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RSHF 75 D DeviceNet

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	**Singleturn**
	10 Bit = 1.024 S/T
	13 Bit = 8.192 S/T
	Multiturn
	26 Bit = 1.024 S/Tx 65.536 T
	29 Bit = 8.192 S/Tx 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
Accurracy	0,025 ° with 400 kHz
	0,05° with 800 kHz

Mechanical data RSHF 75

Speed (mechanical)	≤ 6.000 min $^{-1}$
Speed (electrical)	≤ 6.000 min $^{-1}$
Start-up torque	< 0,015 Nm
Shaft loading	< 40 N radial,
	< 20 N axial
Moment of inertia	2 x 10^{-6} kgm^2
Weight	approx. 700 g

Mechanical data RSHF 90

Speed (mechanical)	≤ 3.800 min $^{-1}$
Speed (electrical)	≤ 6.000 min $^{-1}$
Start-up torque	< 0,015 Nm
Shaft loading	< 40 N radial,
	< 20 N axial
Moment of inertia	200 x 10^{-6} kgm^2
Weight	approx. 830 g

Mechanical data RSHF 120

Speed (mechanical)	≤ 2.000 min $^{-1}$
	upper on request
Speed (electrical)	≤ 6.000 min $^{-1}$
Start-up torque	< 0,015 Nm
Shaft loading	< 40 N radial,
	< 20 N axial
Moment of inertia	1100 x 10^{-6} kgm^2
Weight	approx. 1.200 g

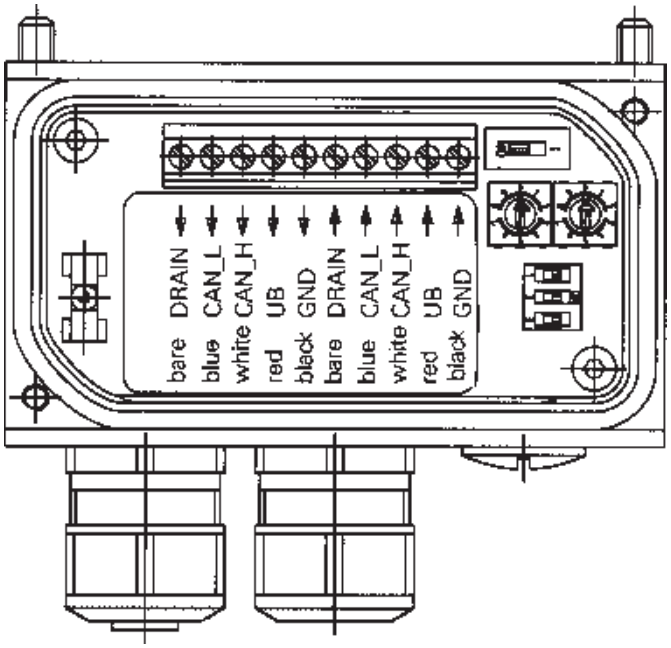
Material

Housing	Steel
Flange	Aluminium
Bus cover	Aluminium

Ambient conditions

Vibration	DIN EN 60068-2-6
	≤ 200 ms^{-2} (16...2000 Hz)
Shock	DIN EN 600068-2-27
	≤ 2.000 ms^2, 6 ms
Operating temperature	- 20...+ 85° C
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



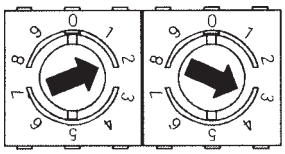
Contact Description

CAN_L	Negative serial data line, Pair 1 and Pair 2
CAN_H	Positive serial data line, Pair 1 and Pair 2
DRAIN	Shield contact
UB	Supply voltage10...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.

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 DeviceNet

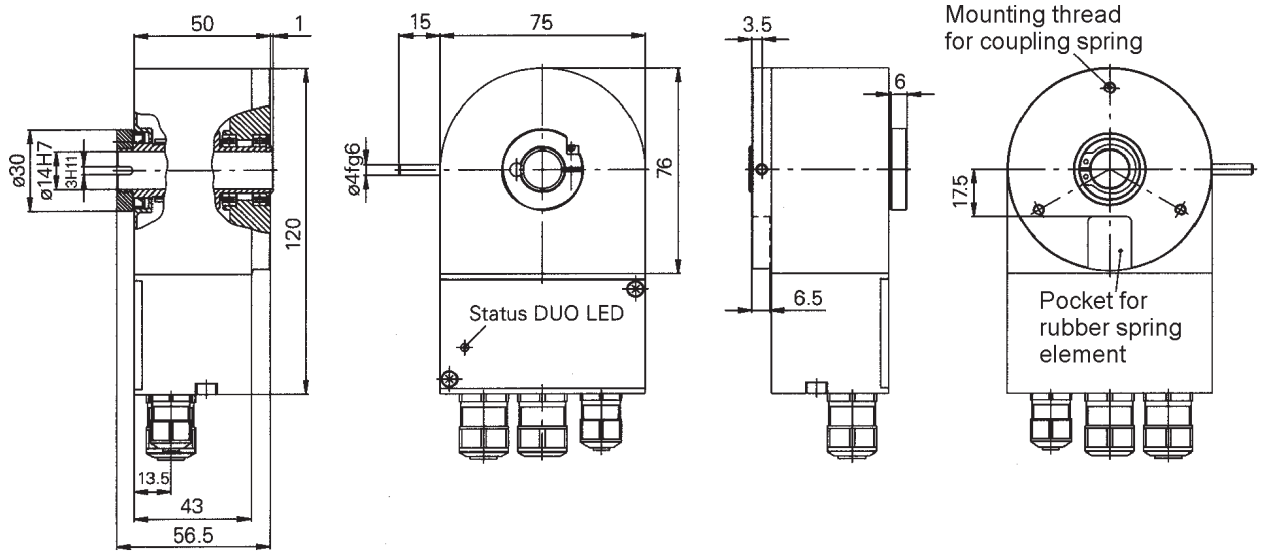
Baud rate	Setting Dip Switch		
	1	2	3
125 kBit/s	X	OFF	OFF
250 kBit/s	X	OFF	ON
500 kBit/s	X	ON	OFF
125 kBit/s*	X	ON	ON

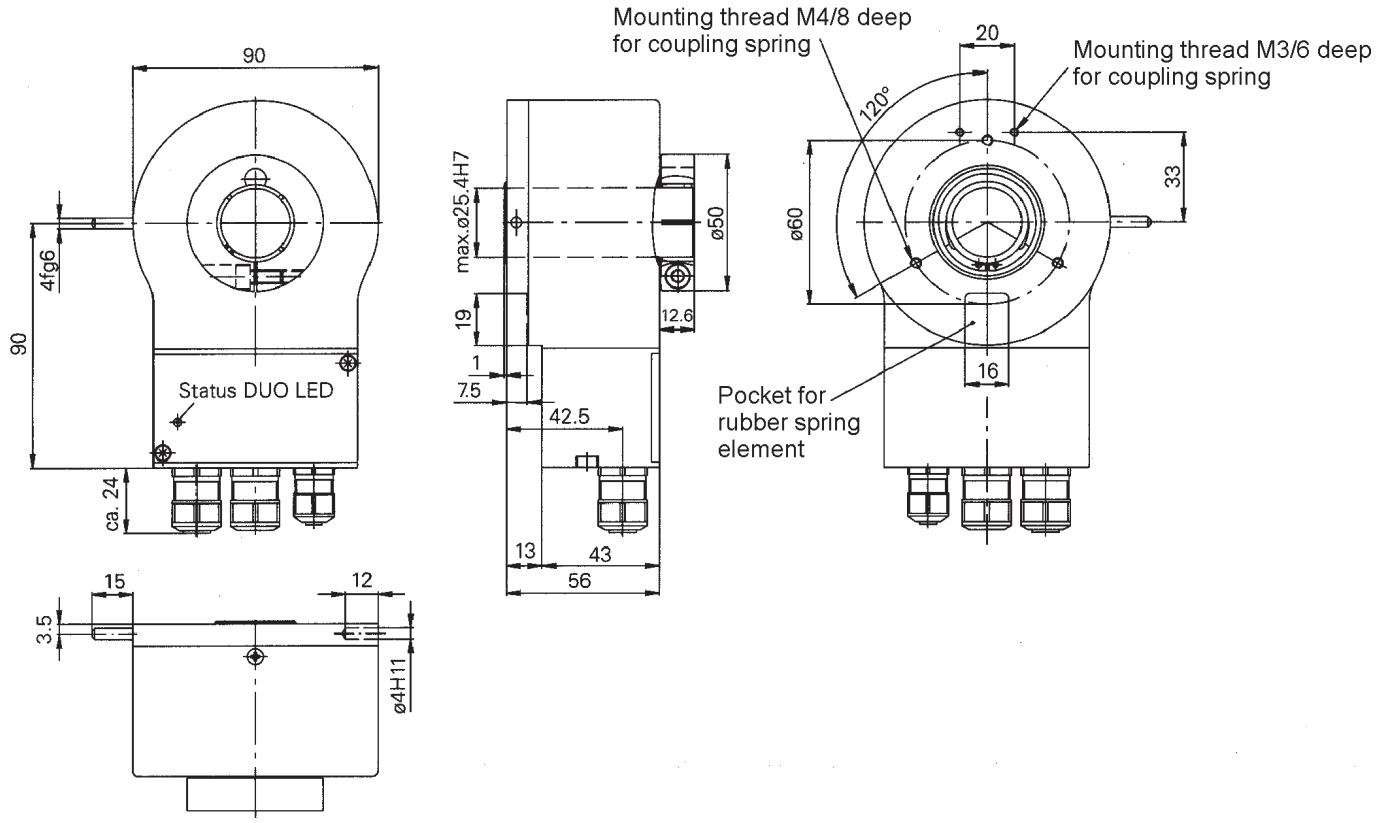
X = no function
* This switch setting is not defined, and is therefore set internally to the default value 125 kbit/s.

DeviceNet features

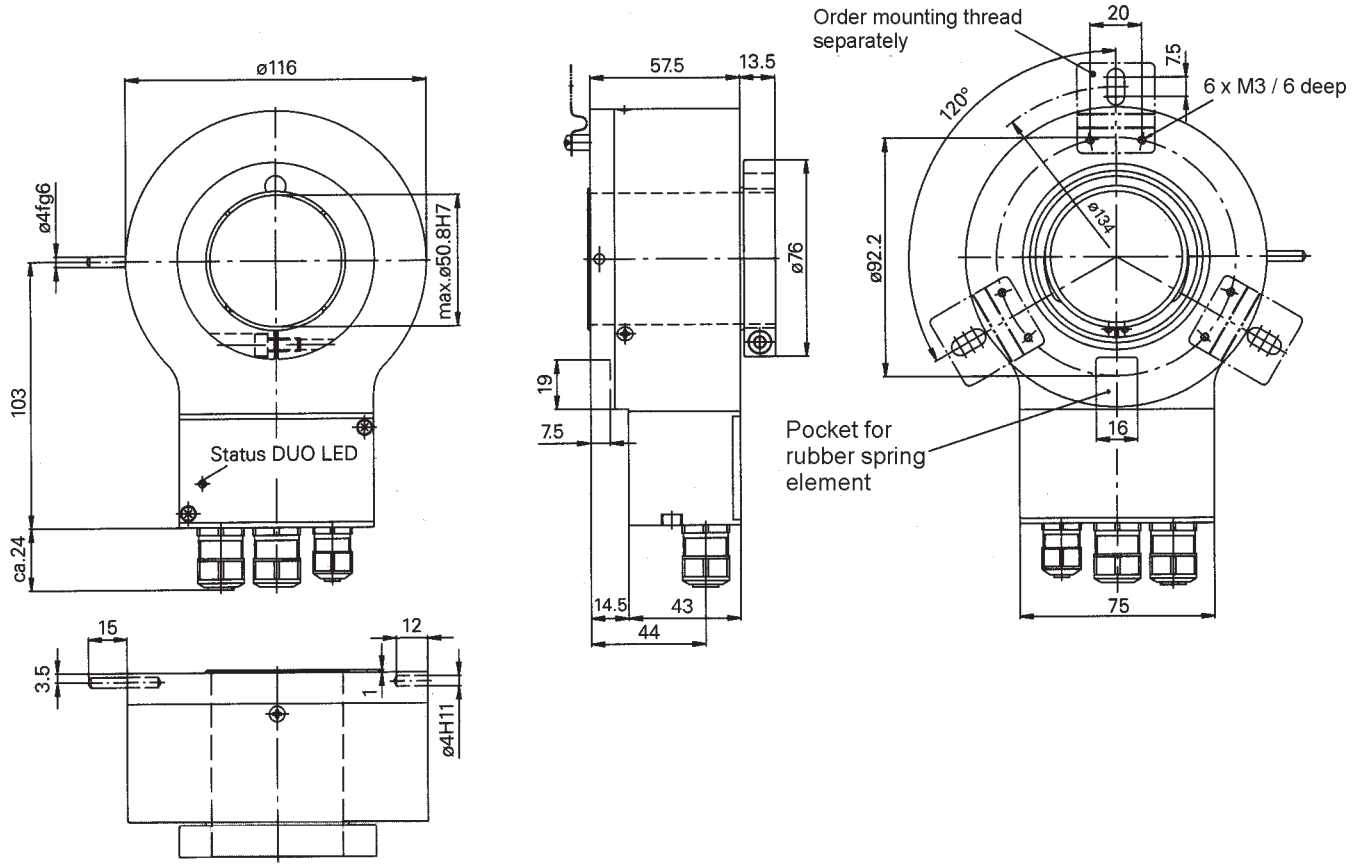
Bus protocol	DeviceNet
Device profile	Proposal: Device Profil for Encoders V 1.0
Operating modes	I/O-Polling, Cyclic and Change of State
Preset value	With the „Preset“ parameter the encoder can be set to a desired actual process value that corresponds to the defined axis position of the system. The offset 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 revoltion 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 and RSHF 90 Device Net





Dimension and cutout RSHF 120 Device Net



Type key of encoder

Encoder type	Bit/Turn	Turns	Code	Voltage	Flange	Output
RSH 75 D		12 = 4096 T	B = Binary	3 = 10 - 30 VDC	1 = Ø 14 mm threaded pin	DS =Bus cover sideways movement out
RSH 75 D	13 = 8192 S/T				2 = Ø 12 mm, clamping collar	
RSH 75 D					3 = Ø 14 mm, clamping collar	
RSH 90 D					up to 25,4mm on request	
RSH 120 D					up to 50,8 m on request	
RSH____D	**13**	**12**	**B**	**3**	_____	**DS**