

| | Incremental | | | |
|--|---|------------|----------------------|-----------------------------------|
| | ERN 420 | ERN 460 | ERN 430 | ERN 480 |
| Incremental signals | □□TTL | | □□HTL | ~ 1 V _{PP} ¹⁾ |
| Line counts* | 250 500 | | | - |
| | 1000 1024 1250 2000 2048 2500 3600 4096 5000 | | | |
| Cutoff frequency -3 dB | - | | | ≥ 180 kHz |
| Scanning frequency | ≤ 300 kHz | | | - |
| Edge separation a | ≥ 0.39 μs | | | - |
| System accuracy | 1/20 of grating period | | | |
| Power supply | 5 V ± 10 % | 10 to 30 V | 10 to 30 V | 5 V ± 10 % |
| Current consumption without load | 120 mA | 100 mA | 150 mA | 120 mA |
| Electrical connection* | <ul style="list-style-type: none"> • Flange socket M23, radial and axial (with blind hollow shaft) • Cable 1 m, without connecting element | | | |
| Shaft* | Blind hollow shaft or hollow through shaft; D = 8 mm or D = 12 mm | | | |
| Mech. permissible speed n²⁾ | ≤ 6000 min ⁻¹ /≤ 12000 min ⁻¹ 3) | | | |
| Starting torque at 20 °C below -20 °C | <i>Blind hollow shaft:</i> ≤ 0.01 Nm <i>Hollow through shaft:</i> ≤ 0.025 Nm ≤ 1 Nm | | | |
| Moment of inertia of rotor | ≤ 4.3 · 10 ⁻⁶ kgm ² | | | |
| Permissible axial motion of measured shaft | ± 1 mm | | | |
| Vibration 55 to 2000 Hz Shock 6 ms/2 ms | ≤ 300 m/s ² ; <i>flange socket version:</i> 150 m/s ² (EN 60068-2-6) ≤ 1000 m/s ² /≤ 2000 m/s ² (EN 60068-2-27) | | | |
| Max. operating temp. ²⁾ | 100 °C | 70 °C | 100 °C ⁴⁾ | |
| Min. operating temp. | <i>Flange socket or fixed cable:</i> -40 °C <i>For frequent flexing:</i> -10 °C | | | |
| Protection EN 60529 | <i>At housing:</i> IP 67 (IP 66 for hollow through shaft) <i>At shaft inlet:</i> IP 64 (IP 66 upon request) | | | |
| Weight | Approx. 0.3 kg | | | |

Bold: These preferred versions are available on short notice

* Please select when ordering

1) Restricted tolerances: Signal amplitude 0.8 to 1.2 V_{PP}

2) For the correlation between the operating temperature and the shaft speed or supply voltage, see *General Mechanical Information*

3) With two shaft clamps (only for hollow through shaft)

4) 80° for ERN 480 with 4096 or 5000 lines