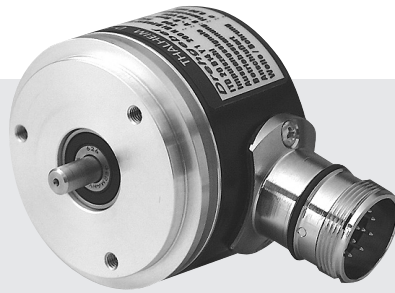


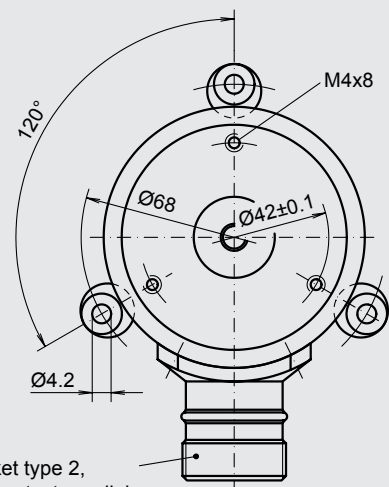
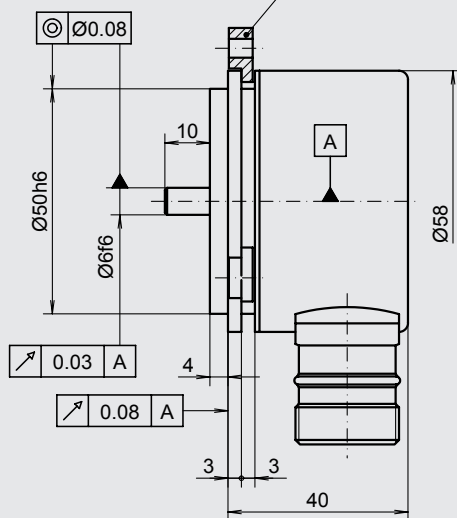
Incremental encoder with shaft



Features

- High-class incremental encoder for industrial use
- Number of pulses up to 10 000 pulses/rev.
- Centering seat $\varnothing 50$ mm, mounting punch circle $\varnothing 68$ mm
- TTL- or HTL- output signals
- Socket radial

eccentric disc-set type A
article-no.: 40701
(accessory)



socket type 2,
pin contacts, radial,
12-poles
D2SR12

drawing-no.: 027- 4 Y 1

Mechanical data

Design	B14	B14
Housing	aluminium, black, powder coated	
Protection	IP 65	according to DIN EN 60 529 IP65
Construction principle	LED with glass slotdisc	
max. revolution (mechanical)	$n_{max} \leq 12\,000 \text{ min}^{-1}$	(observe limit frequency)
Permissible shaft load	axial $\leq 20 \text{ N}$ radial $\leq 40 \text{ N}$	(at shaft end)
Starting torque	at 20 °C $\leq 1 \text{ Ncm}$	
Vibration	55... 2000 Hz $\leq 100 \text{ m/s}^2$	according to DIN IEC 60 068, part 2 - 6
Shock	11 ms $\leq 300 \text{ m/s}^2$	according to DIN IEC 60 068, part 2 - 27
Shaft diameter	d 6 mm	6
Weight	approx. 240 g	

Electrical data

Number of pulses	Z	1000 to 10 000 pulses/rev.	XXXX
Electronic version (output signals)	TTL	Line driver-output stage, supply voltage: $U_B = 5 \text{ VDC} \pm 5\%$ (polarity protected), output amplitude: $U_{LOW} \leq 0.5 \text{ V}$, $U_{HIGH} \geq 2.5 \text{ V}$	T
	HTL	Push pull-output stage (short-circuit proof), supply voltage: $U_B = 8 - 30 \text{ VDC}$ (polarity protected), output amplitude: $U_{LOW} \leq 1.5 \text{ V}$, $U_{HIGH} \geq U_B - 3 \text{ V}$	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 $\leq 70 \text{ mA}$ HTL $\leq 70 \text{ mA}$	
Current consumption (no-load)	I_{max}	$\leq 100 \text{ mA}$	
Permissible cable length		$\leq 100 \text{ m}$ (Baumer Thalheim cable)	
Type of connection		socket type 2, pin contacts, radial, 12-poles	D2SR12
Operating temperature range		0°C to $+70^\circ \text{C}$	S
Permissible relative humidity		$\leq 90\%$ (condensation not permitted)	

Options

Electronic version	TTL-output signals, Line driver-output stage, supply voltage: $U_B = 8 - 30 \text{ VDC}$ (polarity protected)	R
Operating temperature range	0°C to $+100^\circ \text{C}$	E

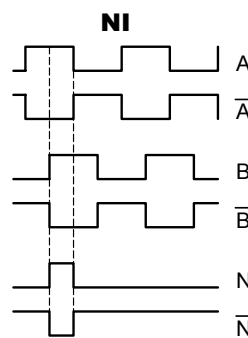
Accessories

Connector, for version D2SR12	connector type 2, bush contacts, straight, 12-poles	S2BG12
Eccentric disc-set type A (3 pcs.)	article-no.: 40701-3	

Connection table

PIN-no.	signals
PIN 5	A
PIN 6	A inv.
PIN 8	B
PIN 1	B inv.
PIN 3	N
PIN 4	N inv.
PIN 12	+ U_B
PIN 10	0 V
PIN 2	+ U_{Sensor}
PIN 11	0 V_{Sensor}
PIN 7	NC
PIN 9	NC

Output signal diagram



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

Ordering example:

ITD 21	B14	Y 1	2048	H	NI	D2SR12	S	6	IP65	
Incremental encoder ITD 21	Design B14	Mechanical variant Y 1 = look at the drawing	Number of pulses 2048 pulses/revolution	Electronic version $U_B = 8 - 30 \text{ VDC HTL}$	Output signals A-, B-, N- track + inv.	Type of connection socket type 2, pin contacts, radial, 12-poles	Operating temperature range 0°C to $+70^\circ \text{C}$	Shaft diameter 6 mm	Protection IP65	Attachment kit variant

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