

# Sine encoders

## Blind hollow shaft

1000...5000 sinewave cycles per turn

### BHT sine



BHT with blind hollow shaft

#### Features

- Encoder with blind hollow shaft  $\varnothing 10$  mm
- Optical sensing method
- Up to 5000 sinewaves cycles per turn
- Sine output
- Integrated flexible coupling for simple mounting

#### Technical data - electrical ratings

Voltage supply	5 VDC $\pm 5$ %
Consumption typ.	100 mA (5 VDC, w/o load)
Sinewave cycles per turn	1000...5000
Reference signal	Zero pulse, width 90°
Sensing method	Optical
Output frequency	$\leq 160$ kHz
Output signals	A 90° B, N + inverted
Output stages	SinCos 1 Vpp
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	$\leq 6000$ 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 18. 05S - -

				Connection
			5	Cable 2 m, radial
			A	Connector radial
				Blind hollow shaft
	L0			ø10 mm, IP 65, with cylindrical screw
	L1			ø9.52 mm, IP 65, with cylindrical screw
	T0			ø10 mm, IP 65, with clamping element
	T1			ø9.52 mm, IP 65, with clamping element
				Sinewave cycles - see table
				Voltage supply / signals
				05S 5 VDC / sine 1 Vpp

#### Accessories

##### Connectors and cables

10116717	Female connector M23, 12-pin, straight
10130368	Female connector M23, 12-pin, straight, 2 m cable, sine
10130369	Female connector M23, 12-pin, straight, 5 m cable, sine

##### Mounting accessories

10252773	Clamp set ø15 mm
10114450	Adjusting tool
10112431	Hexagon wrench 3 mm

#### Sinewave cycles

1000 | 2000 | 2500 | 3600 | 5000

Other sinewave cycles on request.

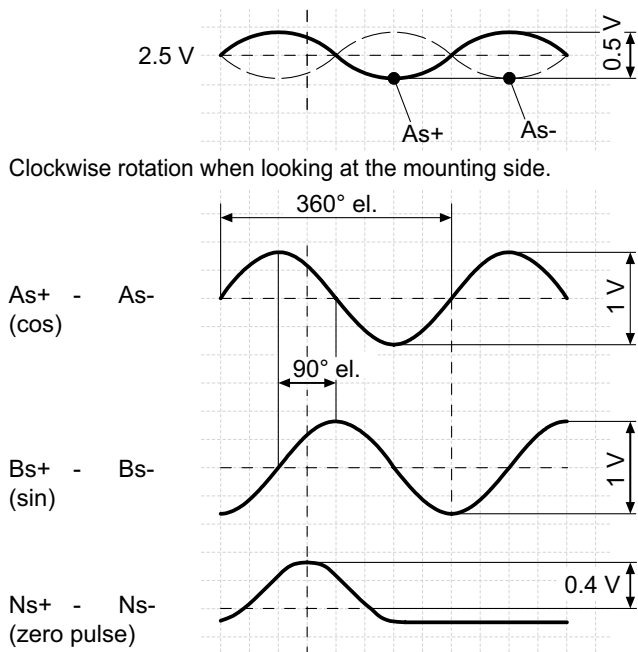
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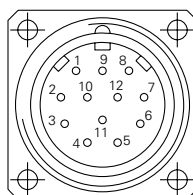
#### Output signals



#### Terminal assignment

**Cable / Connector M23 male**  
for connection references **-A** and **-5**

Connector	Core colour	Signals
Pin 1	pink	Bs-
Pin 2	blue	+Vs
Pin 3	red	Ns+
Pin 4	black	Ns-
Pin 5	brown	As+
Pin 6	green	As-
Pin 7	yellow	n.c.
Pin 8	grey	Bs+
Pin 9	–	n.c.
Pin 10	white	0 V
Pin 11	–	0 V
Pin 12	–	+Vs
Screen	connected to housing	
Cable data	9 x 0,14 mm <sup>2</sup>	



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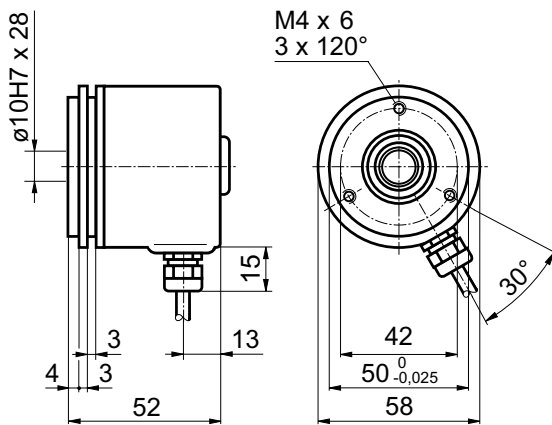
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## Dimensions

BHT sine, cable radial



BHT sine, connector output radial

