

Quality - made in Germany



## RSHF 75 P - Profibus DP

### 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
Max. resolution	<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 RSH 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 RSH 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 RSH 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

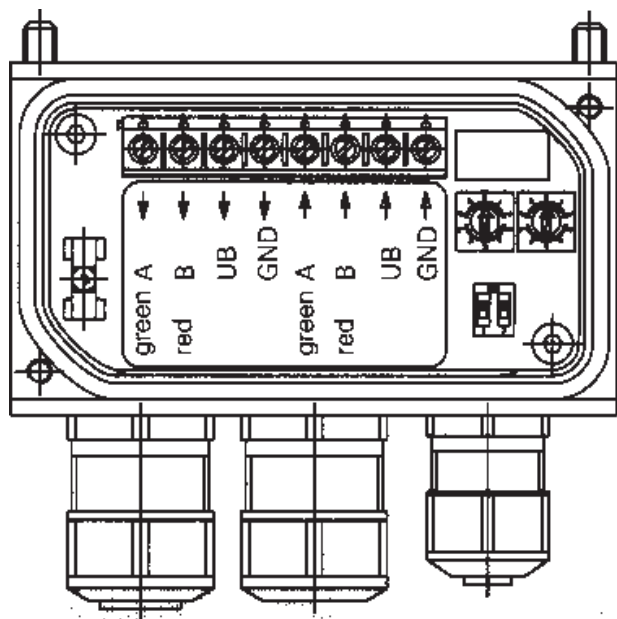
#### Material

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

## 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

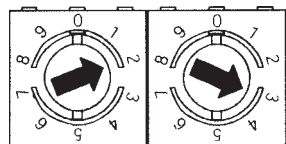
(Terminals with the same designation are internally interconnected)

Option additional incremental tracks A + B, 5pol. plug, 10...30 VDC, 30 mA.

## Profibus-DP characteristics

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 funktions	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.
Step	output of speed in T/min
Diagnosis	The following is monitored during operation:  <ul style="list-style-type: none"> <li>- Consistency test of code</li> <li>- Exceeding of the permissible signal frequency</li> <li>- LED failure, aging</li> <li>- Receiver failure</li> <li>- Code disk, glass breakage</li> <li>- Power supply of electronic gear unit</li> </ul>
Default setting	User address 00
Rotating directions	Clockwise (cw) when shaft is viewed from the front (parameterizable)

## Settings of user address



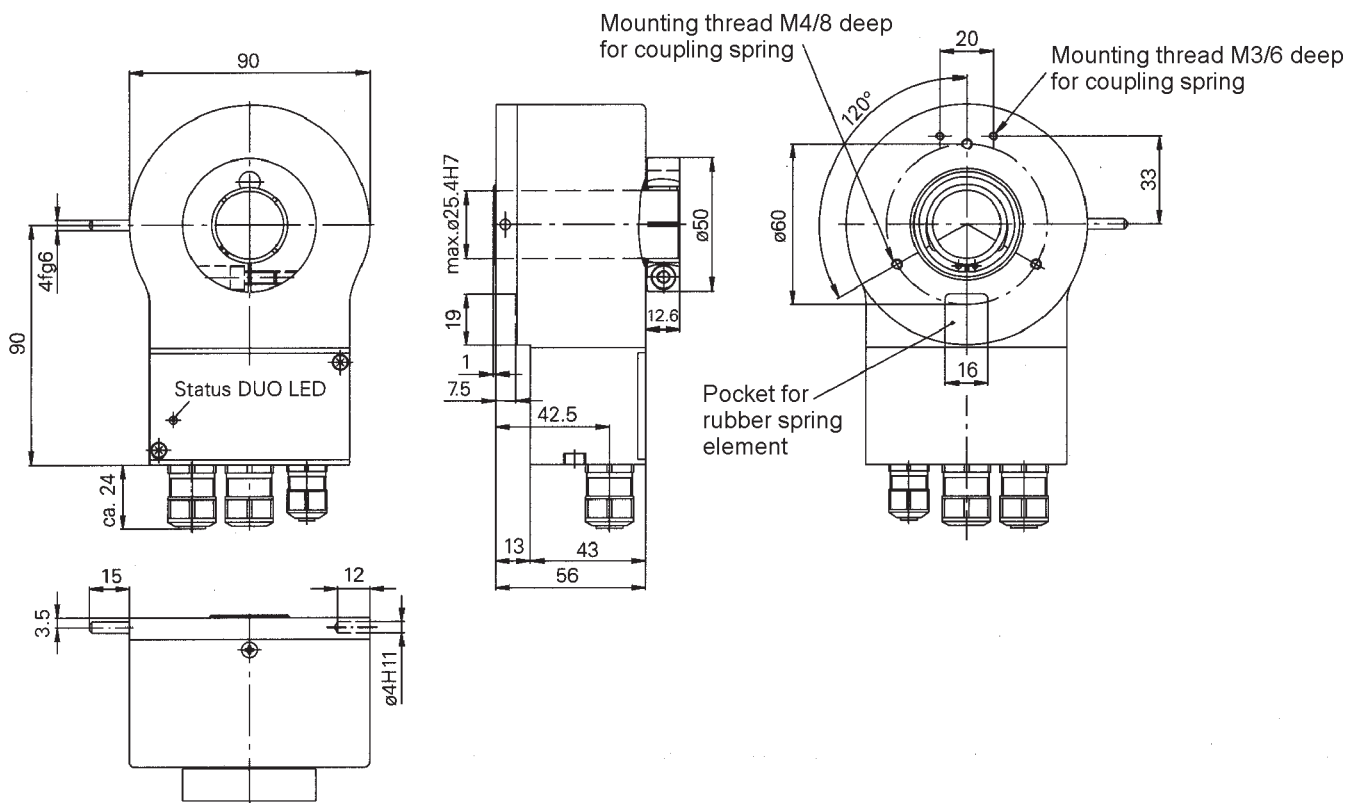
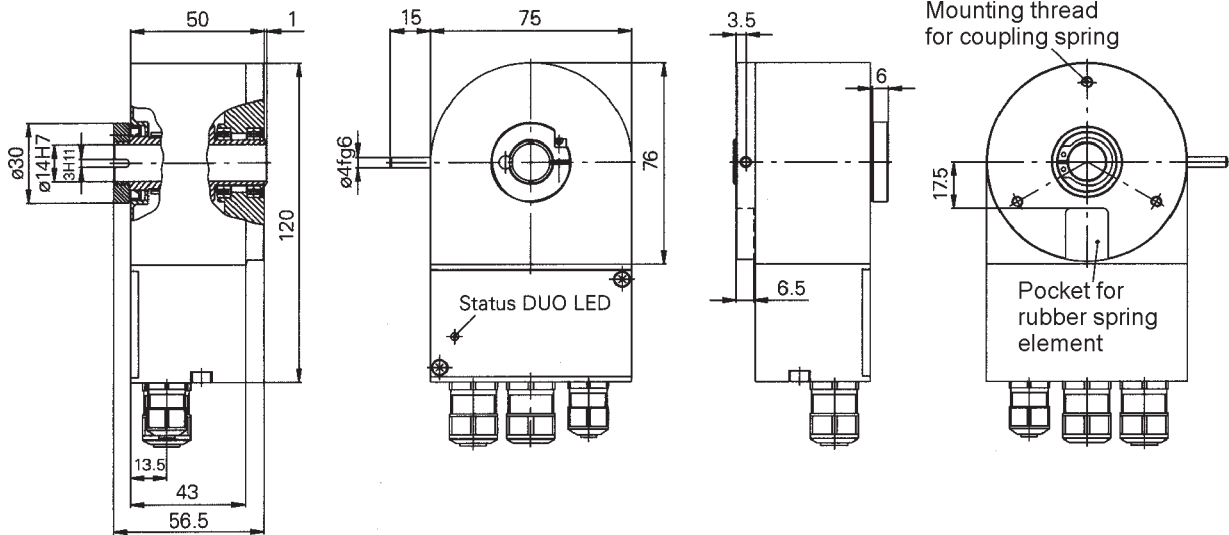
Address can be set with rotary switch.  
Example: User address 23

## Settings of terminating resistors

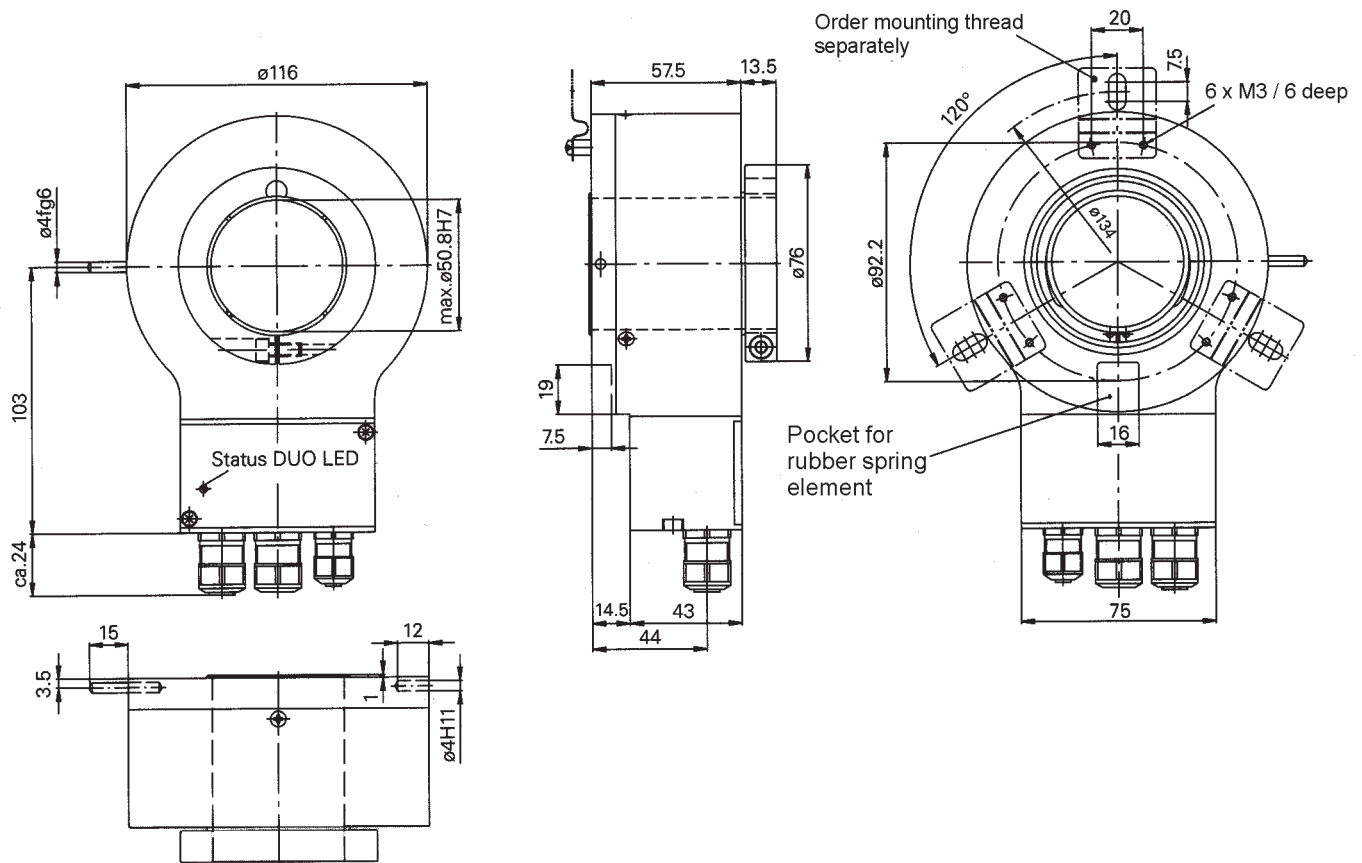


ON = Last user  
OFF = User X

# Dimension and cutout RSHF 75 and RSHF 90 Profibus



# Dimension and cutout RSHF 120 Profibus



## Type key of Encoder

Encoder type	Steps / T - Turns	Voltage	Code	Flange	Output
RSHF 75 P	10 = 10 Bit 1.024 S/T x 1 T	3 = 10 - 30 VDC	B = Binary	1 = $\varnothing$ 14 mm, threaded pin	DS = Bus cover sideways movement out
RSHF 75 P	26 = 26 Bit 1.024 S/T x 65.536 T			2 = $\varnothing$ 12 mm, clamping collar	
RSHF 75 P	13 = 13 Bit 8.192 S/T x 1 T			3 = $\varnothing$ 14 mm clamping collar	
RSHF 90 P	29 = 29 Bit 8.192 S/T x 65.536 T			bis 25,4mm on request	
RSHF 120 P				bis 50,8 mm on request	
RSHF__P	_____	3	B	_____	DS