

# ROTAPULS

Incremental encoders

Series

I40 • I41



- Compact industrial encoders
- Preferential versions with fast delivery
- Universal output circuit HTL/TTL
- High resolution up to 4096 PPR



I41 • I40

## ENVIRONMENTAL SPECIFICATIONS

Shock:	100 g, 6 ms
Vibrations:	10 g, 5-2000 Hz
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)
Option:	• IP65, IP66 protection shaft end

## MECHANICAL SPECIFICATIONS

Dimensions:	see drawing
Shaft diameter:	Ø 6, 6.35, 8 mm
Shaft loading (axial, radial):	20 N max.
Shaft rotational speed:	6000 rpm max.
Starting torque (at 20°C):	0,1 Ncm (typical)
Bearings life:	10 <sup>9</sup> rev. min.
Electrical connections:	cable output 1 m (3.3 ft)
Weight:	~ 100 g (3,5 oz)
Option:	• additional cable

## ELECTRICAL SPECIFICATIONS

Resolution (PPR):	1-2-5-8-10-15-30-32-40-50-60-72-84-90- 100-120 150-180-200-250-256-300-360-400-500-512-600-720 900-1000(*)-1024(*)-1440-1800-2000(*)-2048(*)-2400 2880-4000(*)-4096(*)
(*) not available for I40 series	
Counting frequency:	50 ÷ 100 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

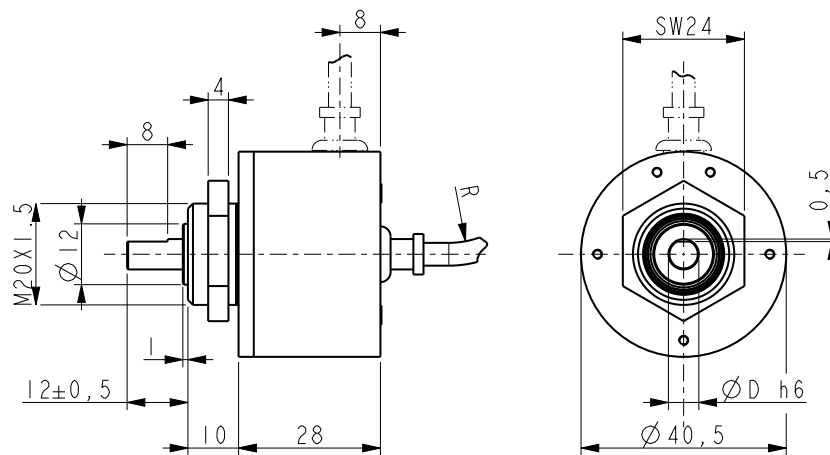
Flange:	anticorrosive, UNI EN AW-6082
Housing:	fibre glass epoxy resin
Bearings:	ABEC 5
Shaft:	stainless steel, non-magnetic, UNI EN 4305
Light source:	GaAl diodes

## PREFERENTIAL MODELS

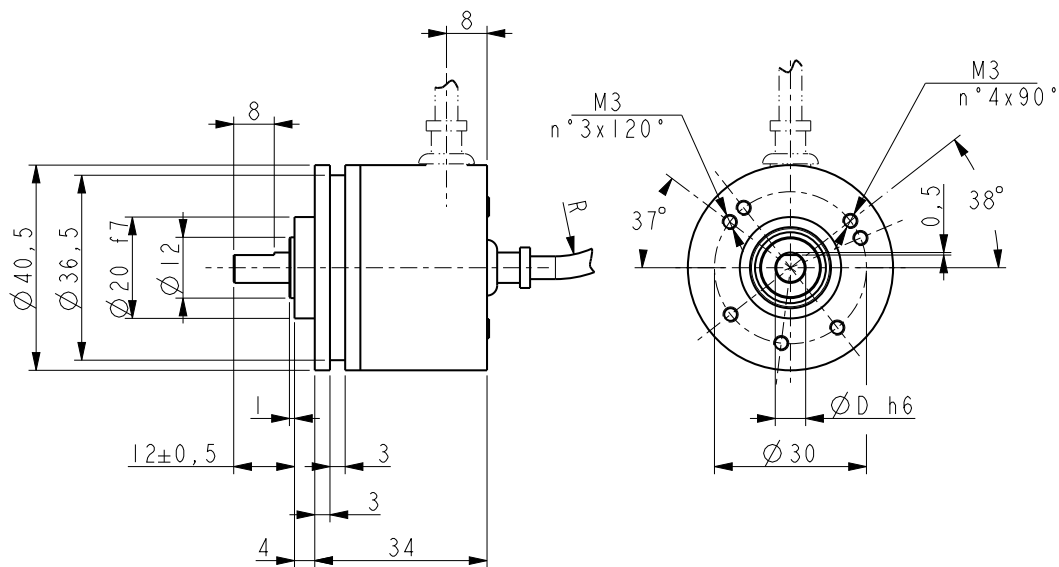
I41-H-100ZCU46L2	100 PPR, HTL/TTL output
I41-H-200ZCU46L2	200 PPR, HTL/TTL output
I41-H-360ZCU46L2	360 PPR, HTL/TTL output
I41-H-500ZCU46L2	500 PPR, HTL/TTL output
I41-H-1000ZCU46L2	1000 PPR, HTL/TTL output
I41-H-1024ZCU46L2	1024 PPR, HTL/TTL output

## ACCESSORIES

EDE9S:	9 pin DSub mating connector
PAN/PGF:	flexible couplings
LKM-386:	fixing clamps



I40



I41

### Order code

I40	-	X	-	XXXX	XXX	X	XX	X	X	XX	/Sxxx
I41		Ⓐ		Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	Ⓖ	Ⓗ	Ⓘ

#### Ⓐ OUTPUT CIRCUITS

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

#### Ⓑ RESOLUTION (PPR)

See electrical specifications

#### Ⓒ OUTPUT SIGNAL

BNF = AB  
BCU = AB, /AB  
ZNF = ABO  
ZCU = ABO, /ABO

#### Ⓓ POWER SUPPLY

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

#### Ⓔ SHAFT DIAMETER

6 = 6 mm  
P6 = 6.35 mm - 1/4"  
8 = 8 mm

#### Ⓕ PROTECTION

- = IP64  
P = IP65  
Q = IP66 shaft side (only I41)

#### Ⓖ CONNECTION POSITION

- = axial  
R = radial

#### Ⓖ CABLE LENGTH

- = cable output 1 m (standard)  
L2 = cable output 2 m  
Lx = cable output x m  
CLx = x m cable with DS9 sub 9 pin inline plug

#### Ⓘ CUSTOM VERSION