

# ROTAPULS

Incremental encoders

series

I40 • I41



I40



I41

## ENVIRONMENTAL SPECIFICATIONS

Shock:	100 g, 6 ms (acc. to MIL STD 202F)
Vibrations:	10 g, 5-2000 Hz (acc. to MIL STD 202F)
Operating temperature range:	-20°C +70°C (-4°F, +158°F)
Storage temperature range:	-20°C +80°C (-4°F +176°F) (98% R.H.without condensation)
Protection:	IP54
Options:	<ul style="list-style-type: none"> <li>• IP65 Protection (only I41)</li> <li>• IP66 Protection shaft end (only I41)</li> </ul>

## MECHANICAL SPECIFICATIONS

Dimensions:	see drawing
Shaft:	Ø 4, 6, 6.35, 8 mm
Shaft loading (axial and radial):	20 N max.
Shaft rotational speed:	6000 rpm max.
Starting torque at 20°C:	≤ 0,3 Ncm (typical)
Moment of inertia:	~20 gcm <sup>2</sup>
Bearings life:	10 <sup>9</sup> rev. min.
Weight:	~ 0,1 kg (3,5 oz)

## ELECTRICAL SPECIFICATIONS

STD pulse rate (other PPR upon request):	1-5-8-10-15-20-25-30-32-40-50-60-64-72-84 90-100-125-127-150-176-180-200-250-300-314 320-360-400-500-540-600-625-635-720-900 1000-1021-1024-1080-1200-1250-1500-1600 2000-2500-3000-3600
Power supply:	+5V±5%, +10V +30V,+5V +30V
Output circuits:	NPN o.c., PNP o.c., Push-Pull, Line Driver, PP/LD
Output current (per channel):	40 mA max.
Output frequency:	50 kHz max.
Input current:	50 mA max.
Protection:	against inversion of polarity (except +5V version)
Optoelectronic life:	100.000 hrs min.
Option:	• Output frequency up to 100 kHz max.

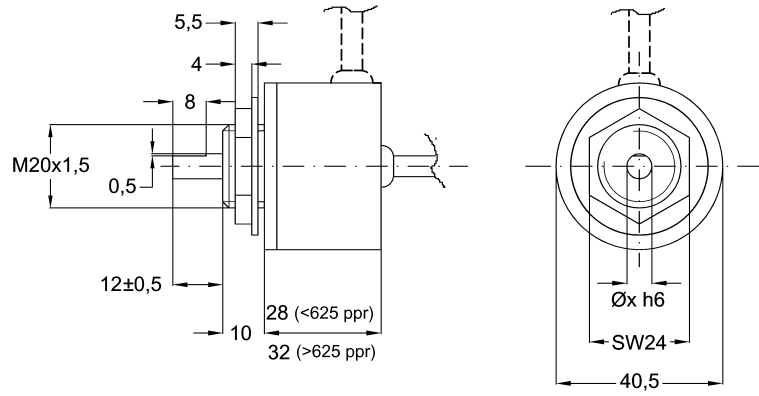
## MATERIALS

Flange:	non corroding
Housing:	fibre glass epoxy resin
Bearings:	ABEC 5
Shaft:	stainless steel, non-magnetic
Light source:	GaAl diodes

## ACCESSORIES

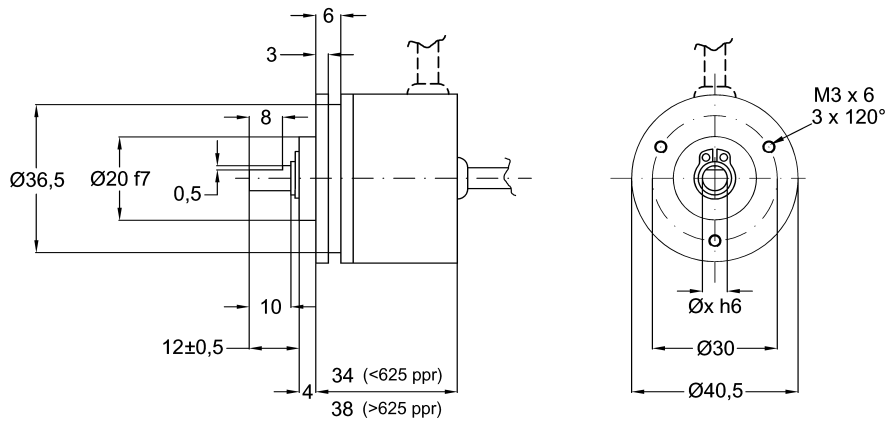
EDE9S:	9 pin DSub mating connector
PAN/PGF:	flexible couplings
LKM-386:	fixing clamps

Specifications subject to changes without prior notice



Ø4 without flat on shaft

I40



Ø4 without flat on shaft

I41

ORDERING CODE

ADDITIONAL CODE (indicate only if necessary)

XXXX - X - XXXX

X

X X X X

X X X X X

SERIES

I40 - I41

OUTPUT CIRCUITS

- NPN o.c. N
- PNP o.c. P
- Push-Pull Y
- Line Driver AD26LS31 or equiv. L
- PP/LD universal circuit H

PULSE RATE (PPR)

See electrical specifications

OUTPUT SIGNALS CONFIGURATION

- Bidirectional B
- Bidirectional with index pulse Z

SHAFT DIAMETER

- 4 4 mm
- 6 6 mm
- 635 6.35 mm / 1/4"
- 8 8 mm

ELECTRICAL CONNECTIONS

- N Normal output
- C Complementary outputs
- F 5 wires cable, 1m. (3.3 ft)
- U 8 wires cable, 1m. (3.3 ft)

see on page 59-60

SUPPLY VOLTAGE VS OUTPUT CIRCUIT

- +5V±5% (L output circuit) 1
- +10V± +30V (N, P and Y output circuits) 2
- +5V± +30V (PP/LD universal circuit) 4

C Inline connector DSub 9 pin

Cable length on request  
Lx Ex.: L4 = 4 meters (13.2 ft)  
L7 = 7 meters (23.0 ft)

V Output frequency up to 100 kHz

P IP65 Protection (only I41)

Q IP66 Protection shaft end (only I41)

R Side mount cable