

# Incremental hollow shaft encoders

## BHF/BHG

### Sine

#### features

- hollow shaft encoders with sine output
- end shaft mounting (BHF)
- through shaft mounting (BHG)
- various hollow shaft adapters
- small mounting depth

#### general data

voltage supply	5 VDC ±5%
max. supply current no load	typ. 100 mA
max. measuring steps	200'000 steps with electronic interpolation 10-fold and 4-fold evaluation (see page 4. 18)
pulse range	see order designation
max. switching frequency	160 kHz

#### mechanical data

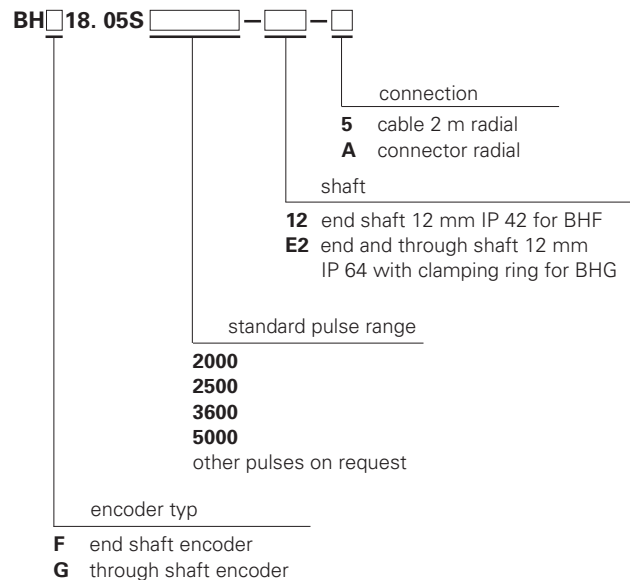
max. revolutions	12'000 rpm
moment of inertia	BHF typ. $13,6 \times 10^{-7}$ kgm <sup>2</sup> BHG typ. $18,5 \times 10^{-7}$ kgm <sup>2</sup>
torque	BHF typ. 0,93 cNm BHG typ. 3,7 cNm (3000 rpm / 20 °C)
product life	depending on ambient conditions (typ. 10 <sup>9</sup> revolutions)
max. protection class	shaft: IP 64 housing: IP 65
material	housing: aluminum with connection ref. <b>-5</b> : steel flange: aluminum
weight	approx. 300 g

#### ambient conditions

temperature range	-20...+85 °C
relative humidity	max. 95% non condensing
vibration	IEC 60068-2-6 (≤ 100 m/s <sup>2</sup> / 10 - 200 Hz)
shock	IEC 60068-2-27 (≤ 500 m/s <sup>2</sup> / 11 ms)
noise immunity	EN 61000-6-2
emitted interference	EN 61000-6-3



#### order designation



Other versions on request.

#### accessories

connector for connection reference <b>-A</b>	
12-pin straight	part nr. 116717
cable with connector (pre-assembled)	
2 m	part nr. 130368
5 m	part nr. 130369
clamp set	part nr. 110616
torque pin	part nr. 107540
torque spring <sup>1)</sup>	part nr. 109520
spring plate set	part nr. 136635
couplings	see chapter accessories
electronic interpolation type AUBM	see chapter accessories

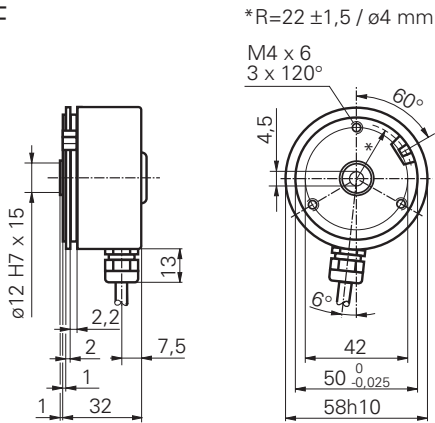
<sup>1)</sup> encoder is delivered with fixed rubber torque spring



## dimensions and connection dimensions

### BHF

-5



## assignment cable

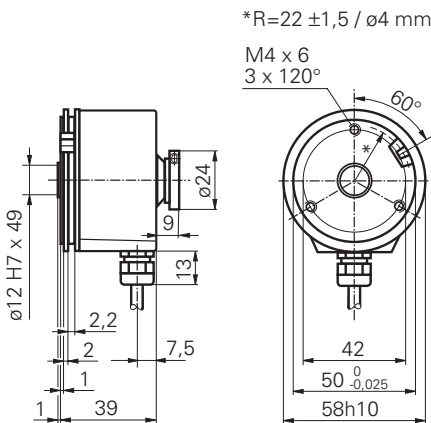
for connection reference -5

### 05S (5 VDC sine)

cable color	signals
brown	As+
green	As-
red	Ns+
yellow	n.c.
blue	+Vs
pink	Bs-
grey	Bs+
white	0 V
black	Ns-
screen	connected to flange
cable data	9 x 0,14 mm <sup>2</sup> , max. ext ø 5,7 mm

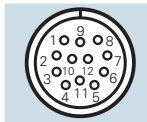
### BHG

-5



## assignment connector

for connection reference-A

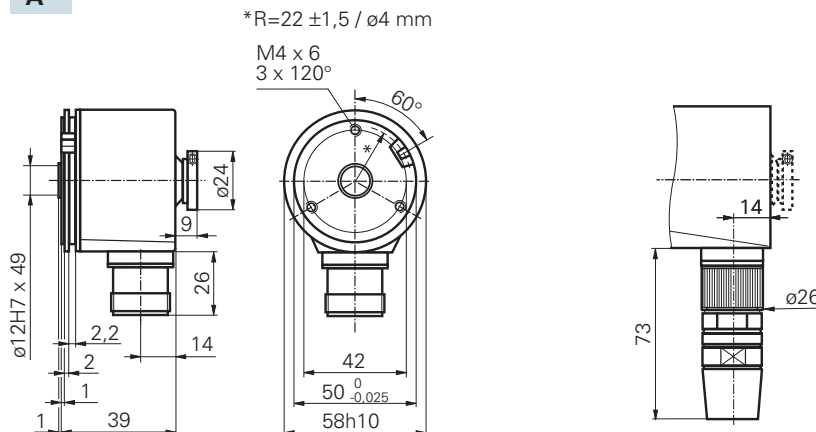


### 05S (5 VDC sine)

pin number	signals
1	Bs-
2	+Vs
3	Ns+
4	Ns-
5	As+
6	As-
7	n.c.
8	Bs+
9	n.c.
10	0 V
11	0 V
12	+Vs

### BHF/BHG

-A



### Note

Mounting drawings see end of chapter.