

# 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



CK58-CK59-CK60

## ENVIRONMENTAL SPECIFICATIONS

Shock:	100 g, 6 ms (acc. to MIL STD 202F)
Vibrations:	10 g, 5-2000 Hz (acc. to MIL STD 202F)
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:	$\leq$ 1 Ncm (typical)
Bearings life:	10 <sup>9</sup> rev. min.
Weight:	$\sim$ 0,3 kg (10,6 oz)
Electrical connections:	M23 connector or cable output 1 m (3.3 ft)
Options:	<ul style="list-style-type: none"> <li>• additional cable</li> <li>• DSub 9 pin inline connector</li> </ul>

## ELECTRICAL SPECIFICATIONS

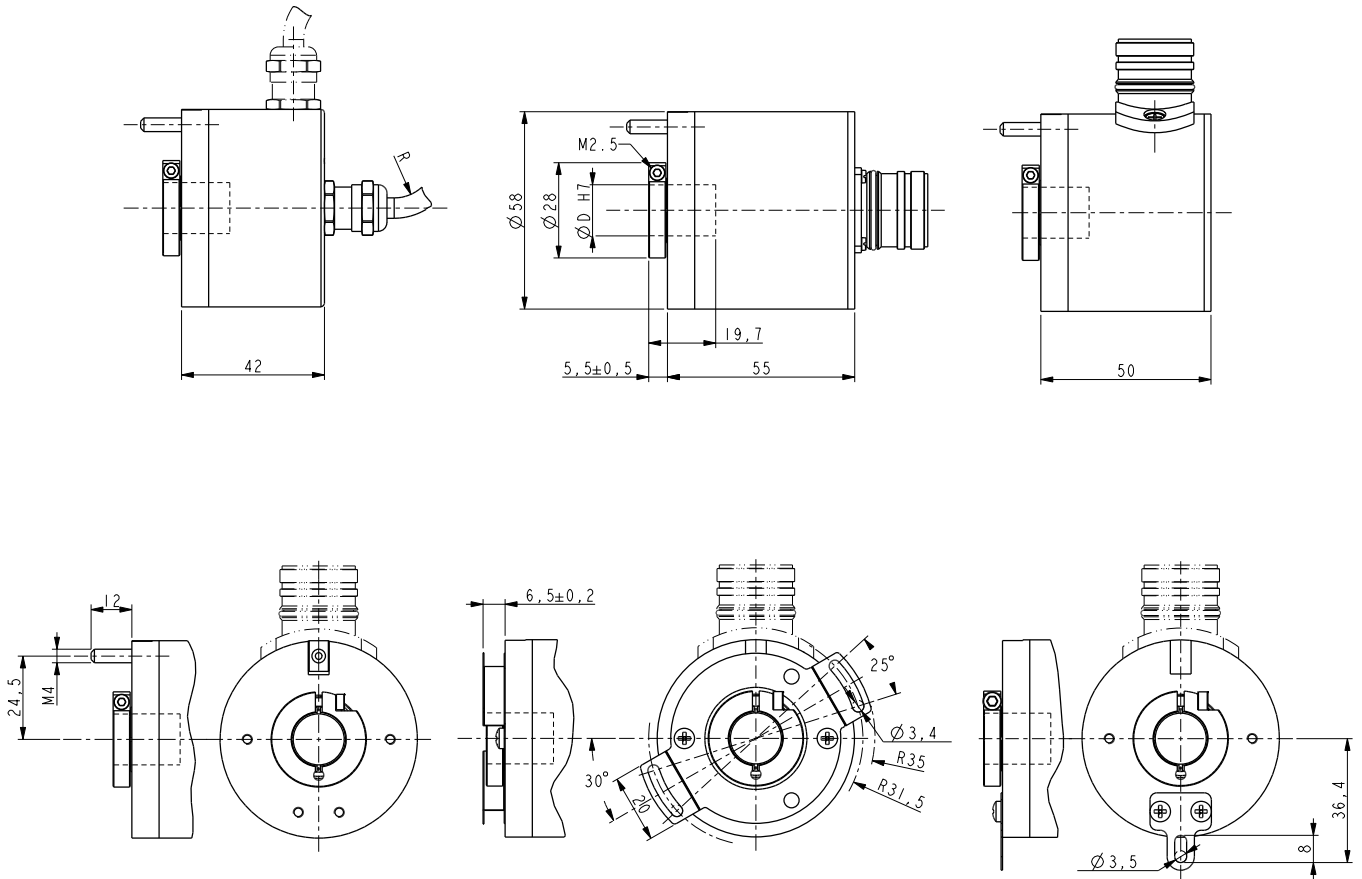
Resolution (PPR):	2 - 4 - 5 - 6 - 10 - 12 - 15 - 16 - 18 - 20 - 24 - 25 - 30 - 35 - 36 - 39 - 40
(output circuit N, P, Y, L, H)	45 - 50 - 60 - 64 - 70 - 80 - 90 - 100 - 120 - 122 - 125 - 127 - 128 160 - 142 - 150 - 180 - 200 - 216 - 236 - 240 - 250 - 254 - 256 267 - 270 - 300 - 314 - 360 - 375 - 400 - 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 - 6350 - 7200 - 8192 9000 - 10000
Resolution (PPR):	500-512-1000-1024-1250-2000-2048-2500
(output circuit V)	
Counting frequency:	100 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:	typ. 70 mA, 100 mA max.
Output current (each channel):	40 mA max.
Protection:	against inversion of polarity and against shortcut (except L, V output)
EMC:	electro-magnetic emission (according to EN 61000-6-4) electro-magnetic immunity (according to EN 61000-6-2)
Optoelectronic life:	100.000 hrs min.
Option:	<ul style="list-style-type: none"> <li>• Counting frequency up to 300 kHz</li> <li>• Line Driver 24/5V</li> </ul>

## MATERIALS

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

## ACCESSORIES

EPFL 121:	12 pin M23 mating connector
EC-C12F-LK-l8-x:	cordset x meter, M23 connector
BR1-xx:	reducing sleeves
EDE 9S:	9 pin DSub mating connector



CK58-CK59-CK60

Order code

Additional code (optional)

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

(a) OUTPUT CIRCUITS

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

(b) PULSE RATE (PPR)

See electrical specifications

(c) OUTPUT SIGNALS

BNF = AB, cable output  
 ZNF = ABO, cable output  
 BCU = AB /AB, cable output  
 ZCU = ABO /ABO, cable output  
 BCZ = AB /AB, M23 connector output  
 ZCZ = ABO /ABO, M23 connector output

(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) COUNTING FREQUENCY

- = 100 kHz (standard)  
 W = 300 kHz

(i) OPERATING TEMPERATURE

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

(j) CABLE LENGTH

- = 1 m cable (standard)  
 L2 = 2 m cable  
 Lx = x m cable  
 CLx = x m cable with DSub 9 pin inline plug

(k) CUSTOM VERSION