

Qualität - made in Germany



## RSF 59 Co - CANopen

Absolute multi-turn encoder

- shockproof up to 200 g
- Parameterizable operating modes
- Parameterizable preset value
- Parameterizable scaling
- Singleturn resolution up to 18 Bit
- Multiturn resolution up to 31 Bit

### Technical data

Code	Binary
<b>Max. resolution</b>	<b>Singleturn</b> 18 Bit = 262.144 S/T <b>Multiturn</b> 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	26 MHz
Accuracy	± 0,01°

### Mechanical data

Speed (mechanical)	≤ 10.000 min <sup>-1</sup>
Speed (electrical)	≤ 6.000 min <sup>-1</sup>
Start-up torque	< 0,015 Nm
Shaft loading	< 40 N radial, < 20 N axial
Moment of inertia	2 x 10 <sup>-6</sup> kgm <sup>2</sup>

### Material

Housing	Steel
Flange	Aluminium
Bus cover	Aluminium
Weight	approx. 600 g

### Ambient conditions

Vibration	DIN EN 60068-2-6 ≤ 200 ms <sup>-2</sup> (16...2000 Hz)
Shock	DIN EN 60068-2-27 ≤ 2.000 ms <sup>2</sup> , 6 ms
Operating temperature	- 20...+ 85° C
Storage temperature	- 20...+ 85° C
Humidity	Max. relative humidity 95 % no-condensing
Protection type	IP 65
Interference resistance	DIN EN 61000-6-2
Emitted interference	DIN EN 61000-6-4

### CANopen features

Bus protocol	CANopen
Device profile	CANopen - CiA DSP 406
CANopen features	Device Class 2
Operating modes (with SDO progr.)	Polling Mode (asynch, via SDO) Cyclic Mode (asynch-cyclic) The encoder cyclically sends the current process actual value without a request by a master. The cycle time can be parameterized for values between 1 and 65535 ms. Synch Mode (synch-cyclic) The encoder sends the current actual process value after receiving a synch telegram sent by a master. The synch counter in the encoder can be parameterized so that the position value is not sent until after a defined number of synch telegrams. Acyclic Mode (synch-acyclic)
Preset value	With the „Preset“ parameter the encoder can be set to a desired actual process value that corresponds to the defined axis position of the system. The offset value between the encoder zero point and the mechanical zero point of the system is saved in the encoder.
Rotating direction	With the operating parameter the rotating direction in 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        10 kbit/s, node number 0

**Contact Description**

CAN\_L            Negative serial data line, Pair 1 and Pair 2

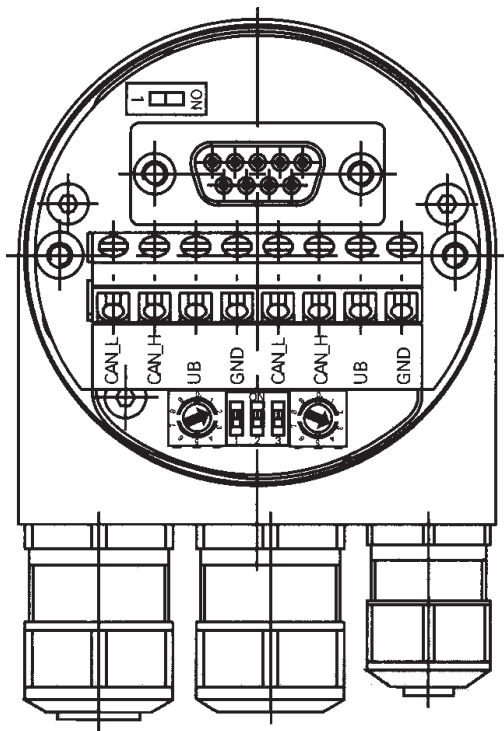
CAN\_H            Positive serial data line, Pair 1 and Pair 2

UB                Supply voltage 10...30 VDC

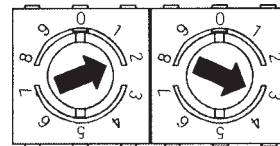
GND              Ground contact for UB

(Terminals with the same designation are internally interconnected)

**View inside bus cover**

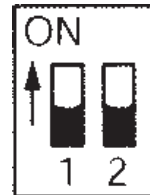


**Settings of user address**



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	Output
RSF 59 Co	18 = 18 Bit 264.144 S/T x 1 T	3 = 10 - 30 VDC	B = Binary	W1 = 10 mm shaft clamping flange	DS = Bus cover sideways movement out
RSF 59 Co	31 = 26 Bit 262.144 S/T x 8.192T				
RSF 59 Co	—	3	B	W1	DS

# Dimension and cutout RSF 59 CANopen

10 mm shaft, clamping flange

