

Incremental encoders

Blind hollow shaft $\varnothing 10$ mm

20...5000 pulses per revolution

BHT



BHT with blind hollow shaft

Features

- Encoder with blind hollow shaft $\varnothing 10$ mm
- Optical sensing method
- Max. 5000 pulses per revolution
- Housing $\varnothing 58$ mm
- Integrated flexible coupling for simple mounting

Technical data - electrical ratings

Voltage supply	5 VDC ± 10 % 10...30 VDC
Consumption typ.	80 mA (5 VDC, w/o load) 60 mA (24 VDC, w/o load)
Pulses per revolution	20...5000
Reference signal	Zero pulse, width 90°
Sensing method	Optical
Output frequency	≤ 750 kHz
Output signals	A 90° B, N + inverted
Output stages	Antivalent Push-pull short-circuit proof
Interference immunity	DIN EN 61000-6-2
Emitted interference	DIN EN 61000-6-3
Approval	UL approval / E217823

Technical data - mechanical design

Size (flange)	$\varnothing 58$ mm
Shaft type	$\varnothing 9.52$ mm (blind hollow shaft) $\varnothing 10$ mm (blind hollow shaft)
Protection DIN EN 60529	IP 65
Operating speed	≤ 6000 rpm
Operating torque typ.	0.037 Nm
Materials	Housing: aluminium Flange: aluminium
Operating temperature	$-20...+85$ °C
Relative humidity	95 % non-condensing
Resistance	DIN EN 60068-2-6 Vibration 10 g, 10-200 Hz DIN EN 60068-2-27 Shock 50 g, 11 ms
Connection	Connector M23, 12-pin Cable 2 m
Weight approx.	300 g

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Part number

BHT 16.

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Connection

5 Cable 2 m, radial

A Connector radial

Blind hollow shaft

L0 $\varnothing 10$ mm, IP 65, with cylindrical screw

L1 $\varnothing 9.52$ mm, IP 65, with cylindrical screw

T0 $\varnothing 10$ mm, IP 65, with clamping element

T1 $\varnothing 9.52$ mm, IP 65, with clamping element

Pulse number - see table

Voltage supply / signals

05A 5 VDC / antivalent (TTL compatible)

24K 10...30 VDC / push-pull short-circuit proof

Accessories

Connectors and cables

10107687 Female connector M23, 12-pin, straight, without cable

10130367 Female connector M23, 12-pin, straight, 2 m cable

10118532 Female connector M23, 12-pin, straight, 5 m cable

Mounting accessories

10252773 Clamp set $\varnothing 15$ mm

10114450 Adjusting tool

10112431 Hexagon wrench 3 mm

Pulse number

20	1024	2048	4096
500	1250	2500	5000
1000	2000	3600	

Other pulse numbers on request.

Trigger level

Outputs 05A

Complementary Linedriver RS422

Output level High $>2,4$ V ($I = -20$ mA)

Output level Low $<0,4$ V ($I = 20$ mA)

Load High <20 mA

Load Low <20 mA

Outputs 24K (25 Ω)

Push-pull short-circuit protection

Output level High $>+V_s - 3,7$ V ($I = -30$ mA)

Output level Low $<2,5$ V ($I = 30$ mA)

Load High <30 mA

Load Low <30 mA

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Terminal assignment

Cable

for connection reference -5

05A

Core colour	Signals	Core colour	Signals
brown	+Vs	brown	+Vs
green	CHA	green	CHA
red	CHA compl.	–	–
yellow	CHB	yellow	CHB
blue	CHB compl.	–	–
pink	CHN	pink	CHN
grey	CHN compl.	–	–
white	0 V	white	0 V
Cable data	8 x 0.14 mm ²	5 x 0.14 mm ²	
Screen	connected to flange		

Connector M23 male

for connection reference -A

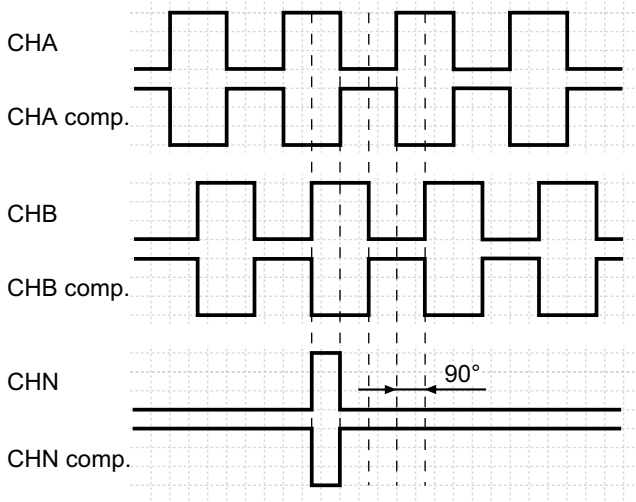
05A, 24K

Connector	Signals
Pin 1	CHA compl.
Pin 2	+Vs
Pin 3	CHN
Pin 4	CHN compl.
Pin 5	CHB
Pin 6	CHB compl.
Pin 7	n.c.
Pin 8	CHA
Pin 9	Housing
Pin 10	0 V
Pin 11	0 V
Pin 12	+ Vs

Output signals

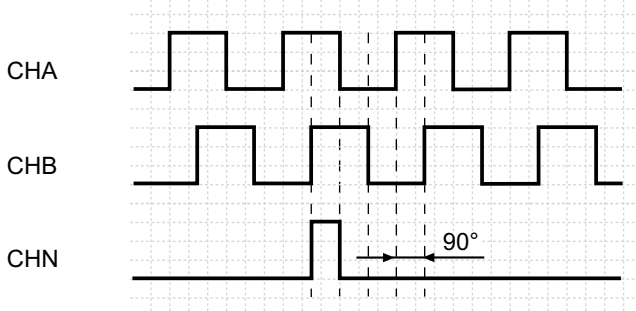
Counter clockwise rotating direction when looking at the flange.

05A

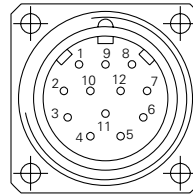


Counter clockwise rotating direction when looking at the flange.

24K



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



Incremental encoders

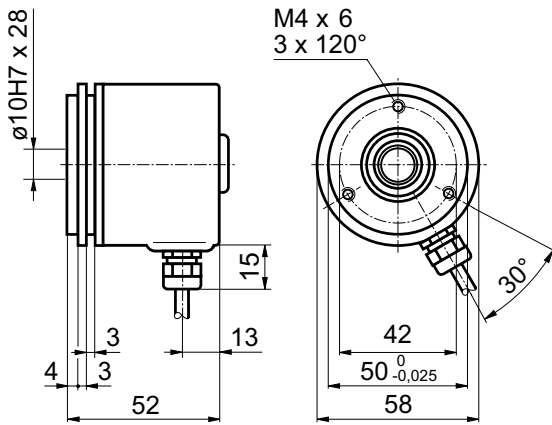
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Dimensions

BHT cable radial



BHT connector output radial

