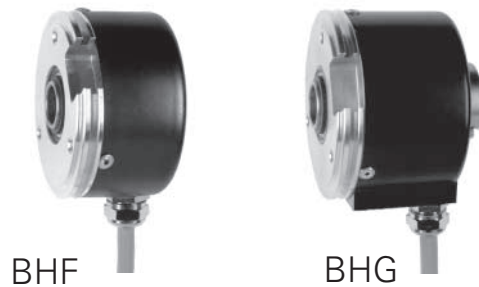


Incremental hollow shaft encoders BHF/BHG

features

- simple mounting
- end shaft mounting (BHF)
- through shaft mounting (BHG)
- various hollow shaft adapters
- small mounting depth



general data

voltage supply	5 VDC $\pm 10\%$ (05A) 4,5 - 30 VDC (25W) 10 - 30 VDC (24K)
max. supply current no load	typ. 80 mA (at 5 VDC) (05A) typ. 180 mA (at 4,5 VDC) (25W) typ. 60 mA (at 24 VDC) (24K)
max. measuring steps	40'000 steps at 10'000 ppr (05A / 24K)
pulse range	see order designation
pulse tolerance	$\pm 10\%$
max. switching frequency	200 kHz (24K) 300 kHz (05A / 25W) 750 kHz (05A > 5000 ppr)

mechanical data

max. revolutions	12'000 rpm (IP 42) 6'000 rpm (IP 65)
moment of inertia	BHF/BHG with clamp ring typ. $18,5 \times 10^{-7}$ kgm ² BHF without clamp ring typ. $13,6 \times 10^{-7}$ kgm ²
torque BHF	typ. 0,9 cNm IP 42 typ. 3,7 cNm IP 65
BHG	typ. 1,75 cNm IP 42 typ. 4,7 cNm IP 65 (3'000 rpm / 20 °C)
product life	depending on ambient conditions (typ. 10 ⁹ revolutions)
max. protection class	IP 65
material	housing: aluminum BHF with connection ref. -5 : steel flange: aluminum
weight	approx. 300 g

ambient conditions

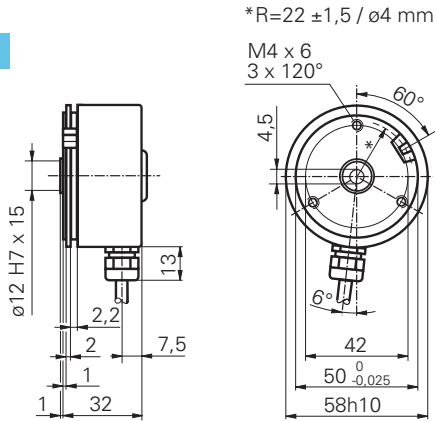
temperature range	-20...+85 °C
relative humidity	max. 95% non condensing
vibration	IEC 60068-2-6 (≤ 100 m/s ² / 10 - 200 Hz)
shock	IEC 60068-2-27 (≤ 500 m/s ² / 11 ms)
noise immunity	EN 61000-6-2
emitted interference	EN 61000-6-3



dimensions and connection dimensions

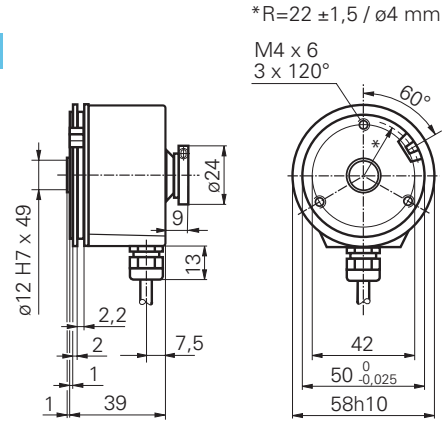
BHF

-5

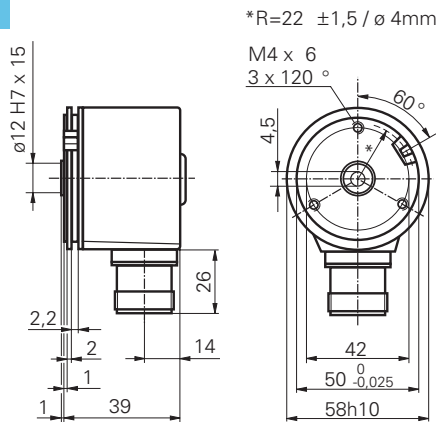


BHG

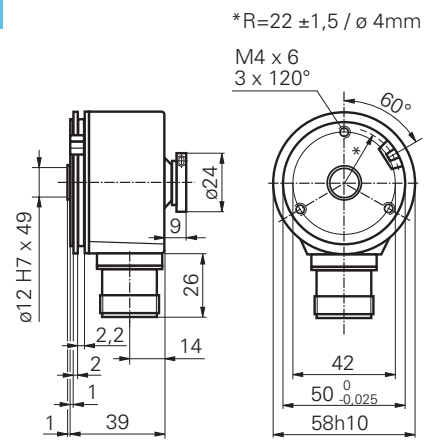
-5



-A



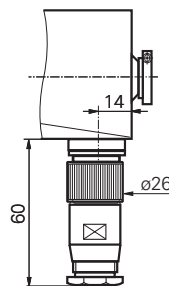
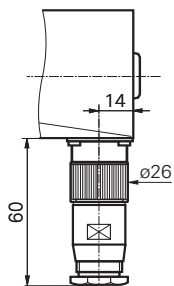
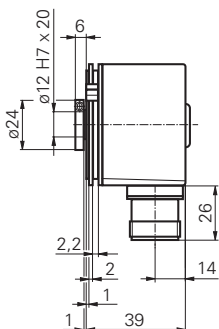
-A



-E2 with clamping ring

-A

-A



Note
Mounting drawings see end of chapter.

Incremental hollow shaft encoders BHF/BHG

assignment cable

for connection reference **-5**

05A (5 VDC complementary)

25W (4,5 - 30 VDC push-pull, complementary, short-circuit protection)

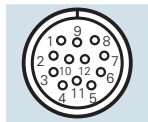
cable color	signals
brown	+Vs
green	CHA
red	CHA compl.
yellow	CHB
blue	CHB compl.
pink	CHN
grey	CHN compl.
white	0V
screen	connected to connector housing
cable data	8 x 0,14 mm ² , max. ext. ø 5,7 mm

24K (10 - 30 VDC complementary, short-circuit protection)

cable color	signals
brown	+Vs
green	CHA
yellow	CHB
pink	CHN
white	0V
screen	connected to connector housing
cable data	5 x 0,14 mm ² , max. ext. ø 5,4 mm

assignment connector M23 male

for connection reference **-A**



05A (5 VDC complementary)

24K (10 - 30 VDC complementary, short-circuit protection)

25W (4,5 - 30 VDC push-pull, complementary, short-circuit protection)

pin number	signals
1	CHA compl.
2	+Vs
3	CHN
4	CHN compl.
5	CHB
6	CHB compl.
7	n.c.
8	CHA
9	housing
10	0 V
11	0 V
12	+Vs

push-pull version **24K** without CHx complementary signals

