

Quality - made in Germany



## RSF 59 D - DeviceNet

### 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

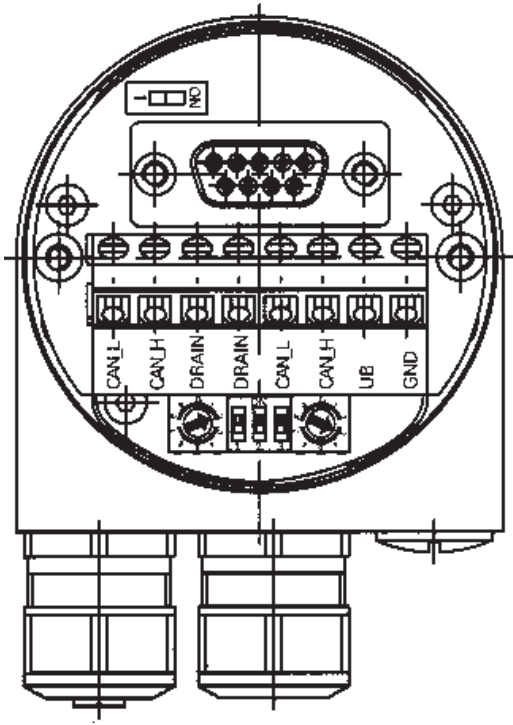
#### Ambient conditions

Vibration	DIN EN 60068-2-6 ≤ 200 ms <sup>-2</sup> (16...2000 Hz)
Shock	DIN EN 600068-2-27 ≤ 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

#### DeviceNet features

Bus protocol	DeviceNet
Device profile	Proposal: Device Profil for Encoders V 1.0
Operating modes	I/O-Polling, Cyclic and Change of State.
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

## View inside bus cover

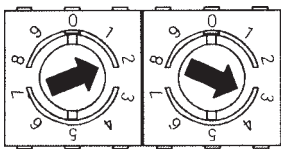


## Contact Description

CAN_L	Negative serial data line, Pair 1 and Pair 2
CAN_H	Positive serial data line, Pair 1 and Pair 2
DRAIN	Shield contact
UB	Supply voltage 10...30 VDC
GND	Ground contact for UB

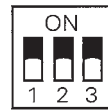
(Terminals with the same designation are internally interconnected)

## Settings of user address



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

## Settings of baud rate DeviceNet



Baud rate	Setting Dip Switch		
	1	2	3
125 kBit/s	X	OFF	OFF
250 kBit/s	X	OFF	ON
500 kBit/s	X	ON	OFF
125 kBit/s*	X	ON	ON

## Settings of terminating resistors



ON = Last user  
OFF = User X

X = no function

\* This switch setting is not defined, and is therefore set internally to the default value 125 kbits/s

## Type key of Encoder

Encoder type	Steps/T - Turns	Voltage	Code	Flansch	Output
RSF 59 D	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 D	31 = 26 Bit 262.144 S/T x 8.192 T				
RSF 59 D	—	3	B	W1	DS

# Dimension and cutout RSF 59 DeviceNet

10 mm shaft, clamping flange

