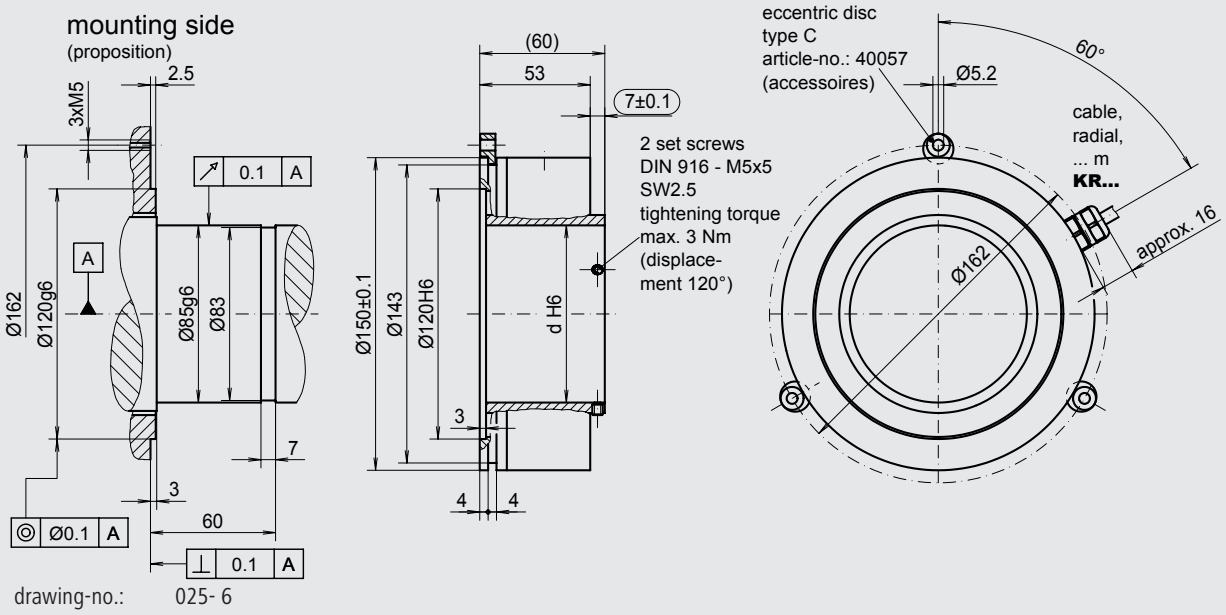
Baumer Thalheim

ITD 75 A 4

Features

- Incremental encoder with hollow shaft going through, without bearings
- Number of pulses up to 2500 pulses/rev.
- Centering seat Ø120 mm, mounting punch circle Ø162 mm
- TTL- or HTL- output signals
- Connector versions optional

Incremental encoder
without bearings



drawing-no.: 025- 6

Mechanical data

Design		A 4		A 4
Housing		aluminium, unpainted		
Protection		IP 54	according to DIN EN 60 529	IP54
Construction principle		OPSIC with slotdisc		
max. revolution (mechanical)		n_{max} ≤ 3000 min^{-1}	(observe limit frequency)	
Permissible motor-shaft play		axial ± 0.2 mm radial ≤ 0.2 mm		
Vibration	55... 2000 Hz	≤ 100 m/s^2	according to DIN IEC 60 068, part 2-6	
Shock	11 ms	≤ 1000 m/s^2	according to DIN IEC 60 068, part 2-27	
Hollow shaft diameter		d 85 mm	(standard), 60 mm to 85 mm possible	85
Weight		approx. 1500 g		

Electrical data

Number of pulses	Z	1000, 1024, 2048, 2500 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 + Inv.	2 square wave pulse trains, electr. phase shifted 90° + signal inverting	BI
Limit frequency	f_G	120 kHz	
Output load current	I_{Load}	≤ 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		-20 °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
Output signals	A, B, N + Inv.	2 square wave pulse trains + zero pulse, electr. length 90° + signal inverting	NI
Type of connection	connector	performed at cable (ref. data sheet »Type of performed cables«)	...

Acessoires

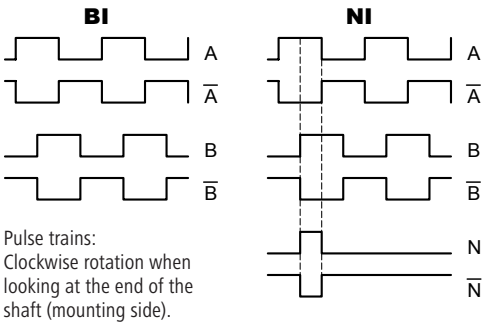
Eccentric disc type (3 pcs.)	article-no.: 40057

Connection table

wire color	signals	*wire color (old)*
green	A	*brown*
brown	A inv.	*green*
grey	B	*grey*
black	B inv.	*pink*
pink	N	*red*
white	N inv.	*black*
red	+ U_B	*brown 0.5 mm²*
blue	0 V	*white 0.5 mm²*
yellow	+ U_{Sensor}	*blue*
violet	0 V_{Sensor}	*white*
transparent	shielding/housing	*transparent*

Old wire color until April 2008

Output signal diagram



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

Ordering example:

ITD 75	A 4		2500	H	BI	KR1	S	85	IP54	
Incremental encoder *ITD 75*	Design *A 4*	Mechanical variant *Y ... = look at the drawing*	Number of pulses *2500 pulses/revolution*	Electronic version *U_B = 8 - 30 VDC HTL*	Output signals *A-, B- track + inv.*	Type of connection *cable, radial, 1 m*	Operating temperature range *-20 °C to +70 °C*	Hollow shaft diameter *85 mm*	Protection *IP54*	Attachment kit variant

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