

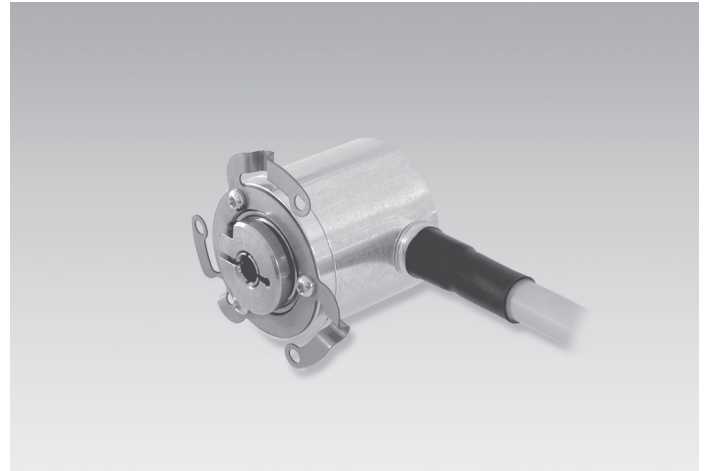
## ATD 07S A 4

Blind hollow shaft  $\varnothing 4$  mm

Magnetic singleturn encoders 12 bit

### Overview

- Encoder singleturn / SSI
- Magnetic sensing method
- Resolution: singleturn 12 bit
- Blind hollow shaft  $\varnothing 4$  mm
- Cable output radial
- Clamping ring torsion-proof



### Technical data

#### Technical data - electrical ratings

Voltage supply	8...26 VDC
Reverse polarity protection	Yes
Consumption w/o load	$\leq 40$ mA (24 VDC)
Interface	SSI
Function	Singleturn
Steps per revolution	4096 / 12 bit
Sensing method	Magnetic
Code	Gray
Code sequence	CW: ascending values with clockwise sense of rotation; looking at mounting surface
Output stages	SSI data: linedriver RS485

#### Technical data - mechanical design

Size (flange)	$\varnothing 24$ mm
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#### Technical data - mechanical design

Shaft type	$\varnothing 4$ mm (blind hollow shaft)
Protection DIN EN 60529	IP 65
Operating speed	$\leq 10000$ rpm (mechanical) $\leq 10000$ rpm (electric)
Starting torque	$\leq 0,008$ Nm (+20 °C)
Material	Housing: aluminium Shaft: stainless steel
Operating temperature	-20...+85 °C
Relative humidity	90 % non-condensing
Resistance	DIN EN 60068-2-6 Vibration 10 g, 55-2000 Hz DIN EN 60068-2-27 Shock 100 g, 11 ms
Weight approx.	50 g
Connection	Cable 1 m
Mounting kit	101

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## Terminal assignment

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Core colour	Assignment
green	clock-
yellow	clock+
grey	data+
pink	data-
red	UB
blue	GND
transparent	Shield/Housing

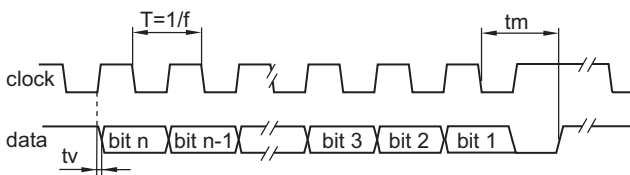
## Terminal significance

UB	Encoder supply voltage.
GND	Encoder ground connection relating to UB.
Data+	Positive, serial data output of differential linedriver.
Data-	Negative, serial data output of differential linedriver.
Clock+	Positive SSI clock input. Clock+ together with clock- forms a current loop. A current of approx. 7 mA towards clock+ input means logic 1 in positive logic.
Clock-	Negative SSI clock input. Clock- together with clock+ forms a current loop. A current of approx. 7 mA towards clock- input means logic 0 in positive logic.

## Trigger level

SSI	Circuit
SSI-Clock	Receiver RS485
SSI-Data	Linedriver RS485

## Data transfer



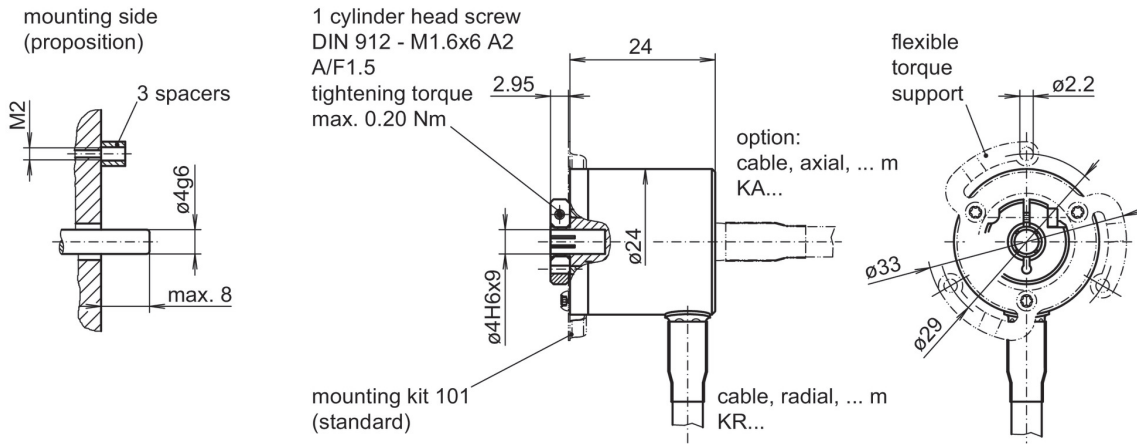
Clock frequency f	80...1000 kHz
Duty cycle of T	40...60 %
Delay time tv	150 ns
Monoflop time tm	20 $\mu$ s + T/2
Clock interval tp	26 $\mu$ s

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## Dimensions



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## Ordering reference

	<b>ATD 07S A 4</b>	<b>12</b>	<b>SS</b>	<b>GR</b>	<b>KR1</b>	<b>S</b>	<b>4</b>	<b>IP65</b>	<b>101</b>
<b>Product</b>	ATD 07S A 4								
<b>Resolution</b>	12 bit singleturn	12							
<b>Interface</b>	Serial SSI		SS						
<b>Output signals</b>	Gray code			GR					
<b>Connection</b>	Cable 1 m, radial				KR1				
<b>Operating temperature</b>	-20...+85 °C					S			
<b>Blind hollow shaft</b>	ø4 mm						4		
<b>Protection</b>	IP 65							IP65	
<b>Mounting kit</b>	Mounting kit 101								101