

# Absolute multi-turn hollow shaft encoder

## BOMH flexible – *Digitalizer*

### Profibus-DP, CANopen, DeviceNet, EtherCAT

#### features

- high resolution multi-turn encoder
  - 18 bit single-turn
  - 14 bit multi-turn
- modular bus cover
- simple mounting via servo flange
- programmable bus parameters
- programmable resolution and preset values



#### general data

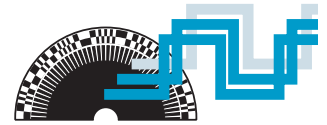
voltage supply	10 - 30 VDC
supply current no load	100 mA (at 24 VDC)
max. resolution single-turn multi-turn	Profibus-DP, DeviceNet 18 bit (1 step = 5") 13 bit (8'192 revolutions) CANopen
single-turn multi-turn	18 bit (1 step = 5") 14 bit (16'384 revolutions)
repeatability	0,012°
output circuit	RS 485
preset	in state data-exchange encoder can be set to a predefined position
address	selectable via dip switches
baud rate	selectable via dip switches
direction of rotation	looking at the flange, position counts up as the shaft rotates clockwise (CW), programmable

#### mechanical data

max. revolutions	mech. 6'000 rpm electr. 6'000 rpm
moment of inertia	typ. $18,4 \times 10^{-7}$ kgm <sup>2</sup>
torque	typ. 1,75 cNm (3'000 rpm / 20 °C / IP 42)
product life	depending on ambient conditions (typ. 10 <sup>9</sup> revolutions)
max. protection class	IP 65
material	housing: aluminum bus cover: zinc die cast
weight	approx. 650 g

#### ambient conditions

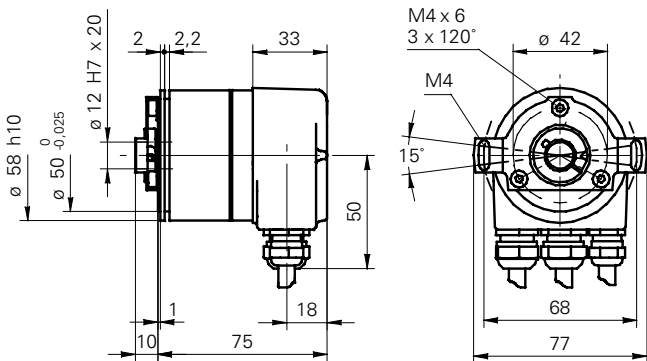
temperature range	-20...+85 °C
relative humidity	max. 95% non condensing
vibration (sine)	IEC 60068-2-6 ( $\leq 100$ m/s <sup>2</sup> / 10 - 2'000 Hz) 150 min per axis
vibration (random)	IEC 60068-2-64 ( $\leq 0,1$ g <sup>2</sup> /Hz / 20 - 1'000 Hz) 30 min per axis
shock	IEC 60068-2-27 ( $\leq 500$ m/s <sup>2</sup> / 11 ms) 10 pulses per axis and direction
noise immunity	EN 61000-6-2
emitted interference	EN 61000-6-3



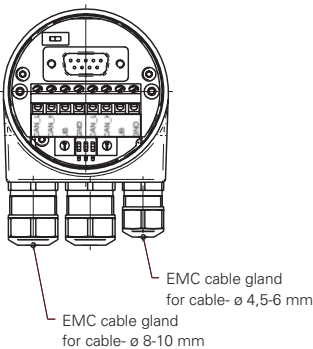
**Profibus-DP, CANopen, DeviceNet, EtherCAT**

**dimensions**

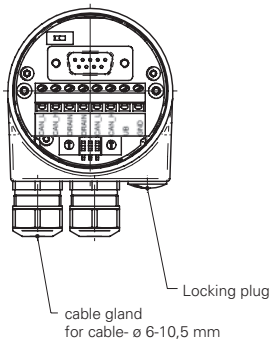
**-E** bus cover



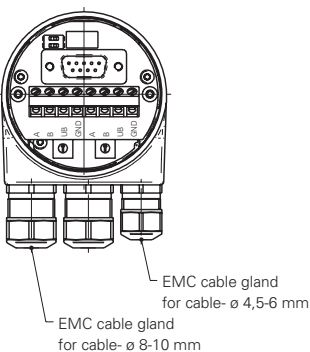
**-B** bus cover



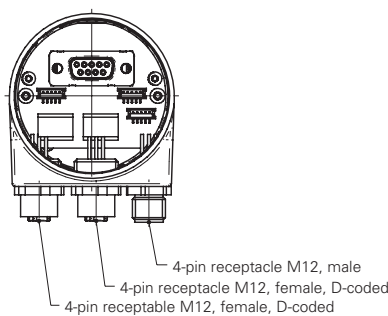
**-D** bus cover



**-P** bus cover



**-E** bus cover



**order designation**

**BOMH 58S1N 24C**   **G** base encoder without bus cover

**BOMH 58S1N 24**    complete encoder

- connection
- D** bus cover with PG radial (for interface **B,D,P**)
- E** bus cover with connector M12 radial (for interface **E**)
- shaft
- B2** hollow shaft 12 mm IP 42 with clamping ring
- P2** hollow shaft 12 mm IP 65 with clamping ring
- I2** hollow shaft 12 mm IP 42 with clamping ring and spring plate
- M2** hollow shaft 12 mm IP 65 with clamping ring and spring plate
- resolution

**single-turn / multi-turn**  
**18 / 14** bit CANopen, EtherCAT  
**18 / 13** bit Profibus-DP, DeviceNet  
 other resolutions programmable

- interface
- B** CANopen
- D** DeviceNet
- P** Profibus-DP
- E** EtherCAT

**accessories**

CD-ROM with GSD-/EDS-/XML-files and manuals	part nr. 147362
bus cover for Profibus-DP	see chapter accessories
for CANopen	part nr. 140831
for DeviceNet	part nr. 140832
for EtherCAT	part nr. 140833
	part nr. 159110

cable EtherCAT M12 male-male, d-coded	
M12 straight, 5 m	part nr. 160565
spring plate set	part nr. 136635