

# 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"> <li>• Operating temperature range: -40°C +100°C (-40°F +212°F)</li> <li>• IP65 Protection (typ. 3000 rpm / 6000 temporary)</li> </ul>

## 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 <sup>6</sup> rev. min. (10 <sup>9</sup> 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"> <li>• additional cable</li> <li>• DSub 9 pin inline plug</li> </ul>

## 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

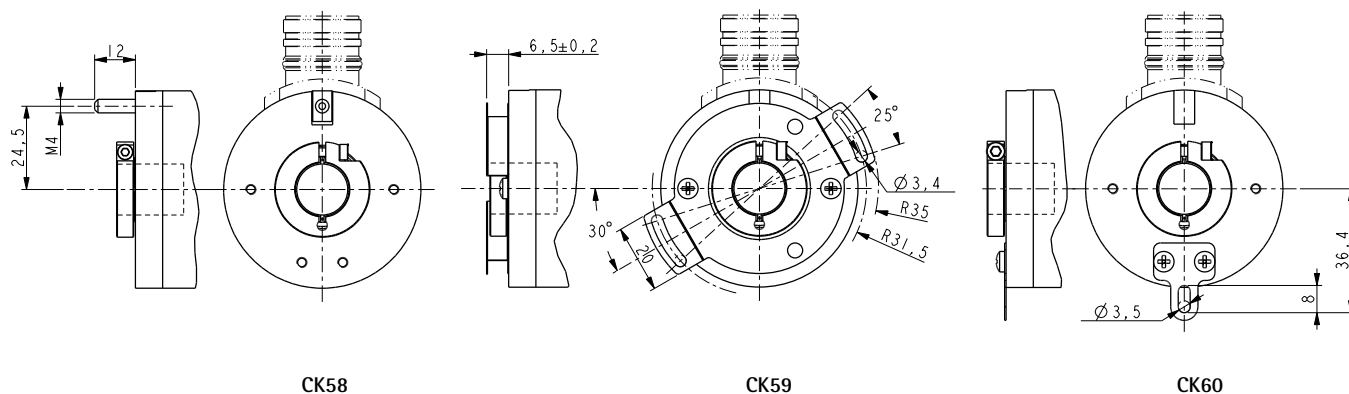
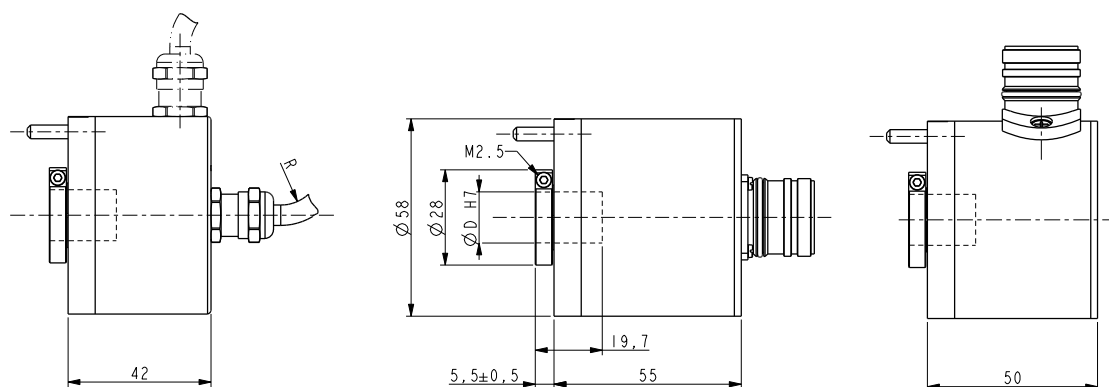
Flange:	anticorrosional, UNI EN AW-6082
Housing:	anticorrosional, UNI EN AW-6082
Bearings:	ABEC 5
Shaft:	stainless steel, non-magnetic - UNI EN 4305
Light source:	GaAl diodes

## 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 V<sub>pp</sub> 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