

Hafenlogistik eines Stahlwerkes



RSG 10FP - Profibus DP

Absolute multi-turn encoder with stainless steel cover

- shockproof up to 200 g
- very high bearing load
- protection class IP 67
- optional with cooling or heating
- Singleturn resolution up to 18 Bit
- Multiturn resolution up to 31 Bit

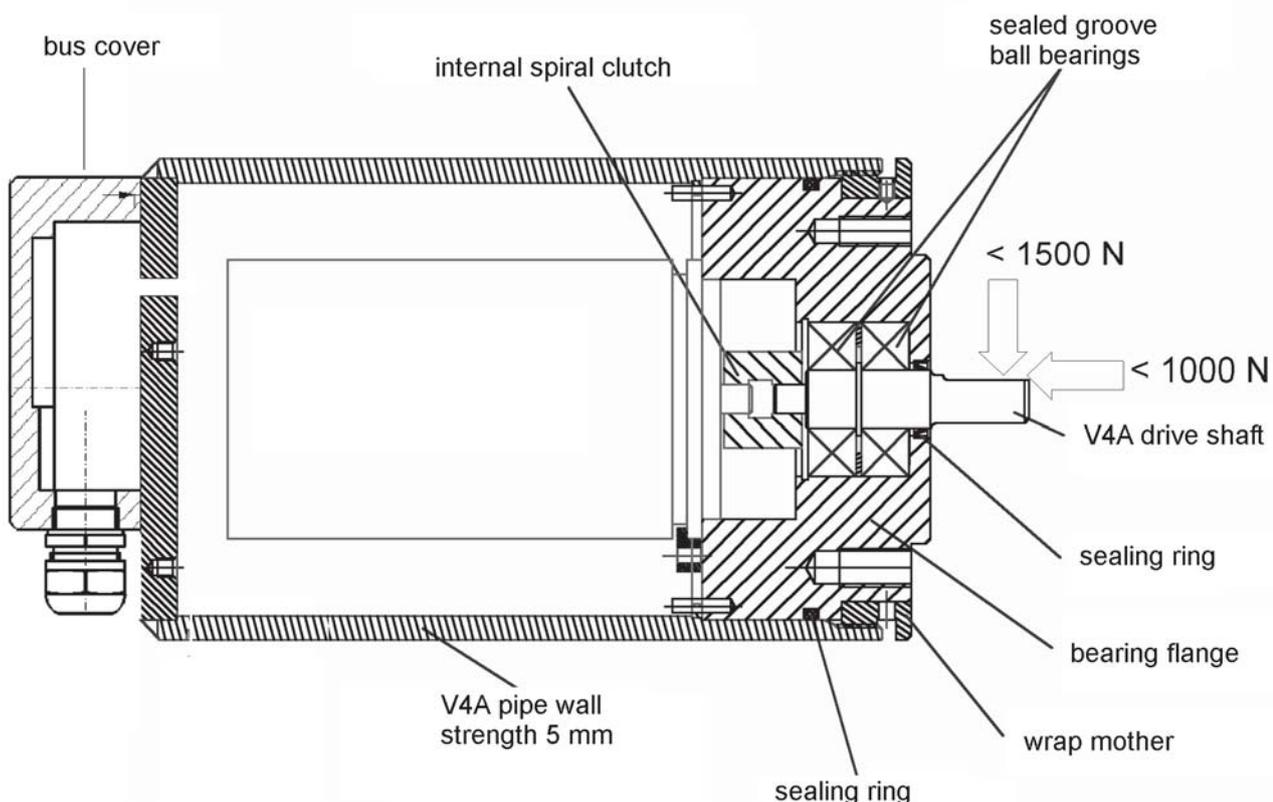
The shaft encoder system **RSG 10** was especially constructed for use under the conditions of heavy and plant making industries. The considerably lowers the costs of the mechanical adaption of the encoder, as a high efficient measuring system, to the different constructions.

System **RSG 10** was developed in close cooperation with engineers of electrical maintenance and plant making departments of the heavy industries. Because of this the already known dimensions of the standard shaft encoder system have been maintained. The system stays compatible to the mostly required encoders, inspite of its very high mechanical resistivity.

Because of the extremely high mechanical and atmospheric loads all parts have been manufactured in stainless steel (**V4A 1.4571**).

The high protection class of IP 67 and the very high bearings loads of 100 kg axial and 150 kg radial ease the use of this encoder under the conditions of the heavy and plant making industries. Additionally the internal encoder is separated form the shaft of the protection cover by means of a coupling, that e.g. guarantees a protection of the internal encoder shaft against shocks.

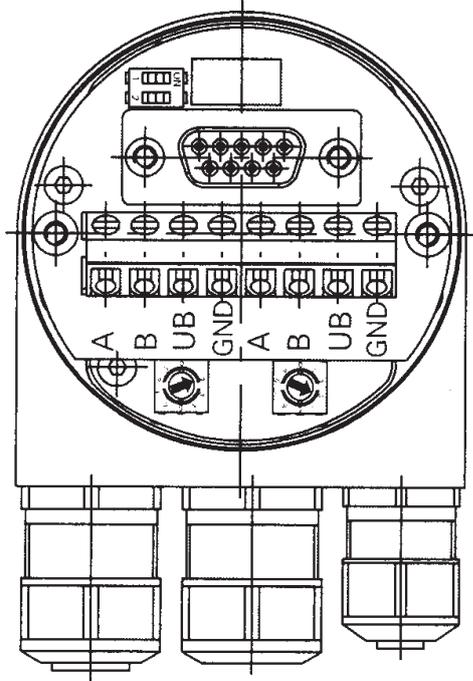
An additional protection cover is not necessary even under the conditions of heavy industries.



Technical data	
Code	Binary
Max. resolution	Singleturn 10 Bit = 1.024 S/T 13 Bit = 8.192 S/T 18 Bit = 262.144 S/T Multiturn 26 Bit = 1.024 S/T x 65.536 T 29 Bit = 8.192 S/T x 65.536 T 31 Bit = 262.144 S/T x 8.192 T
Electrical data	
Operating voltage	UB = 10...30 VDC
Current consumption	Max. 120 mA (w/o load), at 24 VDC
Code change frequency	Max. 26 MHz
Accuracy	0,025 ° with 400 kHz 0,05° with 800 kHz
Mechanical data	
Speed (mechanical)	≤ 10.000 min ⁻¹
Speed (electrical)	≤ 6.000 min ⁻¹
Start-up torque	< 0,015 Nm
Shaft loading	< 1.500 N radial, < 1.000 N axial
Moment of inertia	10 ⁻⁴ rad/ s ²
Material	
Housing	V4A 1.4571
Flange	V4A 1.4571
Bus cover	V4A 1.4571
Weight	approx. 5,4 kg
Ambient conditions	
Vibration	IEC 68 Teil 2 - 6 ≤ 200 ms ⁻² (16...2000 Hz)
Shock	DIN EN 600068-2-27 ≤ 2.000 ms ² (6 ms)
Operating temperature	- 20...+ 85° C
Humidity	Max. relative humidity 95 % no-condensing
Protection type	IP 67
Interference resistance	DIN EN 61000-6-2
Emitted interference	DIN EN 61000-6-4
Profibus-DP characteristic	
Bus protocol	Profibus DP
Profibus-Features	Device Class 1 and 2
Data Exch. functions	Input: Position value Output: Preset value
Preset value	With the „Preset“ parameter the encoder can be set to a desired actual value that corresponds to the defined axis position of the system.
Parameter functions	Rotating direction With the operating parameter the rotating direction for which the output code is to increase or decrease can be parameterized.

Scaling	The steps per revolution and the total revolution can be parameterized.
Diagnosis	The following is monitored during operation: - Consistency test of code - Exceeding of the permissible signal frequency - LED failure, aging - Receiver failure - Code disk, glass breakage - Power supply of electronic gear unit
Default setting	User address 00
Rotating directions	Clockwise (cw) when shaft is viewed from the front (parameterizable)

View inside bus cover

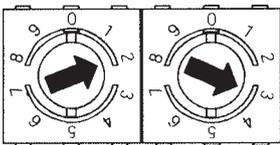


Contact Description

- A Negative serial data line, Pair 1 and Pair 2
- B Positive serial data line, Pair 1 and Pair 2
- UB Supply voltage 10...30 VDC
- GND Ground contact for UB

(Terminals with the same designation are internally interconnected)

Settings of user address



Address can be set with rotary switch.
Example: User address 23

Settings of terminating resistors



ON = Last user
OFF = User X

Type key of encoder

Encoder type	Steps/T - Turns	Voltage	Code	Flange	Options
RSG10 FP	10 = 10 Bit 1.024 S/T x 1 T	3 = 10 - 30 VDC	B = Binary	V1 = 10 mm shaft servo flange	L = air cooling
RSG10 FP	26 = 26 Bit 1.024 S/T x 65.536 T				W = water cooling
RSG10 FP	13 = 13 Bit 8.192 S/T x 1 T				H = electrical heating
RSG10 FP	29 = 29 Bit 8.192 S/T x 65.536 T				
RSG10 FP	18 = 18 Bit 262.144 S/T x 1 T				
RSG10 FP	31 = 31 Bit 262.144 S/T x 8.192 T				
RSG10 FP	—	3	B	V1	—

Dimension and cutout RSG 10 FP Profibus

