

Incremental hollow shaft encoder BHK

BHK



features

- miniaturized hollow shaft encoder with extended pulse range
- radial cable connection or connector
- through shaft mounting $\varnothing$ 6 mm or end shaft mounting $\varnothing$ 12 mm



general data

voltage supply	5 VDC $\pm 10\%$ (05A) 10 - 30 VDC (24K)
max. supply current no load	typ. 60 mA (at 5 VDC) typ. 60 mA (at 24 VDC)
max. measuring steps	8192 steps
pulse range	see order designation
pulse tolerance	$\pm 15\%$
switching frequency	50 kHz (≤ 500 pulses)
fmax.	100 kHz (> 500 pulses)

mechanical data

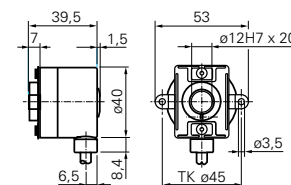
max. revolutions	12'000 /min
rotor inertia	typ. $3,0 \times 10^{-7}$ kgm ²
torque	typ. 0,21 cNm IP 42 typ. 0,75 cNm IP 64 (3000 rev/min 20 °C)
product life	depending on ambient conditions (typ. 10 ⁹ revolutions)
max. protection class	hollow shaft: max. IP 64 housing: IP 42 to max. IP 65 with end cap
material	housing: polyamid flange: aluminum
weight	approx. 100 g

ambient conditions

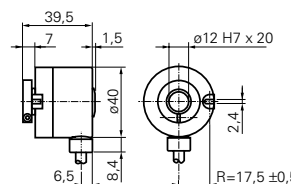
temperature range	-20...+85 °C
relative humidity	max. 95% non condensing
vibration	IEC 68 section 2-6 ($\leq 100 \text{ m/s}^2$ / 10-200 Hz)
shock	IEC 68 section 2-27 ($\leq 500 \text{ m/s}^2$ / 11 ms)
noise immunity	EN 50 082 - 2 EN 61000 - 4 - 2 to 4 severity grade 2
emitted interference	EN 50 081 - 2

dimensions and connection dimensions

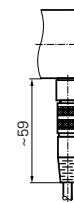
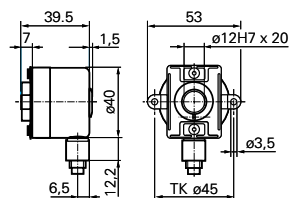
-5 with shaft reference -12



-5 with shaft reference -B2

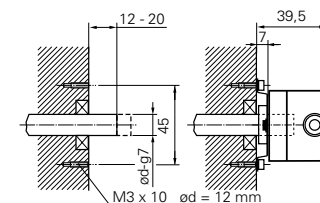


-9

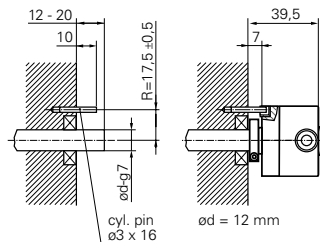


mounting

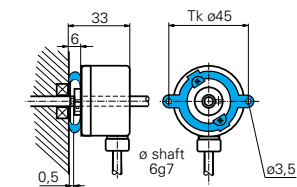
-12 end shaft 12 mm with clamping ring and spring plate



-B2 end shaft 12 mm with clamping ring no spring plate

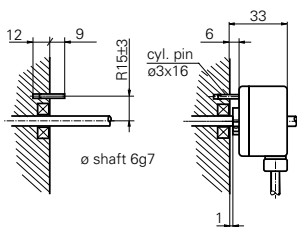


-M6 through shaft 6 mm with clamping ring and spring plate



-B6 through shaft 6 mm with clamping ring no spring plate

-E6 through shaft 6 mm with clamping ring



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assignment cable

for connection reference -5
05A (5 VDC complementary

cable color signals	
brown green red yellow blue pink grey white screen	+Vs CHA CHA compl. CHB CHB compl. CHN CHN compl. 0V connected to flange
cable data	8x 0,14 mm², max. ext. ø 5,7 mm

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

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

assignment connector

for connection reference -9



05A (5 VDC complementary)

pin number	signals
1	0V
2	+Vs
3	CHA
4	CHB
5	CHN compl.
6	CHN
7	CHB compl.
8	CHA compl.

for connection reference -9



24K (10 - 30 VDC push-pull, short-circuit prot.)

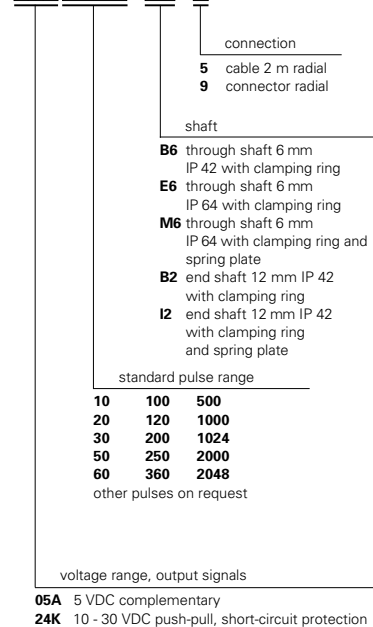
pin number	signals
1	0V
2	+Vs
3	CHA
4	CHB
5	CHN

Note

When using the pre-assembled cable socket, please observe the operating instructions.

order designation

BHK 16. ——



accessories

connector (pre-assembled on one end),
for connection reference **-9**

for complementary	2 m	part nr. 123168	(ES62FB2)
05A	5 m	part nr. 123169	(ES62FB5)
for push-pull	2 m	part nr. 123166	(ES62CB2)
24K	5 m	part nr. 123167	(ES62CB5)
couplings	see page 4. 09 chapter accessories		