

ROTAPULS

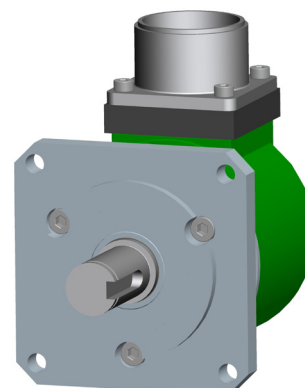
Incremental encoder

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 (acc. to MIL STD 202F)
Vibrations:	10 g, 5-2000 Hz (acc. to MIL STD 202F)
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)
Options:	• IP66 Protection shaft end (torque 2,5 Ncm and 3000 rpm max.)

MECHANICAL SPECIFICATIONS

Dimensions:	see drawing
Shaft diameter:	15 mm with keyway
Shaft loading (axial, radial):	100 N max.
Shaft rotational speed:	6000 rpm max.
Starting torque at 20°C:	≤ 1,5 Ncm (typical)
Bearings life:	400 x 10 ⁶ rev. min. (10 ⁹ rev. min. with 20 N shaft loading max)
Electrical connections:	cabl 1 m, MIL 10 pin or MIL 17 pin connector
Weight:	~ 0,4 kg (14,1 oz)

ELECTRICAL SPECIFICATIONS

Resolution (PPR):	2-4-5-6-10-12-15-16-18-20-24-25-30-35-36-39 40-45-50-60-64-70-80-90-100-120-122-125-127 128-160-142-150-180-200-216-236-240-250-254 256-267-270-300-314-360-375-400-410-433-435- 471-500-512-600-625-628-635-720-750-784-800 875-900-946-1000-1024-1068-1200-1250 1270-1440-1500-1800-2000-2048-2250-2400 2500-2600-2700-3000-3500-3600-4000-4096-5000 6000-7200-8192-9000-10000
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 max.
Output current (each channel):	40 mA max.
Protection:	against inversion of polarity outputs are protected against short-circuit
Optoelectronic life:	100.000 hrs min.
Option:	• Output frequency up to 300 kHz

MATERIALS

Flange:	non corroding, UNI EN AW-6082
Housing:	non corroding, UNI EN AW-6082
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

Additional code (optional)

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

⑥ PULSE RATE (PPR)

See electrical specifications

© OUTPUT SIGNALS

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

④ SUPPLY VOLTAGE

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

© SHAFT DIAMETER

$G = 15 \text{ mm}$

(f) CONNECTION POSITION

- = axial
R = radial

⑨ PROTECTION

Q = IP66

(h) COUNTING FREQUENCY

- = 100 kHz (standard)
W = 300 kHz

① OPERATING TEMPERATURE

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

⓵ CABLE LENGTH (only with ZCU)

⑤ CABLE LENGTH (only)
 - = 1 m cable (standard)
 L2 = 2 m cable
 Lx = x m cable

Ⓚ CUSTOM VERSION