

# ROTAPULS

Incremental encoders

Series

I65 • IT65



- Robust die cast housing
- High shaft load
- Protection up to IP66 (shaft side)
- Clamp flange
- Square flange, US size
- Preferential versions available



I65 • IT65

## ENVIRONMENTAL SPECIFICATIONS

Shock:	250 g, 6 ms acc. to CEI EN 60068-2-27
Vibrations:	10 g, 5-2000 Hz acc. to CEI EN 60068-2-6
Protection:	IP65
Operating temperature range:	-25°C +85°C (-13°F +185°F)
Storage temperature range:	-25°C +85°C (-13°F +185°F) (98% R.H. without condensation)
Options:	<ul style="list-style-type: none"> <li>• Operating temperature range: -40°C +100°C (-40°F +212°F)</li> <li>• IP66 Protection shaft end (torque 2,5 Ncm and 3000 rpm max.)</li> </ul>

## MECHANICAL SPECIFICATIONS

Dimensions:	see drawing
Shaft diameter:	Ø 6, 8, 9.52, 10, 12 mm
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 <sup>6</sup> rev. min. (10 <sup>9</sup> rev. min. with 20 N shaft loading max.)
Electrical connections:	MIL 7 pin, MIL 10 pin plug or cable output 1 m (3.3 ft)
Weight:	~ 400 g (14,1 oz)
Option:	• additional cable

## ELECTRICAL SPECIFICATIONS

Standard resolution with magnetic sensing (PPR): (output circuits N, P, Y, L, H)	2-4-5-6-8-10-12-15-16-20-24-25-30-35-36-40-50-60-64-70 80-90-120-125-127-142-150-160-180-216-230-236-240-254 267-270-314-360-375-410-435-471-635-800-1068-1270 1400-2250 (other on request)
Standard resolution with unbreakable disk (PPR): (output circuits N, P, Y, L, H)	100-200-250-256-300-400-500-512-600-720-750-900-1000 1024-1200-1250-1440-1500-1800-2000-2048-2500-3000 3600-4000-4096-5000
High accuracy glass disk (PPR): (output circuits N, P, Y, L, H)	5K=5000, 6K=6000, 9K=9000, 10K=10000 4KB=4096, 8KB=8192
Counting frequency:	300 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.

## MATERIALS

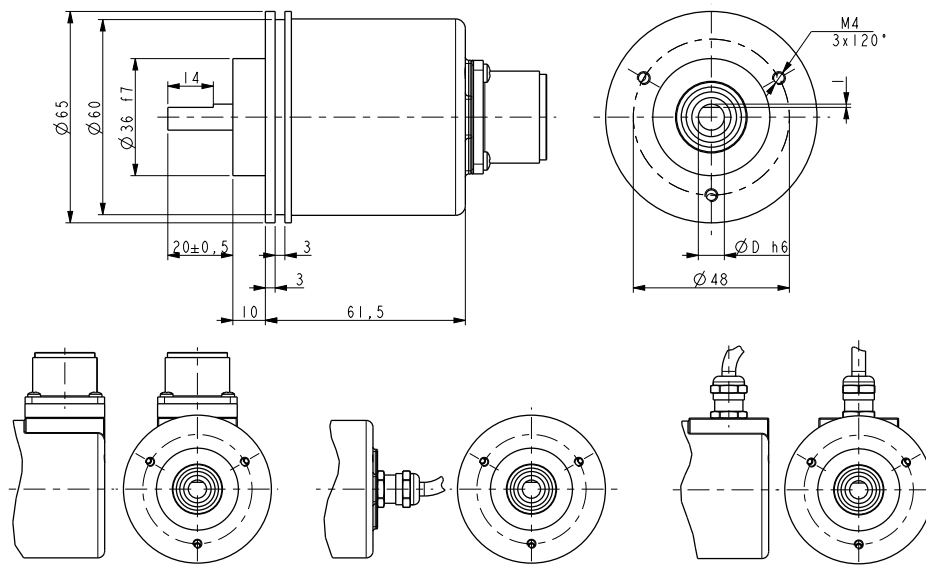
Flange:	anticorodal, UNI EN AW-6082
Housing:	zamac die cast
Bearings:	ABEC 5
Shaft:	stainless steel, non-magnetic - UNI EN 4305
Light source:	GaAl diodes

## PREFERENTIAL MODELS

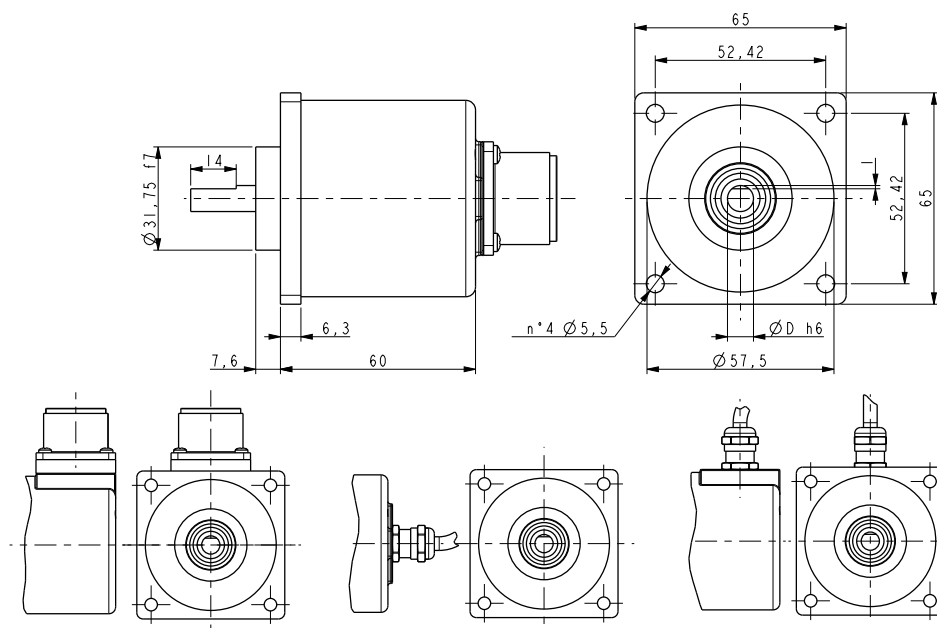
IT65-H-100ZCP4CR	100 PPR, HTL/TTL output
IT65-H-500ZCP4CR	500 PPR, HTL/TTL output
IT65-H-1000ZCP4CR	1000 PPR, HTL/TTL output
IT65-H-1024ZCP4CR	1024 PPR, HTL/TTL output
IT65-H-2500ZCP4CR	2500 PPR, HTL/TTL output
IT65-H-5000ZCP4CR	5000 PPR, HTL/TTL output

## ACCESSORIES

E7MLS:	7 pin MIL mating connector
E10MLS:	10 pin MIL mating connector
PAN/PGF:	flexible couplings
LKM-386:	fixing clamps



I65



IT65

## Order code

I65	-	X	-	XXXXX	XXX	X	X	X	X	X	XX	/Sxxx
IT65		(a)		(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)

## (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

BNF = AB, cable output  
 ZNF = ABO, cable output  
 BND= AB, MIL 7 pin plug  
 ZND= ABO, MIL 7 pin plug  
 BCU = AB /AB, cable output  
 ZCU = ABO /ABO, cable output  
 BCP = AB /AB, MIL 10 pin plug  
 ZCP = ABO /ABO, MIL 10 pin plug

## (d) SUPPLY VOLTAGE

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

## (e) SHAFT DIAMETER

B = 6 mm  
 C = 8 mm  
 D = 9.52 mm - 3/8"  
 E = 10 mm  
 F = 12 mm

## (f) CONNECTION POSITION

- = axial  
 R = radial

## (g) PROTECTION

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

## (h) OPERATING TEMPERATURE

- = -25°C +85°C (-13°F +185°F) standard  
 K = -40°C +100°C (-40°F +212°F)

## (i) CABLE LENGTH

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

## (j) CUSTOM VERSION