

Quality - made in Germany



## RSHF 75 CAN

**Absolute multi-turn encoder**

- shockproof up to 200 g
- Parameterizable operating modes
- Parameterizable preset value
- Parameterizable scaling
- Singleturn resolution up to 13 Bit
- Multiturn resolution up to 29 Bit

### Technical data

Code	Binary
<b>Max. resolution</b>	<b>Singleturn</b>
	10 Bit = 1.024 S/T
	13 Bit = 8.192 S/T
	<b>Multiturn</b>
	26 Bit = 1.024 S/T x 65.536 T
	29 Bit = 8.192 S/T x 65.536 T

### Electrical data

Operating voltage	UB = 10...30 VDC
Current consumption	Max. 100 mA (w/o load), at 24 VDC
Code change frequency	800 kHz
Accuracy	0,025 ° with 400 kHz 0,05° with 800 kHz

### Mechanical data RSHF 75

Speed (mechanical)	≤ 6.000 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>
Weight	approx. 700 g

### Mechanical data RSHF 90

Speed (mechanical)	≤ 3.800 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	200 x 10 <sup>-6</sup> kgm <sup>2</sup>
Weight	approx. 830 g

### Mechanical data RSHF 120

Speed (mechanical)	≤ 2.000 min <sup>-1</sup> upper on request
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	1100 x 10 <sup>-6</sup> kgm <sup>2</sup>
Weight	approx. 1.200 g

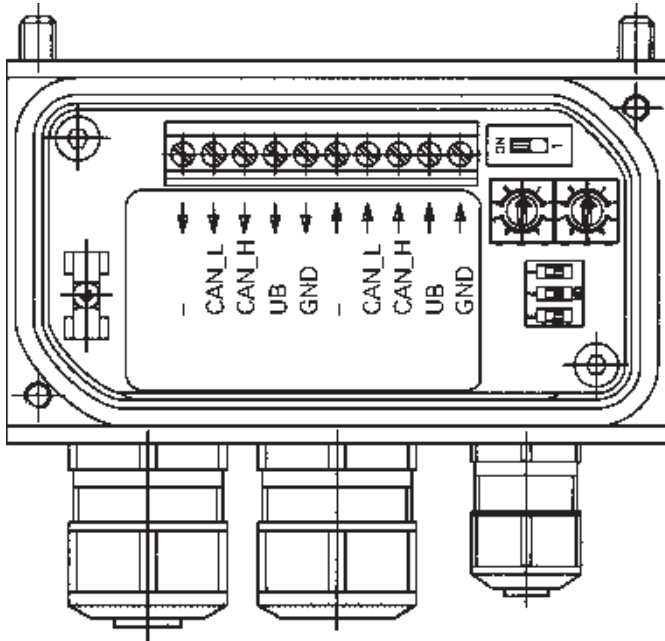
### Material

Housing	Steel
Flange	Aluminium
Bus cover	Aluminium

### 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 54
Interference resistance	DIN EN 61000-6-2
Emitted interference	DIN EN 61000-6-4

## View inside bus cover

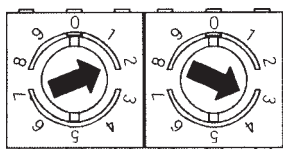


### Contact Description

- CAN\_L Negative serial data line, Pair 1 and Pair 2
- CAN\_H Positive serial data line, Pair 1 and Pair 2
- UB Supply voltage 10...30 VDC
- GND Ground contact for UB

(Terminals with the same designation are internally interconnected)

### Settings of user address



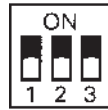
Address can be set with rotary switch.  
Example: User address 23

### Settings of terminating resistors



ON = Last user  
OFF = User X

## Settings of baud rate CAN



Baud rate	Setting dip switch		
	1	2	3
10 kBit/s	OFF	OFF	OFF
20 kBit/s	OFF	OFF	ON
50 kBit/s	OFF	ON	OFF
125 kBit/s	OFF	ON	ON
250 kBit/s	ON	OFF	OFF
500 kBit/s	ON	OFF	ON
800 kBit/s	ON	ON	OFF
1 MBit/s	ON	ON	ON

### CAN features

Bus protocol  
Operating modes

CAN

Polling Mode (asynch)  
The encoder sends data on request by another subscriber.  
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 65'535 ms.

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

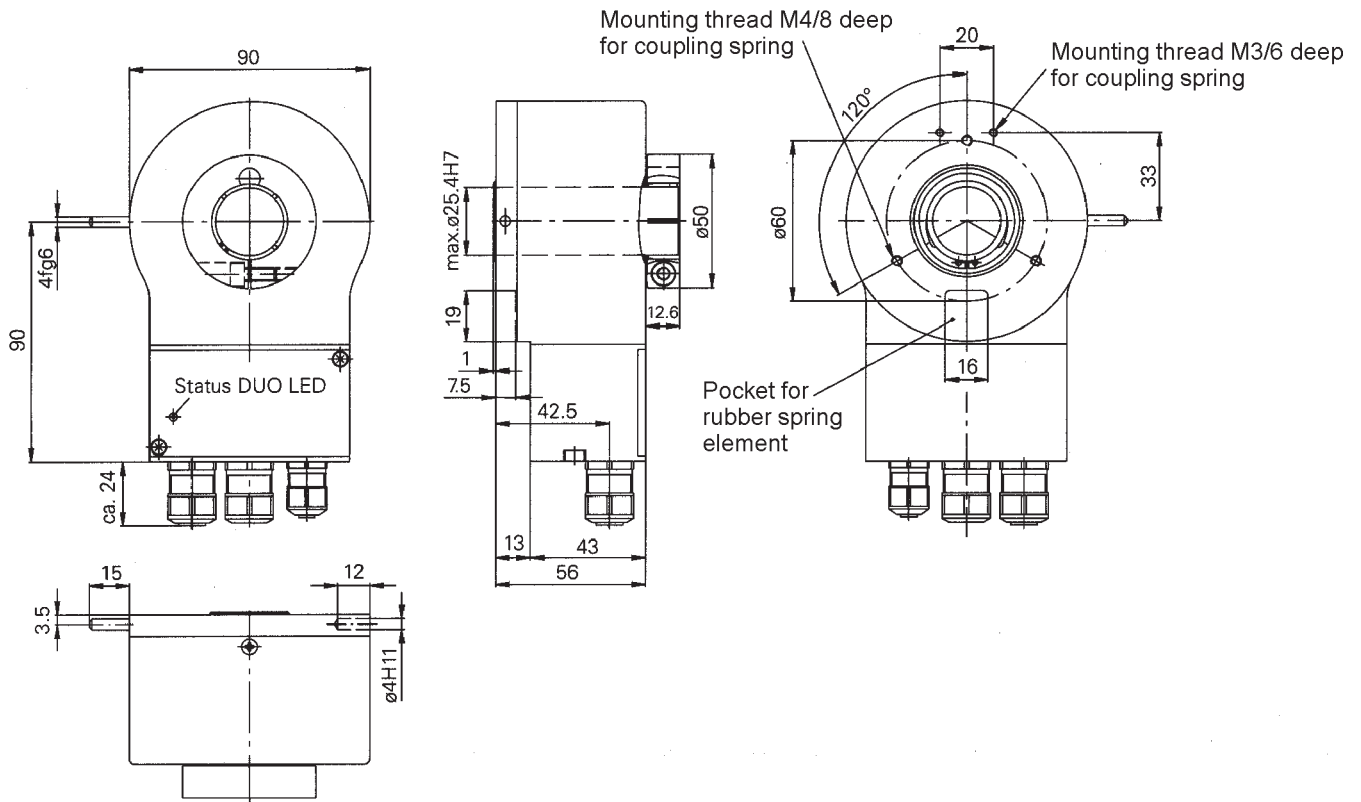
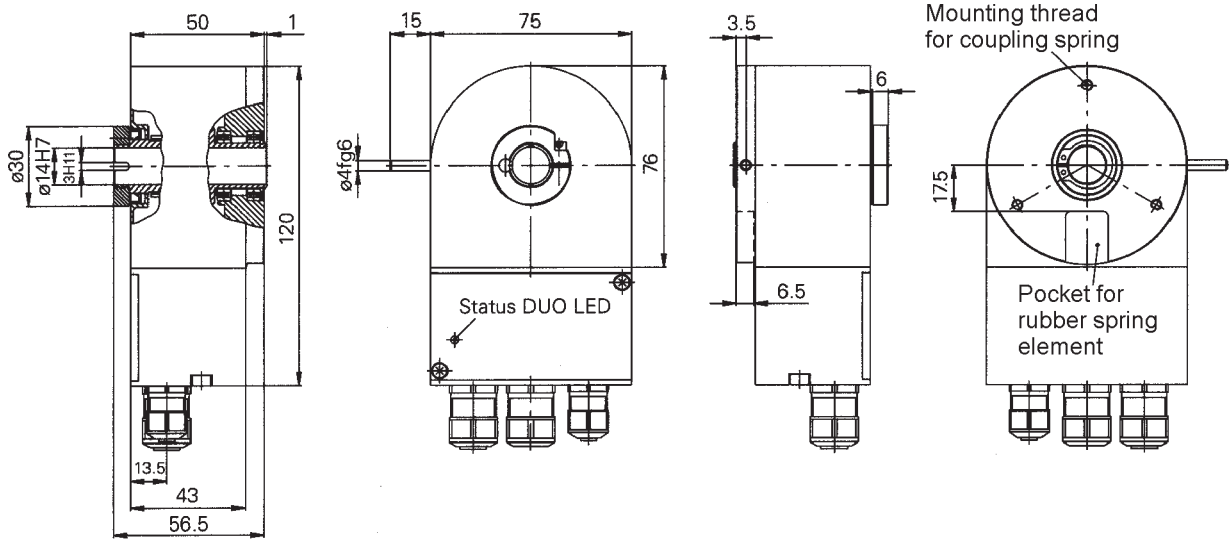
The following is monitored during operation:

- 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

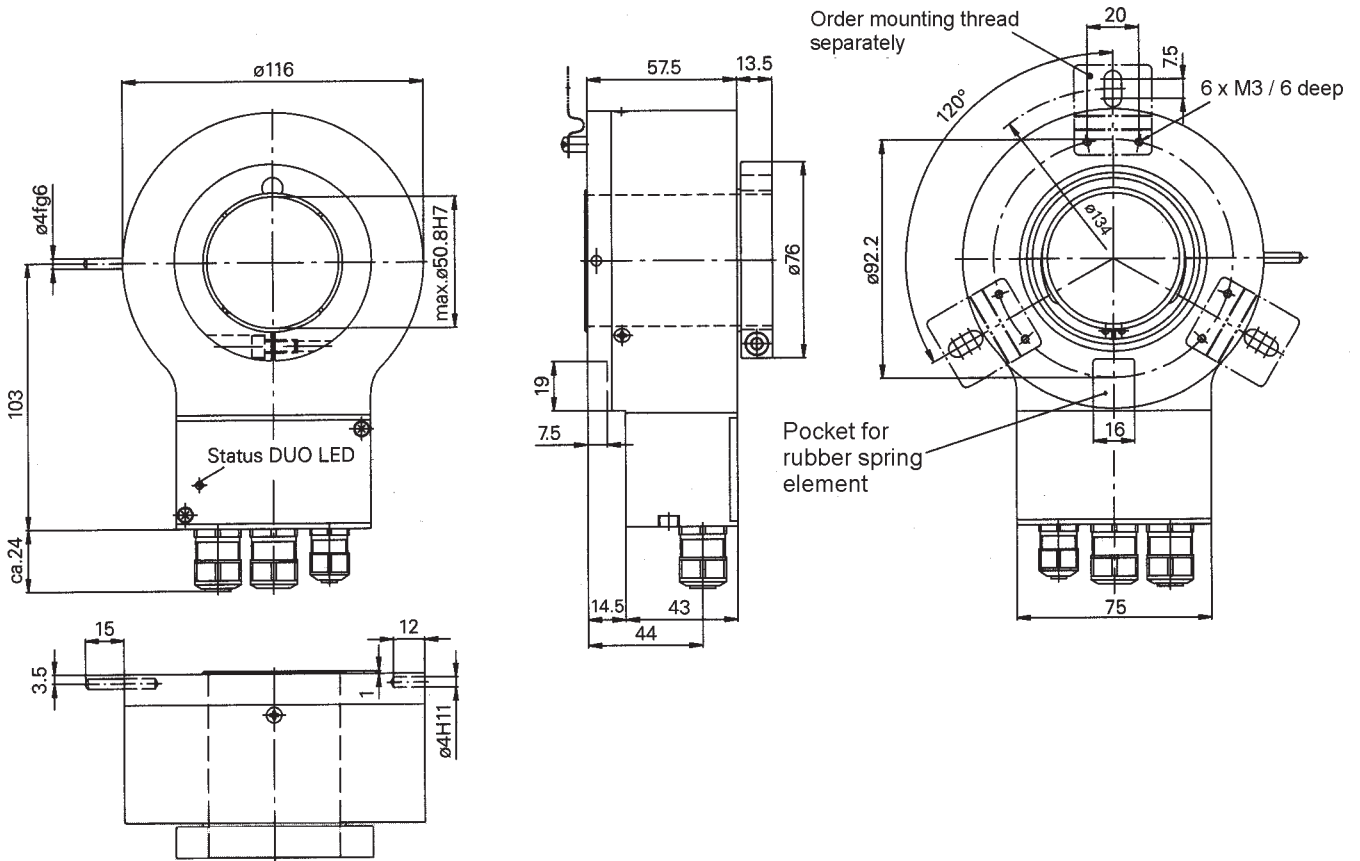
Default setting

10 kbit/s, node number 0

# Dimension and cutout RSHF 75 CAN and RSHF 90 CAN



# Dimension and cutout RSHF 120 CAN



## Type key of Encoder

Encoder type	Steps/T - Turns	Voltage	Code	Flange	Output
RSHF 75 C	10 = 10 Bit 1.024 S/T x 1T	3 = 10 - 30 VDC	B = Binary	1 = $\varnothing$ 14 mm, threaded pin	DS = Bus cover sideways movement out
RSHF 75 C	16 = 16 Bit 1.024 S/T x 65.536T			2 = $\varnothing$ 12 mm, clamping collar	
RSHF 75 C	13 = 13 Bit 8.192 S/T x 1 T			3 = $\varnothing$ 14 mm, clamping collar	
RSHF 90 C	29 = 29 Bit 8.192 S/T x 65.536T			up to 25,4 mm on request	
RSHF 120 C				up to 50,8 mm on request	
RSHF___C	_____	3	B	_____	DS