

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"> • Operating temperature range: -40°C +100°C (-40°F +212°F) • IP66 Protection shaft end (torque 2,5 Ncm and 3000 rpm max.) |

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 ⁶ rev. min. (10 ⁹ 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

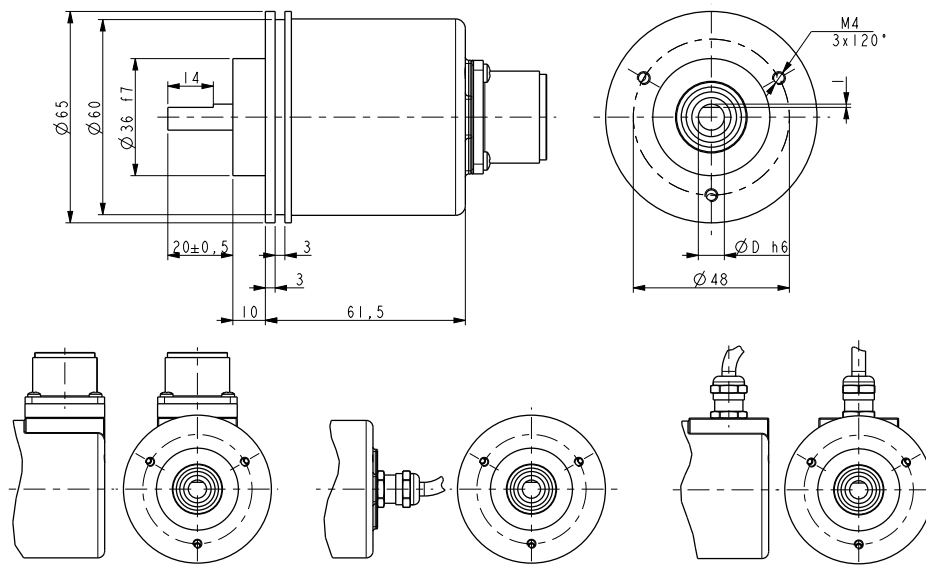
| | |
|---------------|---|
| Flange: | anticorrosional, UNI EN AW-6082 |
| Housing: | zamac die cast |
| Bearings: | ABEC 5 |
| Shaft: | stainless steel, non-magnetic - UNI EN 4305 |
| Light source: | GaAl diodes |

PREFERENTIAL MODELS

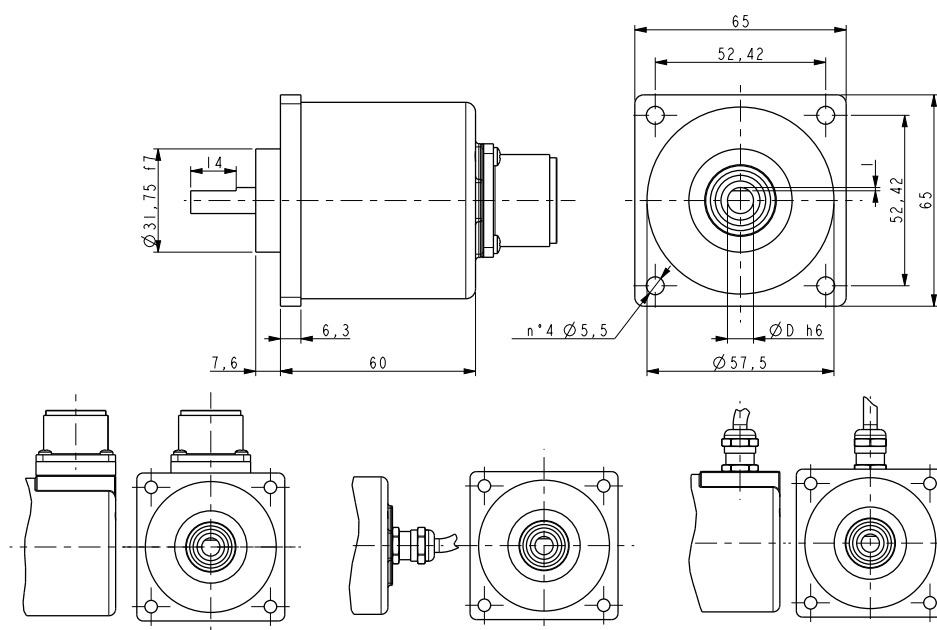
| | |
|-------------------|--------------------------|
| IT65-H-100ZCP4CR | 100 PPR, HTL/TTL output |
| IT65-H-500ZCP4CR | 500 PPR, HTL/TTL output |
| IT65-H-1000ZCP4CR | 1000 PPR, HTL/TTL output |
| IT65-H-1024ZCP4CR | 1024 PPR, HTL/TTL output |
| IT65-H-2500ZCP4CR | 2500 PPR, HTL/TTL output |
| IT65-H-5000ZCP4CR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



IT65



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