

ROTAPULS

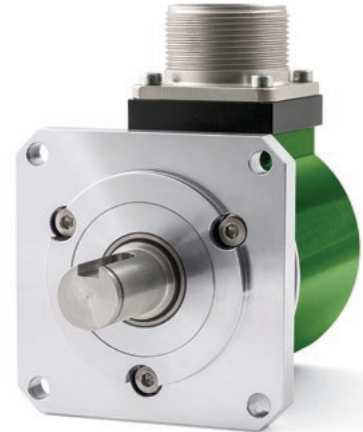
Incremental encoder

Series

IT68



- Popular machine tool encoder with increased reliability and performance
- Resolution up to 10000 PPR
- NPN, Push-Pull, Line Driver or Universal circuit
- Extended temperature range -40°C +100°C & IP66



IT68

ENVIRONMENTAL SPECIFICATIONS

Shock:	100 g, 6 ms
Vibrations:	10 g, 5-2000 Hz
Protection:	IP65
Operating temperature range:	-40°C +100°C (-40°F +212°F)
Storage temperature range:	-40°C +100°C (-40°F +212°F) (98% R.H. without condensation)
Option:	• IP66 Protection shaft end (torque 2,5 Ncm and 3000 rpm max.)

MECHANICAL SPECIFICATIONS

Dimensions:	see drawing
Shaft diameter:	Ø 15 mm with keyway
Shaft loading (axial, radial):	100 N max.
Shaft rotational speed:	6000 rpm max.
Starting torque (at 20°C):	0,4 Ncm (typical)
Bearings life:	400 x 10 ⁶ rev. min. (10 ⁹ rev. min. with 20 N shaft loading max.)
Electrical connections:	MIL 10 pin, MIL 17 pin plug or cable output 1 m (3.3 ft)
Weight:	~ 500 g (17,6 oz)
Option:	• additional cable

ELECTRICAL SPECIFICATIONS

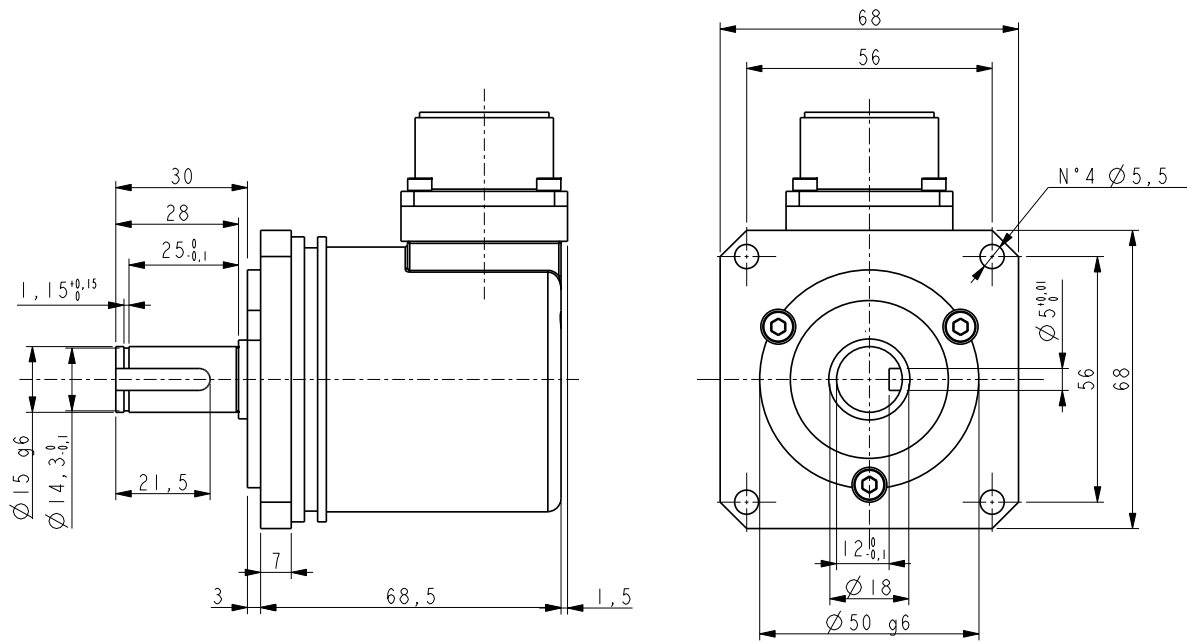
Resolution (PPR):	2-4-5-8-10-12-15-16-20-24-25-30-35-36-40-50-60-64-70-80 90-100-120-127-142-150-160-180-200-216-230-236-240-250 254-256-267-270-300-314-360-375-400-410-435-471-500 512-600-635-720-750-800-900-1000-1024-1068-1200-1250 1270-1400-1440-1500-1800-2000-2048-2250-2400-2500 3000-3600-4000-4096-5000-6000-8192-9000-10000
Counting frequency:	100 kHz max.
Output circuits:	NPN, PNP, Push-Pull, Line Driver, Universal circuit
Power supply:	+5V±5%, +10V +30V,+5V +30V
Consumption:	70 mA (typical)
Output current (each channel):	40 mA max.
Protection:	against inversion of polarity and short-circuit (except L circuit)
EMC:	electro-magnetic immunity, according to: EN 61000-4-2 EN 61000-4-4
Optoelectronic life:	100.000 hrs min.
Option:	• Output frequency up to 300 kHz

MATERIALS

Flange:	anticorodal, UNI EN AW-6082
Housing:	zamac die cast
Bearings:	ABEC 5
Shaft:	stainless steel, non-magnetic - UNI EN 4305
Light source:	GaAl diodes

ACCESSORIES

E17MLS:	17 pin MIL mating connector
E10MLS:	10 pin MIL mating connector



IT68

Order code

IT68	-	X (a)	-	XXXXX (b)	XXX (c)	X (d)	G (e)	X (f)	X (g)	X (h)	K (i)	XX (j)	/Sxxx (k)
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(a) OUTPUT CIRCUITS

N = NPN o.c.
 P = PNP o.c.
 Y = Push Pull
 L = Line Driver (RS422)
 H = PP/LD universal circuit

(b) RESOLUTION (PPR)

See electrical specifications

(c) OUTPUT SIGNALS / CONNECTIONS

ZCU = ABO /ABO, cable output
 ZCP = ABO /ABO, MIL 10 pin plug
 ZCQ = ABO /ABO, MIL 17 pin plug

(d) SUPPLY VOLTAGE

1 = +5V±5% (L output circuit)
 2 = +10V± 30V (N, P and Y output circuit)
 4 = +5V± 30V (H output circuit)

(e) SHAFT DIAMETER

G = 15 mm

(f) CONNECTION POSITION

- = axial
 R = radial

(g) PROTECTION

- = IP65 (standard)
 Q = IP66 protection shaft side

(h) COUNTING FREQUENCY

- = 100 kHz (standard)
 W = 300 kHz

(i) OPERATING TEMPERATURE

K = -40°C +100°C (-40°F +212°F) standard

(j) CABLE LENGTH (only with ZCU)

L1 = cable output 1 m (standard)
 L2 = cable output 2 m
 Lx = cable output x m

(k) CUSTOM VERSION