 1000, 1024, 1200, 1250, 1500, 2000, 2048, 2500, 3000, 3600, 4000, 4096, 5000
(e.g. 100 pulses => 0100)
Other pulse rates on request

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Technical data

Mechanical characteristics

Speed		max. 6000 min^{-1} [1)]
Moment of intertia		approx. 6.0 x 10^{-6} kgm^2
Starting torque – at 20°C [68°F]		< 0.05 Nm
Weight		approx. 0.4 kg [14.11 oz]
Protection acc. to EN 60529		IP66
Working temperature range	without seal	-20°C ... +80°C [-4°F ... +176°F]
Material	shaft	stainless steel
Shock resistance acc. EN 60068-2-27		2000 m/s^2, 6 ms
Vibration resistance acc. EN 60068-2-6		100 m/s^2, 10 ... 2000 Hz

Electrical characteristics

Output circuit		**RS422** (TTL-compatible)	**Push-Pull**
Power supply		5 V DC (±5 %) or 10 ... 30 V DC	10 ... 30 V DC
Power consumption (no load)			
without inverted signal		–	typ. 55 mA / max. 125 mA
with inverted signal		typ. 40 mA / max. 90 mA	typ. 80 mA / max. 150 mA
Permissible load / channel		max. ±20 mA	max. ±30 mA
Pulse frequency		max. 300 kHz	max. 300 kHz
Signal level	HIGH	min. 2.5 V	min. +V - 2.5 V
	LOW	min. 0.5 V	max. 2.0 V
Rising edge time t_r		max. 200 ns	max. 1 µs
Falling edge time t_f		max. 200 ns	max. 1 µs
Short circuit proof outputs [2)]		yes [3)]	yes
Reverse polarity protection of the power supply		no; 10 ... 30 V DC: yes	yes
UL approval		File 224618	
CE compliant acc. to		EMC guideline 2004/108/EC	
RoHS compliant acc. to		guideline 2002/95/EC	

Terminal assignment

Output circuit	Type of connection	Cable (isolate unused wires individually before initial start-up)											
1, 2, 3, 4, 5, 6, 7	1	Signal:	0 V	+V	0Vsens [4)]	+Vsens [4)]	A	$\overline{A}$	B	$\overline{B}$	0	$\overline{0}$	⏚
		Cable colour:	WH 0.5 mm^2	BN 0.5 mm^2	WH	BN	GN	YE	GY	PK	BU	RD	shield

Using RS422 outputs and long cable distances, a wave impedance has to be applied at each cable end.

+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 increased accordingly.

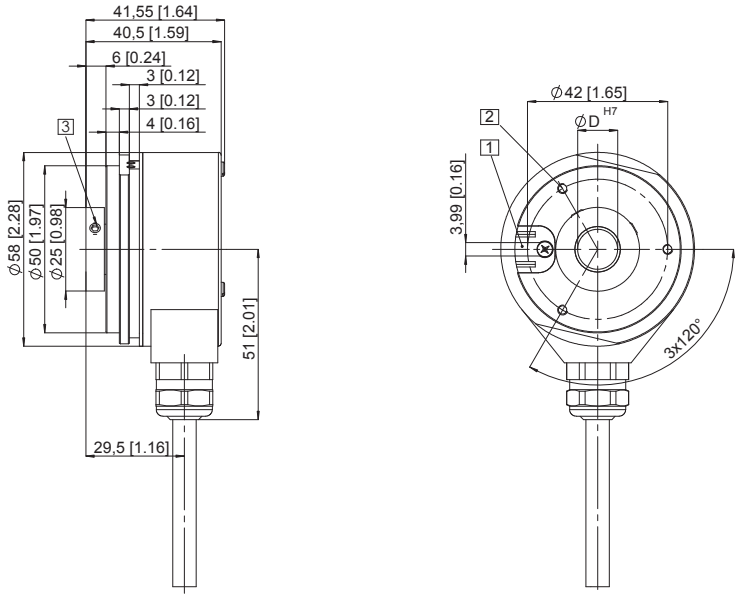
A, $\overline{A}$: Incremental output channel A
B, $\overline{B}$: Incremental output channel B
0, $\overline{0}$: Reference signal
PH ⏚: Plug connector housing (Shield)

Dimensions

Dimensions in mm [inch]

Flange with spring element short
Flange type 1

1 Torque stop slot,
Recommendation: Cylindrical pin DIN 7, ø 4 [0.16]
2 3 x M3, 5 [0.2] deep
3 Recommended torque for the clamping ring 1.0 Nm



1) For continuous operation 3000 min^{-1}, ventilated
2) If supply voltage correctly applied
3) 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 = 10 ... 30 V DC short circuit to channel or 0 V is permitted.
4) The sensor cables are connected to the supply voltage internally.
If long feeder cables are involved they can be used to adjust or control the voltage at the encoder.