

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 ⁹ 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

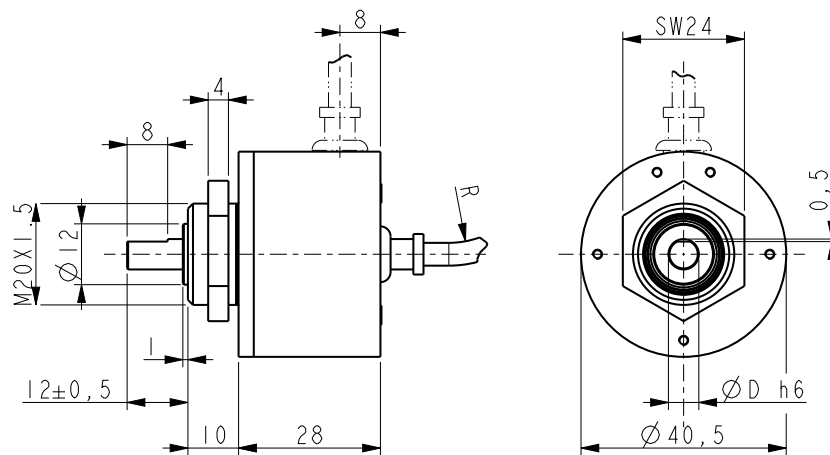
| | |
|---------------|--|
| Flange: | anticorrosive, UNI EN AW-6082 |
| Housing: | fibre glass epoxy resin |
| Bearings: | ABEC 5 |
| Shaft: | stainless steel, non-magnetic, UNI EN 4305 |
| Light source: | GaAl diodes |

PREFERENTIAL MODELS

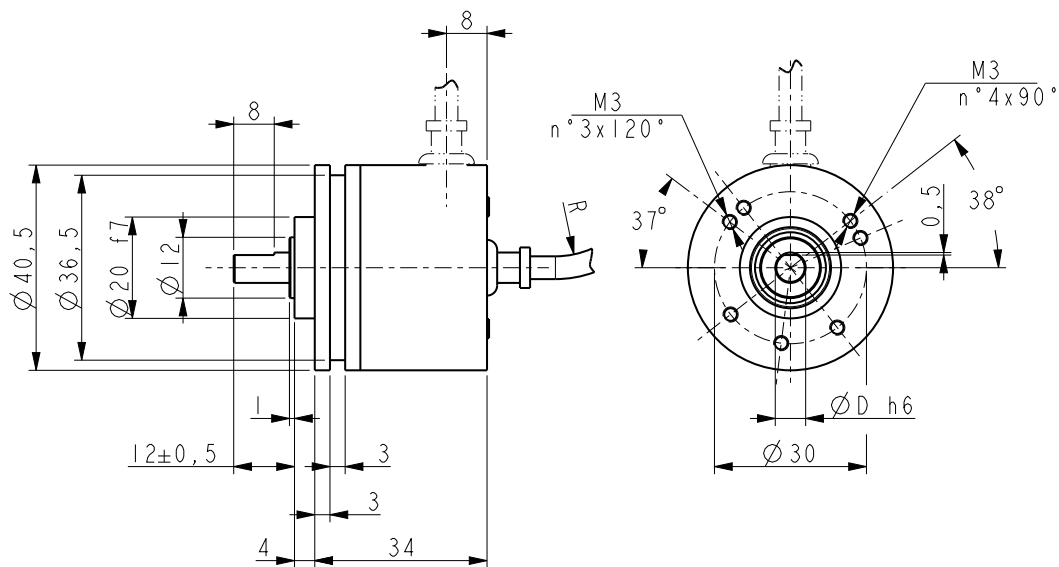
| | |
|-------------------|--------------------------|
| I41-H-100ZCU46L2 | 100 PPR, HTL/TTL output |
| I41-H-200ZCU46L2 | 200 PPR, HTL/TTL output |
| I41-H-360ZCU46L2 | 360 PPR, HTL/TTL output |
| I41-H-500ZCU46L2 | 500 PPR, HTL/TTL output |
| I41-H-1000ZCU46L2 | 1000 PPR, HTL/TTL output |
| I41-H-1024ZCU46L2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