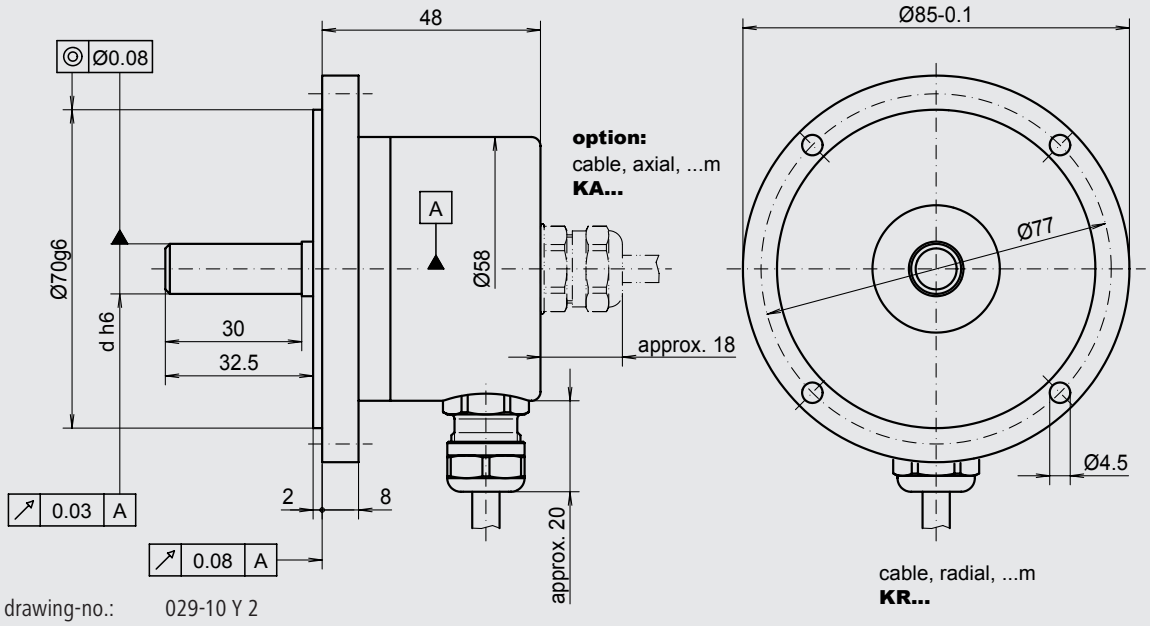
Baumer Thalheim

ITD 21 B10 Y 2

Incremental encoder
with shaft

Features

- High-class incremental encoder for industrial use
- Number of pulses up to 6000 pulses/rev.
- Centering seat Ø70 mm, mounting punch circle Ø77 mm
- Mounting compatible to TD 3-/ KTD 3-/ ITD 3-series
- TTL- or HTL- output signals
- Cable outlet radial or axial
- Connector version optional



drawing-no.: 029-10 Y 2

Mechanical data

Design	B10		B10
Housing	aluminium, black, powder coated		
Protection	IP 65	according to DIN EN 60 529	IP65
Construction principle	LED with glass slotdisc		
max. revolution (mechanical)	n_{max}	≤ 12 000 min^{-1}	(observe limit frequency)
Permissible shaft load	axial radial	≤ 40 N ≤ 60 N	(at shaft end)
Starting torque	at 20 °C	≤ 1 Ncm	
Vibration	55... 2000 Hz	≤ 100 m/s^2	according to DIN IEC 60 068, part 2 - 6
Shock	11 ms	≤ 300 m/s^2	according to DIN IEC 60 068, part 2 - 27
Shaft diameter	d	11 mm	(standard), 10 mm, 12 mm possible 11
Weight		approx. 470 g	

Electrical data

Number of pulses	Z	1000 to 6000 pulses/rev.	XXXX
Electronic version (output signals)	TTL	Line driver-output stage, supply voltage: U_B = 5 VDC ± 5 % (polarity protected), output amplitude: $U_{LOW} \leq 0.5$ V, $U_{HIGH} \geq 2.5$ V	T
	HTL	Push pull-output stage (short-circuit proof), supply voltage: U_B = 8 - 30 VDC (polarity protected), output amplitude: $U_{LOW} \leq 1.5$ V, $U_{HIGH} \geq U_B$ - 3 V	H
Output signals	A, B, N + Inv.	2 square wave pulse trains, electr. phase shifted 90° + zero pulse, electr. length 90° + signal inverting	NI
Limit frequency	f_G	TTL 300 kHz HTL 160 kHz	
Output load current	I_{Load}	TTL ≤ 70 mA HTL ≤ 70 mA	
Current consumption (no-load)	I_{max}	≤ 100 mA	
Permissible cable length		≤ 100 m (Baumer Thalheim cable)	
Type of connection		cable, radial, 1.0 m (standard length)	KR1
Operating temperature range		0 °C to +70 °C	S
Permissible relative humidity		≤ 90 % (condensation not permitted)	

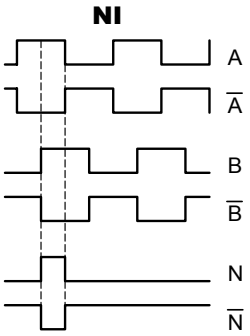
Options

Electronic version		TTL-output signals, Line driver-output stage supply voltage: U_B = 8 - 30 VDC (polarity protected)	R
Type of connection	cable	cable, axial, ... m	KA...
	connector	performed at cable, (ref. data sheet »Type of performed cable«)	...
Operating temperature range		0 °C to +100 °C	E

Connection table

wire color	signals
brown	A
green	A inv.
grey	B
pink	B inv.
red	N
black	N inv.
brown 0.5 mm²	+ U_B
white 0.5 mm²	0 V
blue	+ U_{sensor}
white	0 V_{sensor}
transparent	shielding/housing

Output signal diagram



Pulse trains:
Clockwise rotation when looking at the end of the shaft (mounting side).

Ordering example:

ITD 21	B10	Y 2	1024	H	NI	KR1	S	11	IP65	
Incremental encoder *ITD 21*	Design *B10*	Mechanical variant *Y 2 = look at the drawing*	Number of pulses *1024 pulses/revolution*	Electronic version *U_B = 8 - 30 VDC HTL*	Output signals *A-, B-, N- track + inv.*	Type of connection *cable, radial, 1.0 m*	Operating temperature range *0 °C to +70 °C*	Shaft diameter *11 mm*	Protection *IP65*	Attachment kit variant

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