

Sine encoders

Solid shaft with synchro flange

1000...5000 sinewave cycles per turn

BDT sine



BDT sine

Features

- Encoder with solid shaft $\varnothing 6$ mm
- Optical sensing method
- Up to 5000 sinewaves cycles per turn
- Sine output
- Small profile depth
- Synchro flange

Technical data - electrical ratings

Voltage supply	5 VDC ± 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	≤ 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	$\varnothing 6$ mm solid shaft (synchro flange)
Shaft loading	≤ 10 N axial ≤ 20 N radial
Flange	Synchro flange
Protection DIN EN 60529	IP 65, IP 42
Operating speed	≤ 12000 rpm (IP 42) ≤ 6000 rpm (IP 65)
Operating torque typ.	0.0023 Nm (IP 42) 0.026 Nm (IP 65)
Materials	Housing: steel Housing: steel (connection -A) 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

BDT 18. 05S | | - | | - | |

					Connection
					4 Cable 2 m, axial
					5 Cable 2 m, radial
					A Connector radial
					B Connector axial
					Solid shaft
					6 ø6 mm, IP 42
					L6 ø6 mm, IP 65
					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
10117667	Mounting adaptor for encoders with synchro flange
10117668	Clamp set ø14 mm

Sinewave cycles

1000	2000	2500	3600	5000
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Other sinewave cycles on request.

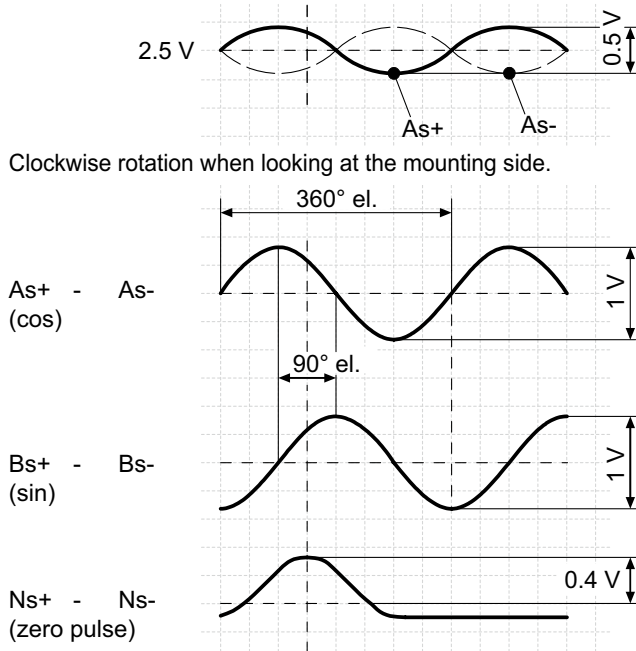
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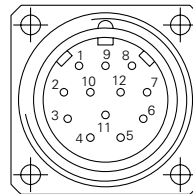
Output signals



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 ²	



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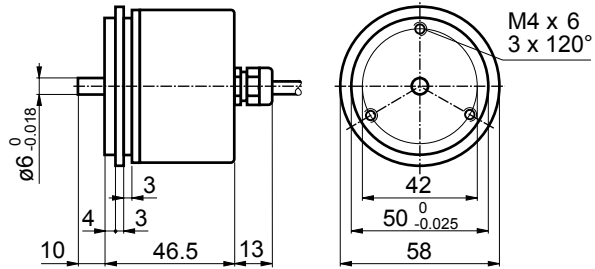
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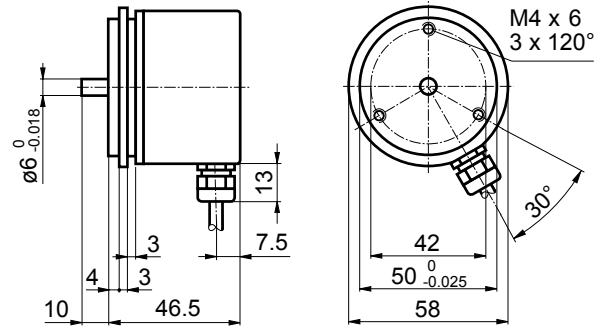
BDT sine

Dimensions

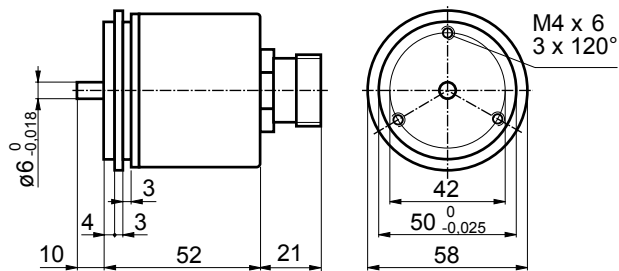
BDT sine, cable axial



BDT sine, cable radial



BDT sine, connector output axial



BDT sine, connector output radial

