

# ROTAPULS

Incremental encoders

Series

158 • I58S



- Standard encoder for general industrial application
- Pulse rates up to 10000 PPR (real)
- Servo or clamp flange mounting
- High operating temperature range (optional)
- Line Driver, HTL and sine/cosine output circuits



I58-I58S

## 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</li> </ul>

## MECHANICAL SPECIFICATIONS

Dimensions:	see drawing
Shaft diameter:	6, 8, 9.52, 10, 12 mm
Shaft loading (axial, radial):	100 N max.
Shaft rotational speed:	typ. 6000 rpm / 12000 temporary
Starting torque at 20°C:	≤ 1 Ncm (typical)
Bearings life:	10 <sup>9</sup> rev. min.
Weight:	~ 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

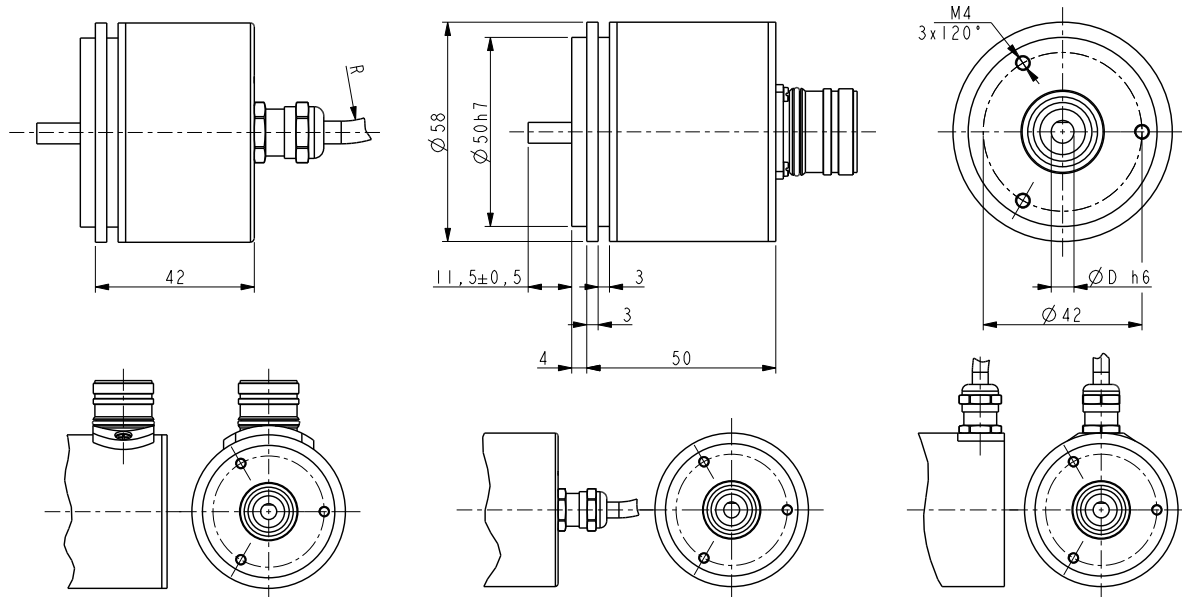
Resolution (PPR): (output circuit N, P, Y, L, H)	2-4-5-6-10-12-15-16-18-20-24-25-30-35-36-39-40 45-50-60-64-70-80-90-100-120-122-125-127-128 160-142-150-180-200-216-236-240-250-254-256 267-270-300-314-360-375-400-410-433-435-471 500-512-600-625-628-635-720-750-784-800-875 900-946-1000-1024-1068-1200-1250-1270 1440-1500-1800-2000-2048-2250-2400-2500-2600 2700-3000-3500-3600-4000-4096-5000-6000-6350-7200-8192 9000-10000
Resolution (PPR): (output circuit V)	500-512-1000-1024-1250-2000-2048-2500
Counting frequency:	100 kHz max.
Output circuits:	NPN, PNP, Push-Pull, Line Driver, Universal circuit, Sine/cosine
Power supply:	+5V±5%, +10V +30V,+5V +30V (sine/cosine only +5V±5%)
Consumption:	70 mA max.
Output current (each channel):	40 mA max.
Protection:	against inversion of polarity and short cut
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

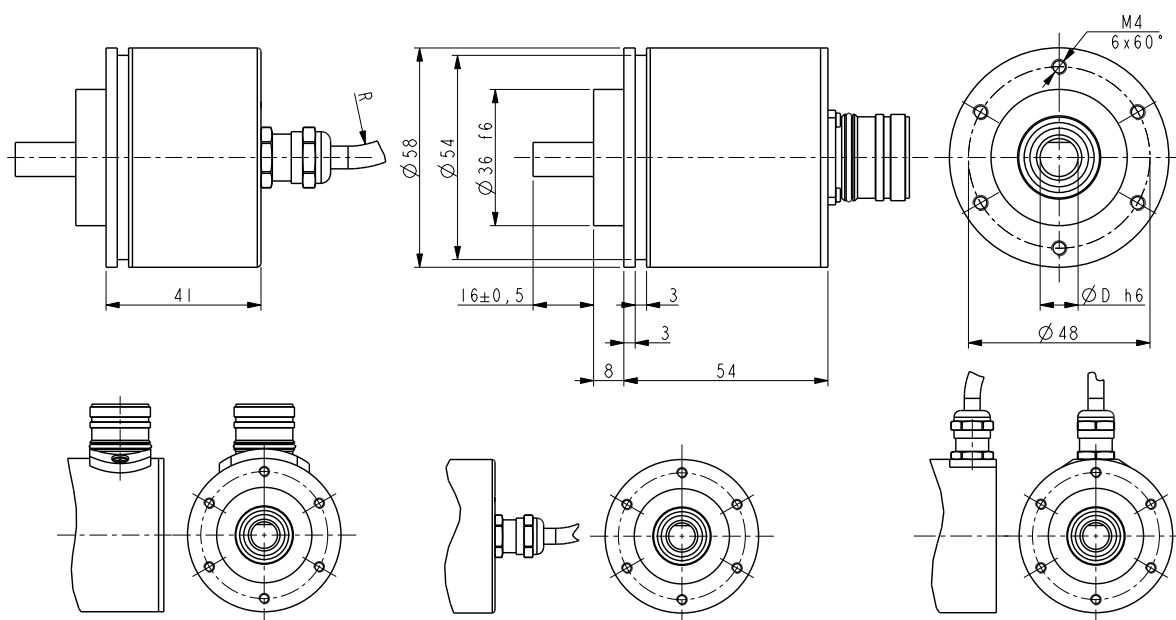
Flange:	anticorrosive, UNI EN AW-6082
Housing:	anticorrosive, UNI EN AW-6082
Bearings:	ABEC 5
Shaft:	stainless steel, non-magnetic - UNI EN 4305
Light source:	GaAl diodes

## ACCESSORIES

EPFL 121:	12 pin M23 mating connector
EC-C12F-LK-I8-x:	cordset x meter, M23 connector
EDE 9S:	9 pin DSub mating connector
PAN/PGF:	flexible couplings
LKM-386:	fixing clamps



158



158S

Order code

158	-	X	-	XXXXX	XXX	X	XX	X	X	X	X	XX	/Sxxx
158S		(a)		(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)

Ⓐ 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

Ⓑ PULSE RATE (PPR)

See electrical specifications

Ⓒ OUTPUT SIGNALS

BNF = AB, cable output  
ZNF = AB0, cable output  
BCU = AB /AB, cable output  
ZCU = AB0 /AB0, cable output  
BCZ = AB /AB, M23 connector output  
ZCZ = AB0 /AB0, M23 connector output

Ⓓ SUPPLY VOLTAGE

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

Ⓔ SHAFT DIAMETER

6 = 6 mm  
8 = 8 mm  
P9 = 9.52 mm - 3/8"  
10 = 10 mm  
12 = 12 mm

Ⓕ CONNECTION POSITION

- = axial  
R = radial

Ⓖ PROTECTION

- = IP64 (standard)  
P = IP65

Ⓗ COUNTING FREQUENCY

- = 100 kHz (standard)  
W = 300 kHz

Ⓘ OPERATING TEMPERATURE

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

Ⓙ CABLE LENGTH

- = 1 m cable (standard)  
L2 = 2 m cable  
L7 = 7 m cable  
Lx = x m cable  
CLx = x m cable with DSub 9 pin inline plug

Ⓚ CUSTOM VERSION