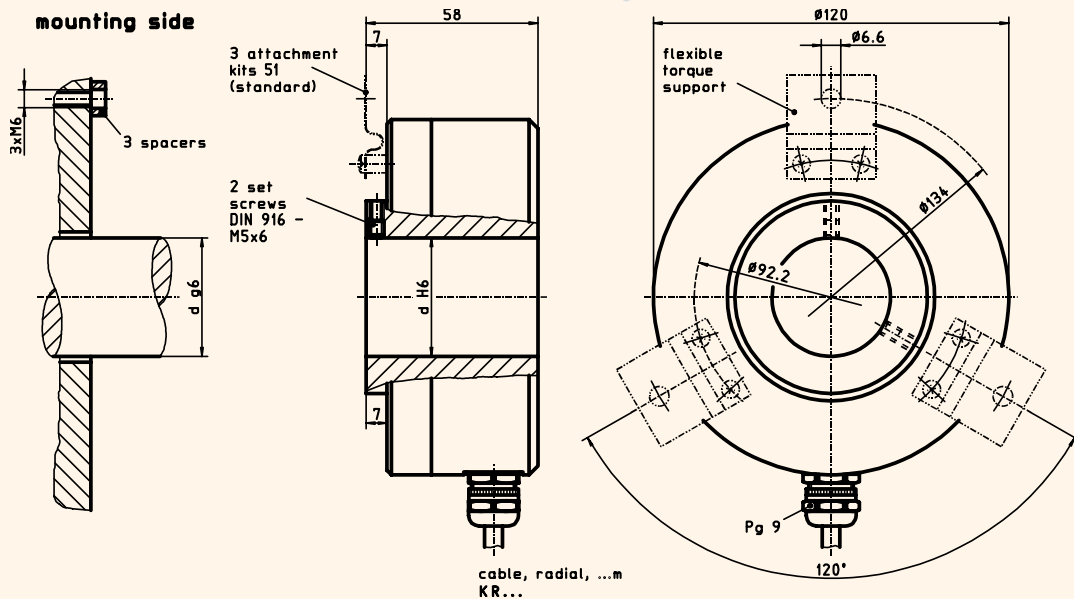
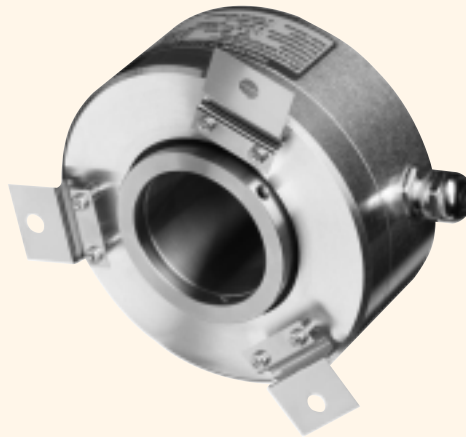
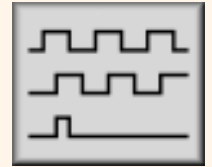


Incremental Encoder with hollow shaft ITD 61 A 4



Qualities:

- incremental encoder with hollow shaft going through
- **Number of pulses**, up to **5000** pulses per revolution
- Hollow shaft diameter up to 50 mm
- Flat design style
- Mounting at torque support, mounting punch circle \varnothing 134 mm
- TTL- or HTL-output signals
- cable outlet radial
- Connector versions optional



ITD 61 A 4

drawing-no.: 026 - 30

Mechanical data:

Housing		light-alloy metal, unpainted
Design style	A 4	A 4, hollow shaft going through
Attachment kit	51	51 (standard) (ref. datasheet "Attachment kit's ...")
Protective class	IP54	IP 54 according to DIN 40 050, IEC 529
Construction principle		LED with glas slotdisc
max. revolution (mechanical)	n_{max}	≤ 4000 rpm (observe frequency limit)
Admissible motor shaft play	axial	≤ 0.5 mm
	radial	≤ 0.1 mm
Vibration	55... 2000 Hz	≤ 100 m/s ² according to DIN IEC 68, part 2-6
Shock	11 ms	≤ 300 m/s ² according to DIN IEC 68, part 2-27
Hollow shaft diameter	d	50 (standard) (30 to 50 mm possible)
Weight		approx. 1650 g

Incremental Encoder with hollow shaft

ITD 61 A 4



Electrical data:

• Number of pulses	Z	XXXX	1024 pulses per revolution (further on request)
• Execution of electronic	TTL	T	TTL-output signals supply voltage: $U_B = 5 \text{ VDC} \pm 5\%$ (poling error safe)
	HTL	H	HTL-output signals supply voltage: $U_B = 8 - 30 \text{ VDC}$ (poling error safe)
• Output signals	A, B, N + Inv.	NI	2 square-wave pulse trains phase shifted by $90^\circ (\pm 10^\circ)$ electr. (refer to output signals-diagram)
Pulse ratio			pulse : pause = 1 : 1 $\pm 10\%$ at 30 kHz
Flank steepness			$\geq 15 \text{ V}/\mu\text{s}$
Frequency limit	f_G	TTL	300 kHz
Output load current	I_{Load}	TTL	$\leq 70 \text{ mA}$
Input current	I_{max}		$\leq 100 \text{ mA}$
Permissible cable length			$\leq 100 \text{ m}$
• Type of connection		KR1	cable, radial, 1.0 m
• Operating temperature range		S	$0^\circ \text{ C to } +70^\circ \text{ C}$

Options:

• Execution of electronic		R	TTL-output signals supply voltage: $U_B = 8 - 30 \text{ VDC}$ (poling error safe)
• Type of connection	connector	D2SR12	flange socket type 2, pin contacts, radial; 12-poles
	connector	...	performed at cable (ref. data sheet Type of performed cables)

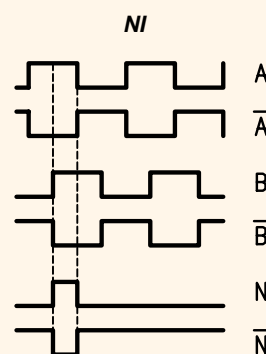
Accessories:

Connector, for version **D2S..12** **S2BG12** connector type 2, bush contacts, straight, 12-poles

Connection table:

wire color	PIN-no.	Signale
brown	PIN 5	= A
green	PIN 6	= A inverted
grey	PIN 8	= B
pink	PIN 1	= B inverted
red	PIN 3	= N
black	PIN 4	= N inverted
brown 0.5 mm ²	PIN 12	= + U_B
white 0.5 mm ²	PIN 10	= 0 V
blue	PIN 2	= + U_{sensor}
white	PIN 11	= 0 V _{sensor}
	PIN 7	= NC
transparent	PIN 9	= shilding/housing

Output signal diagram:



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

Ordering example:

ITD 61	A 4		1024	H	NI	KR1	S	50	IP54	51
Incremental encoder ITD 61	Design style A 4	Mechanical variante Y... = look at the drawing	Number of pulses 1024 pulses / revolution	Execution of electronic $U_B = 8-30 \text{ VDC HTL-output}$	Output signals A-, B-, N-track + inverting	Type of connection cable, radial, 1 m	Operating temperature $0^\circ \text{ C to } +70^\circ \text{ C}$	Hollow shaft diameter 50 mm	Protective class IP 54	Attachment kit variante 51