

Incremental hollow shaft encoders BHT

features

- integrated flex mounting coupling for simple add-on installation
- mounting by end shaft fixture (cylindrical screw) or clamping element
- high resolution



general data

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

mechanical data

max. revolutions	6'000 rpm
moment of inertia	typ. $13,7 \times 10^{-7} \text{ kgm}^2$
torque	typ. 3,7 cNm (3000 rpm / 20 °C)
product life	depending on ambient conditions (typ. 10^9 revolutions)
max. protection class	IP 65
material	housing: aluminum flange: aluminum
weight	approx. 300 g
max. play compensation	axial $\pm 0,5 \text{ mm}$ radial dynamic $\pm 0,1 \text{ mm}$ angular dynamic $\pm 1^\circ$

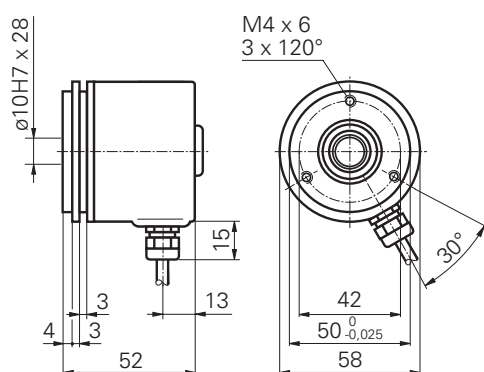
ambient conditions

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

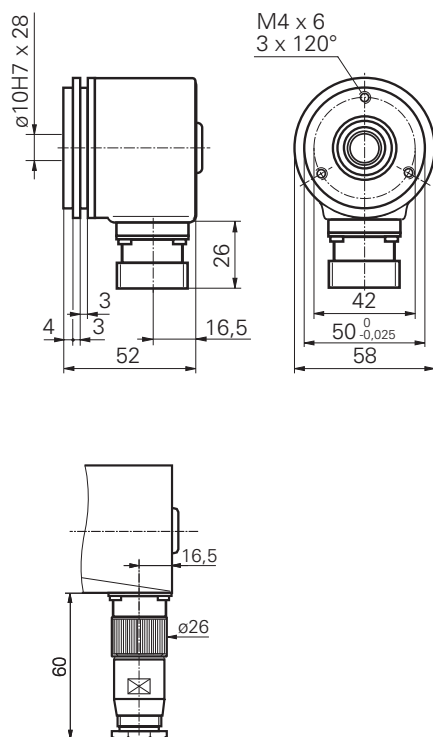


dimensions and connection dimensions

-5



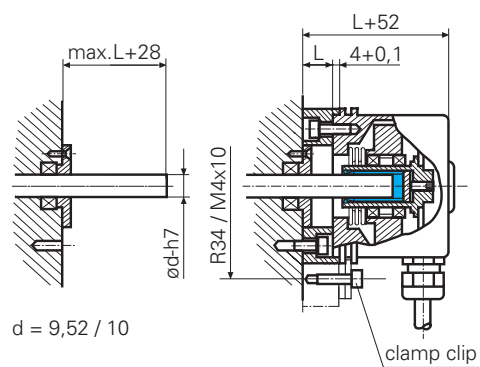
-A



mounting

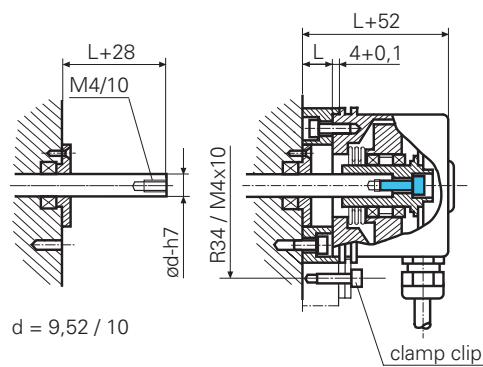
T0 with clamping element

T1



L0 with cylindrical screw

L1



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assignment cable

for connection reference **-5**

05A (5 VDC complementary)

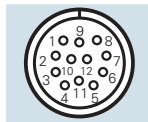
cable color	signals
brown	+Vs
green	CHA
red	CHA compl.
yellow	CHB
blue	CHB compl.
pink	CHN
grey	CHN compl.
white	0V
screen	connected to connector housing
cable data	8 x 0,14 mm ² , max. ext. ø 5,7 mm

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)

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



order designation

BHT 16.		
	connection	
5	cable 2 m radial	
A	connector radial M23	
	shaft	
L1	hollow shaft 9,52 mm IP 65 with cylindrical screw	
L0	hollow shaft 10 mm IP 65 with cylindrical screw	
T1	hollow shaft 9,52 mm IP 65 with clamping element	
T0	hollow shaft 10 mm IP 65 with clamping element	
	standard pulse range	
500	2048	7200¹⁾
1000	2500	8192¹⁾
1024	3600	10000¹⁾
1250	4096	
2000	5000	
	other pulses on request	
	voltage range, output signals	
05A	5 VDC complementary	
24K	10 - 30 VDC push-pull, short-circuit protection	

Other versions on request.

accessories

connector M23 female reference -A	
straight	part nr. 107687
cable with connector M23 female (pre-assembled)	
2 m	part nr. 130367
5 m	part nr. 118532
clamp set	part nr. 252773
adjustment key	part nr. 114450
allen key	part nr. 112431
	usage see chapter accessories
shaft adapter	see chapter accessories