

Absolute encoders - BiSS C

Blind hollow shaft up to $\varnothing 14$ mm

Optical multiturn encoders 18 bit ST / 12 bit MT

GBPAS - BiSS C



GBPAS with blind hollow shaft

Features

- High resolution encoder multiturn / BiSS C
- Optical sensing method
- Resolution: singleturn 18 bit, multiturn 12 bit
- Blind hollow shaft up to $\varnothing 14$ mm

Optional

- Revolution: 21 bit
- Corrosion protection for offshore applications
- Extended operating temperature range up to -40 °C

Technical data - electrical ratings

Voltage supply	10...30 VDC 5 VDC ± 10 %
Reverse polarity protection	Yes (10...30 VDC)
Consumption w/o load	≤ 50 mA (24 VDC)
Initializing time typ.	20 ms after power on
Interface	BiSS C
Function	Multiturn
Steps per revolution	262144 / 18 bit
Number of revolutions	4096 / 12 bit
Absolute accuracy	$\pm 0.01^\circ$
Sensing method	Optical
Code	Binary
Interference immunity	DIN EN 61000-6-2
Emitted interference	DIN EN 61000-6-4
Diagnostic function	Self-diagnosis (via BiSS)
Approval	UL approval / E63076

Technical data - mechanical design

Size (flange)	$\varnothing 58$ mm
Shaft type	$\varnothing 12...14$ mm (blind hollow shaft)
Protection DIN EN 60529	IP 54
Operating speed	≤ 6000 rpm (mechanical) ≤ 6000 rpm (electric)
Starting acceleration	≤ 1000 U/s ²
Starting torque	≤ 0.04 Nm (+25 °C, IP 54)
Rotor moment of inertia	20 gcm ²
Materials	Housing: aluminium Flange: aluminium
Operating temperature	$-25...+85$ °C $-40...+85$ °C (optional)
Relative humidity	95 % non-condensing
Resistance	DIN EN 60068-2-6 Vibration ± 0.75 mm - 10-58 Hz 10 g - 58-2000 Hz DIN EN 60068-2-27 Shock 200 g, 6 ms
Weight approx.	400 g
Connection	Connector M23, 12-pin Cable 1 m

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Part number

GBPAS.

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Connection

- A1 Connector M23, 12-pin, radial
21 Cable 1 m, radial

Voltage supply / signals

- 12 10...30 VDC / binary code 30 bit
(ST 18 + MT 12)
13 5 VDC / binary code 30 bit
(ST 18 + MT 12)

Blind hollow shaft

- 0 ø12 mm, without pin
4 ø14 mm, without pin

Accessories

Connectors and cables

11034154	Female connector M23, 12-pin, without cable (Z 130.001)
10138559	Female connector M23, 12-pin, 2 m cable (Z 130.003)
10126594	Female connector M23, 12-pin, 5 m cable (Z 130.005)
10129757	Female connector M23, 12-pin, 10 m cable (Z 130.007)

Mounting accessories

11003562	Spring coupling for encoders with ø58 mm housing, hole distance 63 mm (Z 119.082)
11034121	Spring coupling for encoders with ø58 mm housing, hole distance 68 mm (Z 119.073)
10165157	Spring coupling for encoders with ø58 mm housing, hole distance 73 mm (Z 119.072)
10147837	Spring coupling for one-side attachment, length 35 mm (Z 119.050)
11034106	Spring coupling for motor's fan guard (Z 119.053)
11034123	Spring coupling for one-side attachment, length 115 mm (Z 119.076)

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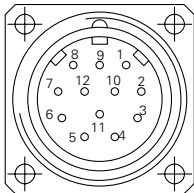
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Trigger level	
BiSS C	Circuit
BiSS C-Clock	RS422 Terminating resistor 220 Ω
BiSS C-Data	RS422

Terminal assignment		
Pin	Core colour	Assignment
1	brown	UB
2	black	GND
3	blue	MA+
4	beige	SLO+
5	green	–
6	yellow	SLO-
7	violet	MA-
8	brown/yellow	–
9	pink	–
10	black/yellow	–
11 -12	–	–



Please use cores twisted in pairs (for example clock+ / clock-) for extension cables of more than 10 m length.

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Dimensions

