

Incremental Encoders

Large hollow shaft **5821**



Optimised proportions, optimised costs:

With an overall diameter of just 58 millimetres the series 5821 boasts a hollow shaft of up to 28 millimetres diameter.

Temperature -20° +85°	Shock/vibration resistant	Magnetic field proof	Short-circuit proof	Reverse polarity protection

Order code
Hollow shaft

8.5821 . XXXX . XXXX
Type ① ② ③ ④ ⑤

① Flange
1 = with spring element

② Hollow shaft
3 = ø 28 mm
5 = ø 25 mm
6 = ø 24 mm
C = ø 20 mm
K = ø 16 mm
(other on request)

③ Output circuit / Power supply
1 = RS 422 (with inverted signal) / 5 V
3 = Push-pull (with inverted signal) / 8-30 V
4 = RS 422 (with inverted signal) / 8-30 V

④ Type of connection
1 = Cable radial (1 m PVC cable)
E = 8-pin connector M12, radial

⑤ Pulse rate
50, 60, 100, 125, 250, 400, 500, 512, 960, 1000, 1024, 2000, 2048, 5000 (z.B. 100 pulses => 0100)

Other pulse rates on request

Preferred types are underlined

Mechanical characteristics	
Speed	max. 3000 min ⁻¹
Rotor moment of inertia (shaft version)	approx. 3,5 x 10 ⁻⁶ kgm ²
Starting torque	< 0,1 Nm
Weight	ca. 0,4 kg
Protection acc. to EN 60 529	IP 64
Working temperature	-20°C ... +70°C ¹⁾ -20°C ... +60°C ²⁾
Material	steel
Shock resistance acc. to DIN-IEC 68-2-27	1000 m/s ² , 6 ms
Vibration resistance acc. to DIN-IEC 68-2-6	100 m/s ² , 35...2000 Hz

Electrical characteristics		
Output circuit	RS 422	Push-Pull (7272)
Supply voltage	5 V ±5% / 8 ... 30 V	8 ... 30 V DC
Power consumption		
no load	typ. 40 mA	< 40 mA
with inverted signal	max. 90 mA	max. 100 mA
Permissible load/channel	max. ±20 mA	max. ±40 mA
Pulse frequency	max. 300 kHz	max. 200 kHz
Signal level	high min. 2,5 V low max. 0,5 V	min UB - 3 V max. 0,5 V
Rise time tr	max. 200 ns	max. 1 s
Fall time tf	max. 200 ns	max. 1 s
Short circuit proof outputs ³⁾	yes	yes
Reverse connection of the supply voltage	yes	yes
CE compliant acc. to	EN 61 000-6-2, EN 61 000-6-4 and EN 61 000-6-3	
RoHS compliant acc. to	EG-guideline 2002/95/EG	

1) At speed max. 2000 min⁻¹
2) At speed max. 3000 min⁻¹
3) If supply voltage correctly applied

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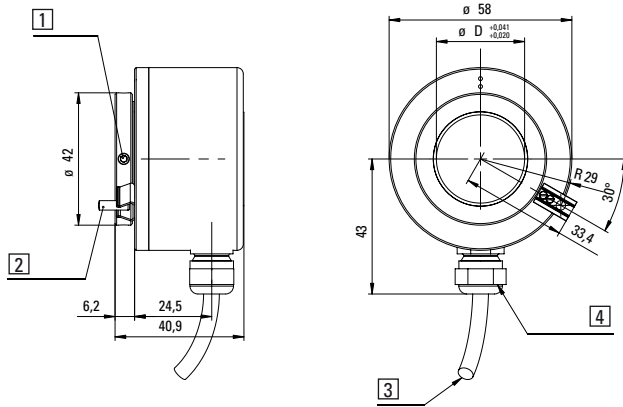
Large hollow shaft

5821

Dimensions shaft version:

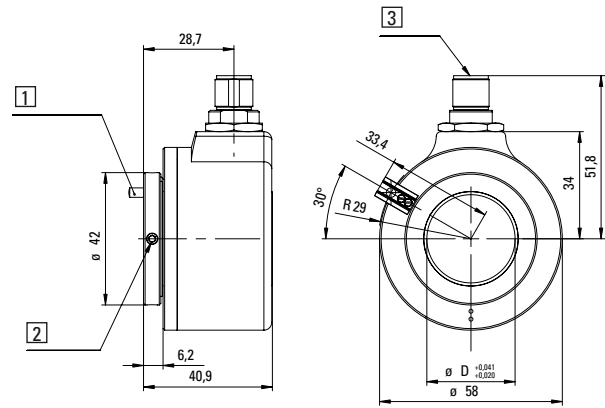
Flange with torque stop, \varnothing 58 mm, spring contact

Cable version, Connection type 1



- 1 Cylindrical pin 3m6x12 DIN 6325 included
- 2 4 x socket set screw M4x6 DIN 913
- 3 Cable length 2 metres
- 4 Cable gland PG7

M12 Plug version, Connection type E

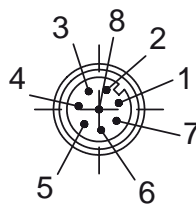


- 1 Cylindrical pin 3m6x12 DIN 6325 included
- 2 4 x socket set screw M4x6 DIN 913
- 3 Connector M12

Terminal assignment

Signal:	0 V GND	+U _B	A	\bar{A}	B	\bar{B}	0	$\bar{0}$	shield
M12 eurofast, 8-pol. connector, Pin	1	2	3	4	5	6	7	8	1)
Cable colour	WH	BN	GN	YE	GY	PK	BU	RD	shield

8-pin M12 connector



Accessories

Mounting attachments and stator couplings can be found in the Accessories section

M12 coupling

straight, 8-pin,
self-assembly, IP67

Order No.:

05.CMB8181-0



M12 connector

preassembled with cable
straight, 8-pin,
open end, PVC cable 2 -15 m

Order No.:

2 m: **05.WAKS8-2/P00**

5 m: **05.WAKS8-5/P00**

10 m: **05.WAKS8-10/P00**

15 m: **05.WAKS8-15/P00**



1) PH = Shield is attached to connector housing.