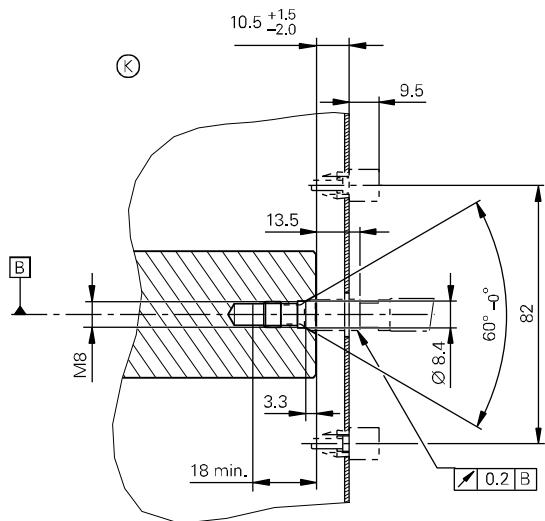
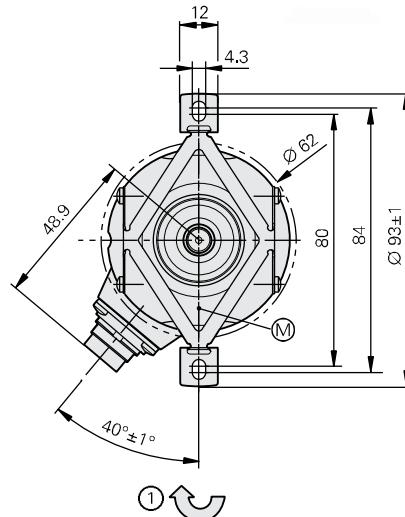
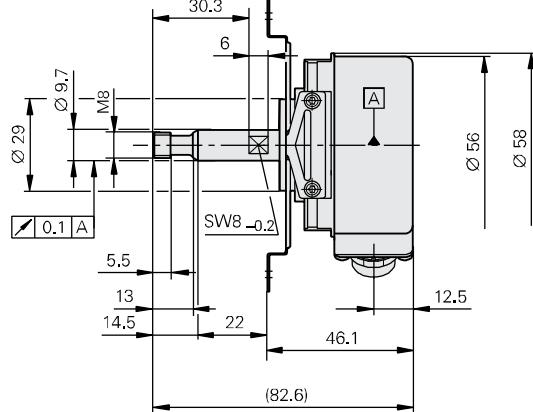
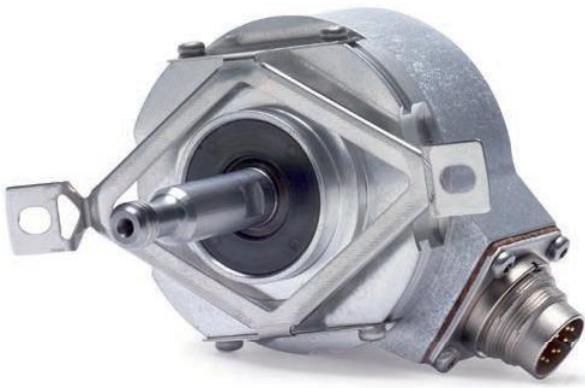


ERN 401 series

Incremental rotary encoders

- Stator coupling via fastening clips
- Blind hollow shaft
- Replacement for Siemens 1XP8000
- Including mounting set with housing



Tolerancing ISO 8015
ISO 2768 - m H
< 6 mm: ±0.2 mm

Siemens model	Replacement model	ID
1XP8001-2	ERN 421	538724-71
1XP8001-1	ERN 431	538725-02

A = Encoder bearing

B = Bearing of mating shaft

C = Required mating dimensions

M = Measuring point for operating temperature

1 = Direction of shaft rotation for output signals as per the interface description

	Incremental	
	ERN 421	ERN 431
Interface	<input checked="" type="checkbox"/> TTL	<input checked="" type="checkbox"/> HTL
Line count	1024	
Reference mark	One	
Output frequency Edge separation a	$\leq 300 \text{ kHz}$ $\geq 0.39 \mu\text{s}$	
System accuracy	1/20 of grating period	
Electrical connection	M16 flange socket (female)	
Supply voltage	DC 5 V ± 0.5 V	DC 10 V to 30 V
Current consumption without load	$\leq 120 \text{ mA}$	$\leq 150 \text{ mA}$
Shaft	Solid shaft with M8 external thread, 60° centering taper	
Mech. permiss. speed $n^1)$	$\leq 6000 \text{ rpm}$	
Starting torque (typical)	0.025 Nm (at 20 °C)	
Moment of inertia of rotor	$\leq 4.3 \cdot 10^{-6} \text{ kgm}^2$	
Permissible axial motion of measured shaft	$\pm 1 \text{ mm}$	
Vibration 55 Hz to 2000 Hz Shock 6 ms	$\leq 100 \text{ m/s}^2$ (EN 60068-2-6); higher values upon request $\leq 1000 \text{ m/s}^2$ (EN 60068-2-27)	
Max. operating temp.	100 °C	
Min. operating temperature	-40 °C	
Protection EN 60529	IP66	
Mass	$\approx 0.3 \text{ kg}$	
Valid for ID	538724-xx	538725-xx

¹⁾ For the relationship between the operating temperature and the shaft speed or supply voltage, see the *General mechanical information*