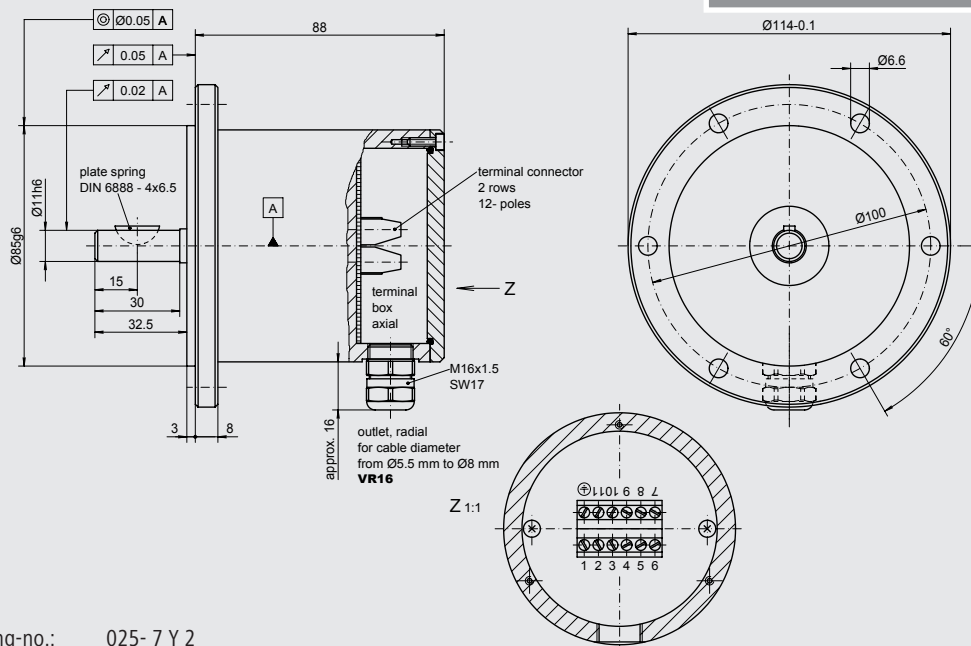


Incremental encoder with shaft



Features

- Robust incremental encoder for industrial use
- Number of pulses up to 2048 pulses/rev.
- Euro-flange-fastening
- Centering seat Ø85 mm, mounting punch circle Ø100 mm
- TTL- or HTL- output signals
- Spacious cable box, axial



drawing-no.: 025- 7 Y 2

Mechanical data

Design	B10	B10
Housing	aluminium, unpainted	
Protection	IP 65	according to DIN EN 60 529 IP65
Construction principle	OPSIC with slotdisc	
max. revolution (mechanical)	$n_{max} \leq 12\,000 \text{ min}^{-1}$	(observe limit frequency)
Permissible shaft load	axial $\leq 40 \text{ N}$ radial $\leq 60 \text{ N}$	(at shaft end)
Starting torque	at 20 °C $\leq 1.2 \text{ Ncm}$	
Vibration	55... 2000 Hz $\leq 100 \text{ m/s}^2$	according to DIN IEC 60 068, part 2-6
Shock	11 ms $\leq 1000 \text{ m/s}^2$	according to DIN IEC 60 068, part 2-27
Shaft diameter	d 11 mm	11
Weight	approx. 1050 g	

Electrical data

Number of pulses	Z	100, 180, 200, 360, 500, 512, 720, 1000, 1024, 2000, 2048 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: $U_{\text{LOW}} \leq 0.5 \text{ V}$, $U_{\text{HIGH}} \geq 2.5 \text{ V}$	T
	HTL	Push pull-output stage (short-circuit proof), supply voltage: $U_B = 8 - 30 \text{ VDC}$ (polarity protected), output amplitude: $U_{\text{LOW}} \leq 1.5 \text{ V}$, $U_{\text{HIGH}} \geq U_B - 3 \text{ V}$	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}	$\leq 70 \text{ mA}$	
Current consumption (no-load)	I_{max}	$\leq 100 \text{ mA}$	
Permissible cable length		$\leq 100 \text{ m}$ (Baumer Thalheim cable)	
Type of connection		cable box, axial, 12-poles, M16x1.5-outlet, radial	VR16
Operating temperature range		-20°C to $+70^\circ \text{C}$	S
Permissible relative humidity		$\leq 90\%$ (condensation not permitted)	

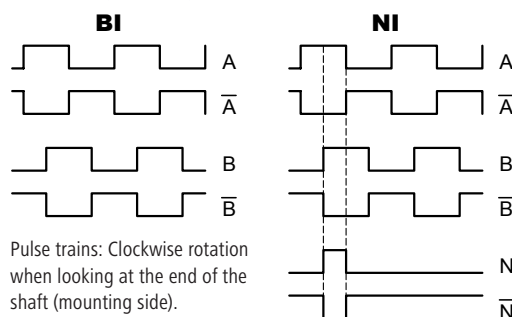
Options

Electronic version		TTL-output signals, Line driver-output stage, supply voltage: $U_B = 8 - 30 \text{ VDC}$ (polarity protected)	R
Output signals	A, B, N + Inv.	2 square wave pulse trains + zero pulse, electr. length 90° + signal inverting	NI
Operating temperature range		-20°C to $+100^\circ \text{C}$	E

Connection table

terminal	signals
PIN 3	A
PIN 4	A inv.
PIN 5	B
PIN 6	B inv.
PIN 7	N
PIN 8	N inv.
PIN 2	$+U_B$
PIN 1	0 V
PIN 10	$+U_{\text{Sensor}}$
PIN 9	0 V_{Sensor}
PIN 11	NC
PIN 12	shielding/housing

Output signal diagram



Ordering example:

Incremental encoder ITD 40	Design B10	Mechanical variant Y 2 = look at the drawing	Number of pulses 1024 pulses/revolution	Electronic version $U_B = 8 - 30 \text{ VDC HTL}$	Output signals A; B- track + inv.	Type of connection cable box, axial, M16x1.5-outlet, radial	Operating temperature range -20°C to $+70^\circ \text{C}$	Shaft diameter 11 mm	Protection IP65	Attachment kit variant
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