

ROTAPULS

Incremental encoders

Series

CK58 • CK59 • CK60

- Standard encoder for heavy industrial applications
- Blind hollow shaft up to \varnothing 15 mm
- Connector or cable output
- ABO or sine/cosine signals



CK60 • CK58 • CK59

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: | IP64 |
| 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) • IP65 Protection (typ. 3000 rpm / 6000 temporary) |

MECHANICAL SPECIFICATIONS

| | |
|---|--|
| Dimensions: | see drawing |
| Hollow shaft diameter: | 14, 15 mm |
| Reducing sleeves from \varnothing 15 mm to: | \varnothing 6, 8, 9.52, 10, 11, 12 mm |
| Shaft loading (axial, radial): | 50 N max. |
| Shaft rotational speed: | typ. 6000 rpm / 12000 temporary |
| 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: | M12, M23 plug or cable output 1 m (3.3 ft) |
| Weight: | ~ 200 g (7 oz) |
| Options: | <ul style="list-style-type: none"> • additional cable • DSub 9 pin inline plug |

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 |
| Resolution (PPR): (only output circuit V) | 500-512-1000-1024-1250-2000-2048-2500 |
| Counting frequency: | 300 kHz max. |
| Output circuits: | NPN, PNP, Push-Pull, Line Driver, Universal circuit, Sine/cosine |
| Power supply: | +5V \pm 5%, +10V +30V, +5V +30V (sine/cosine only +5V \pm 5%) |
| Consumption: | 70 mA (typical) |
| Output current (each channel): | 40 mA max. |
| Protection: | against inversion of polarity and short-circuit (except L and V circuit) |
| EMC: | electro-magnetic immunity, according to: EN 61000-4-2 EN 61000-4-4 |
| Optoelectronic life: | 100.000 hrs min. |
| Option: | • Line Driver 24/5V |

MATERIALS

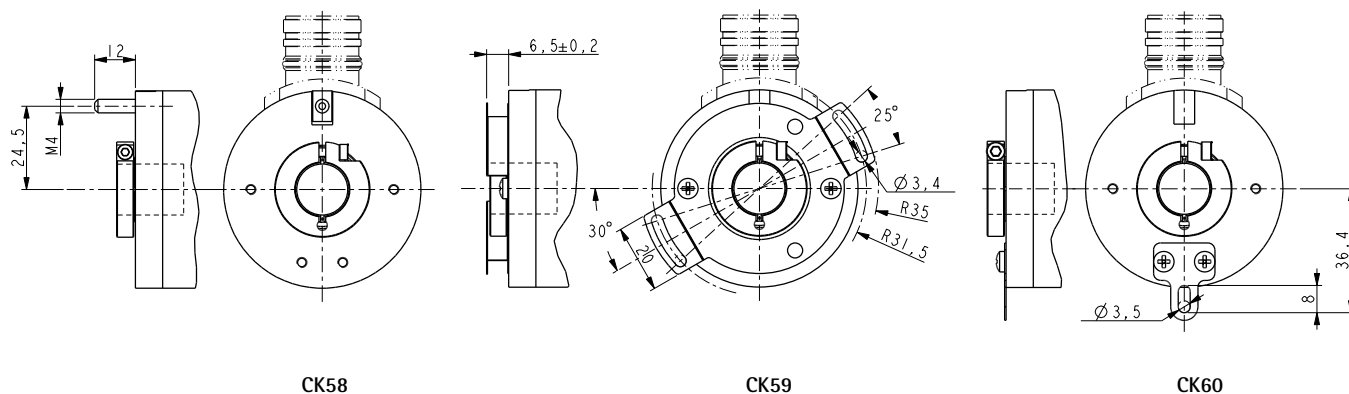
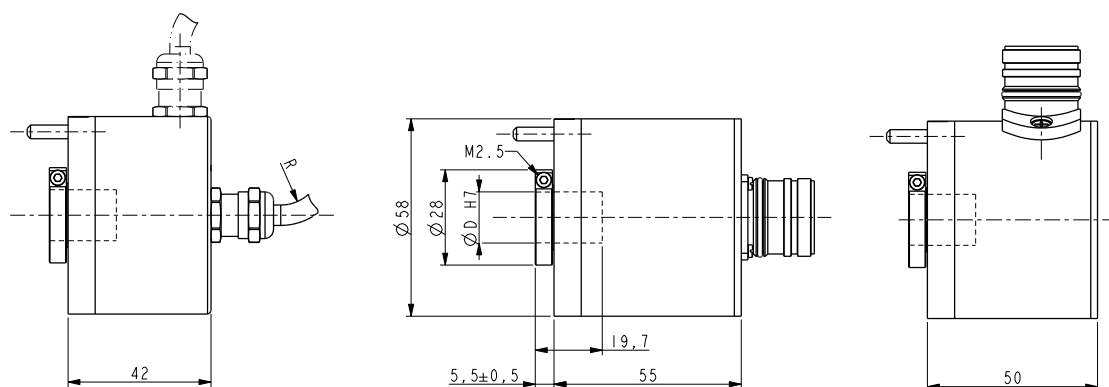
| | |
|---------------|---|
| Flange: | anticorrosive, UNI EN AW-6082 |
| Housing: | anticorrosive, UNI EN AW-6082 |
| Bearings: | ABEC 5 |
| Shaft: | stainless steel, non-magnetic - UNI EN 4305 |
| Light source: | GaAl diodes |

PREFERENTIAL MODELS

| | |
|--------------------|--------------------------|
| CK58-H-500ZCU415R | 500 PPR, HTL/TTL output |
| CK58-H-1000ZCU415R | 1000 PPR, HTL/TTL output |
| CK58-H-1024ZCU415R | 1024 PPR, HTL/TTL output |
| CK58-H-2048ZCU415R | 2048 PPR, HTL/TTL output |

ACCESSORIES

| | |
|-------------------|---------------------------------|
| EPFL 121: | 12 pin M23 mating connector |
| EC-C12F-LK-l8-x: | cordset x meter with M23 conn. |
| EC-M12F8-LK-M8-5: | cordset 5 meters with M12 conn. |
| EDE9S: | 9 pin DSub mating connector |
| BR1: | Reducing sleeves |



CK58

CK59

CK60

Order code

| | | | | | | | | | | | | |
|------|---|-----|---|-------|-----|-----|-----|-----|-----|-----|-----|-------|
| CK58 | - | X | - | XXXXX | XXX | X | XX | X | X | X | XX | /Sxxx |
| CK59 | | (a) | | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) | (j) |
| CK60 | | | | | | | | | | | | |

(a) OUTPUT CIRCUITS

N = NPN o.c.
P = PNP o.c.
Y = Push Pull
L = Line Driver (RS422)
H = PP/LD universal circuit
V = 1 Vpp sine/cosine

(b) RESOLUTION (PPR)

See electrical specifications

(c) OUTPUT SIGNALS / CONNECTIONS

BNF = AB, cable output (except V output)
ZNF = ABO, cable output (except V output)
BCU = AB /AB, cable output
ZCU = ABO /ABO, cable output
BCZ = AB /AB, M23 12 pin plug
ZCZ = ABO /ABO, M23 12 pin plug
ZCM = ABO /ABO, M12 8 pin plug

(d) SUPPLY VOLTAGE

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

(e) SHAFT DIAMETER

14 = 14 mm
15 = 15 mm

(f) CONNECTION POSITION

- = axial
R = radial

(g) PROTECTION

- = IP64 (standard)
P = IP65

(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
CLx = x m cable with DSub 9 pin inline plug

(j) CUSTOM VERSION