

Sine encoders

Shaft with synchro flange

Resolution 1000...5000 pulses

BDT sine



BDT sine

Features

- Encoder with shaft $\varnothing 6$ mm
- Optical sensing
- Resolution max. 5000 ppr
- Sine output
- Small profile depth
- Synchro flange

Technical data - electrical ratings

Voltage supply	5 VDC ± 5 %
Consumption w/o load (typ.)	100 mA (5 VDC)
Resolution (steps/turn)	1000...5000
Reference signal	Zero pulse, width 90°
Sensing method	Optical
Output frequency	≤ 160 kHz
Output signals	A 90° B, N + inverted
Output circuit	Sine/cosine 1 Vpp
Interference immunity	DIN EN 61000-6-2
Emitted interference	DIN EN 61000-6-3
Approval	UL approval / E217823

Technical data - mechanical design

Dimensions (flange)	$\varnothing 58$ mm
Shaft	$\varnothing 6$ mm (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
					Shaft
			6		ø6 mm, IP 42
			L6		ø6 mm, IP 65
					See part number (pulses)
					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 sine
10130369	Female connector M23, 12-pin, straight, 5 m sine

Mounting accessories

10252773	Clamp set ø15 mm
10117667	Mounting adaptor for encoders with synchro flange
10117668	Clamp set ø14 mm

Part number (pulses)

1000 | 2000 | 2500 | 3600 | 5000

Other pulse numbers upon request.

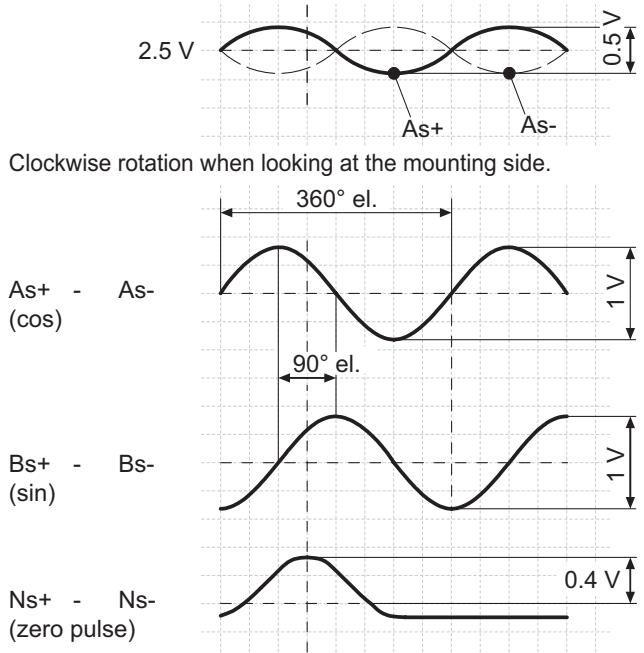
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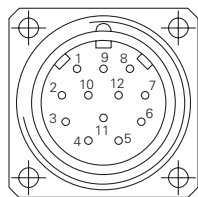
BDT sine

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	



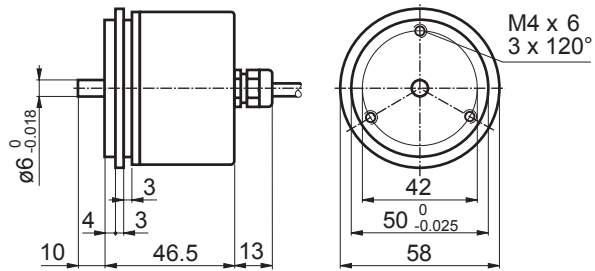
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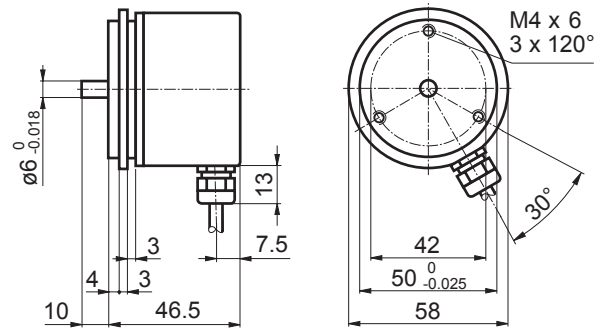
BDT sine

Dimensions

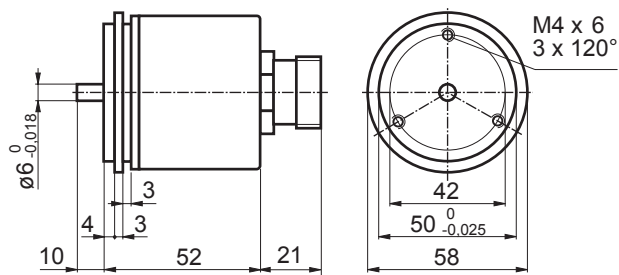
BDT sine, cable axial



BDT sine, cable radial



BDT sine, connector output axial



BDT sine, connector output radial

