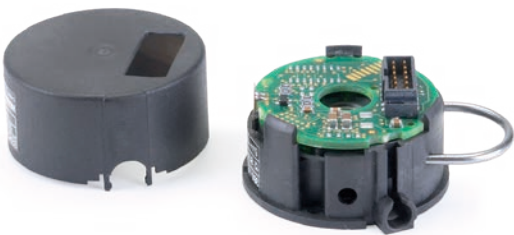
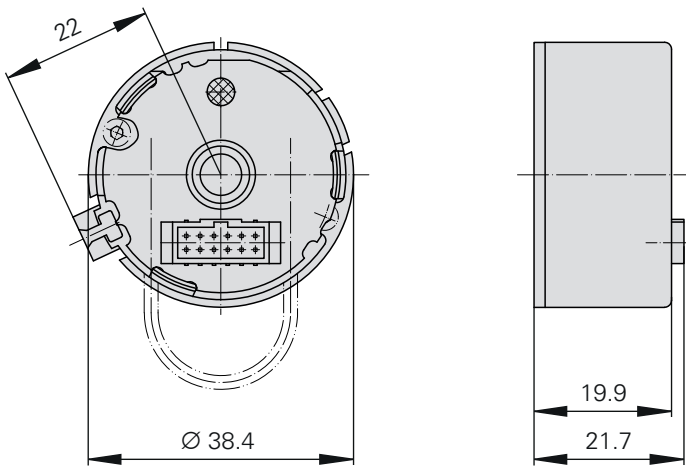


# ERO 1400 series

- Incremental rotary encoders
- Flange for axial mounting
  - Hollow through shaft
  - Without integral bearing; self-centering



Overall dimensions indicated without tolerances



For technical drawings, visit: [www.heidenhain.com/documentation](http://www.heidenhain.com/documentation)



Mating dimensions  
[ID 339431](#)

|                                            | Incremental                                                                                                                                                                |                                          |                |                |                |                                                               |
|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|----------------|----------------|----------------|---------------------------------------------------------------|
|                                            | ERO 1420                                                                                                                                                                   | ERO 1470                                 |                |                |                | ERO 1480                                                      |
| Interface                                  | □ TTL                                                                                                                                                                      |                                          |                |                |                | ~ 1 V <sub>pp</sub>                                           |
| Line count*                                | 512<br>1000<br>1024                                                                                                                                                        | 1000<br>1500                             |                |                |                | 512<br>1000<br>1024                                           |
| Integrated interpolation*                  | –                                                                                                                                                                          | 5-fold                                   | 10-fold        | 20-fold        | 25-fold        | –                                                             |
| Signal periods per revolution              | 512<br>1000<br>1024                                                                                                                                                        | 5000<br>7500                             | 10000<br>15000 | 20000<br>30000 | 25000<br>37500 | 512<br>1000<br>1024                                           |
| Edge separation <i>a</i>                   | ≥ 0.39 μs                                                                                                                                                                  | ≥ 0.47 μs                                | ≥ 0.22 μs      | ≥ 0.17 μs      | ≥ 0.07 μs      | –                                                             |
| Scanning frequency                         | ≤ 300 kHz                                                                                                                                                                  | ≤ 100 kHz                                |                | ≤ 62.5 kHz     | ≤ 100 kHz      | –                                                             |
| Cutoff frequency –3 dB                     | –                                                                                                                                                                          |                                          |                |                |                | ≥ 180 kHz                                                     |
| Reference mark                             | One                                                                                                                                                                        |                                          |                |                |                |                                                               |
| System accuracy <sup>1)</sup>              | 512 lines :± 139″<br>1000 lines :± 112″<br>1024 lines :± 112″                                                                                                              | 1000 lines :± 130″<br>1500 lines :± 114″ |                |                |                | 512 lines :± 190″<br>1000 lines :± 163″<br>1024 lines :± 163″ |
| Electrical connection*                     | 12-pin PCB connector, axial <sup>2)</sup>                                                                                                                                  |                                          |                |                |                |                                                               |
| Supply voltage                             | DC 5 V ±0.5 V                                                                                                                                                              | DC 5 V ±0.25 V                           |                |                |                | DC 5 V ±0.5 V                                                 |
| Current consumption (without load)         | ≤ 150 mA                                                                                                                                                                   | ≤ 155 mA                                 |                | ≤ 200 mA       |                | ≤ 150 mA                                                      |
| Shaft*                                     | Blind hollow shaft Ø 4 mm, Ø 6 mm, or Ø 8 mm, or hollow through shaft in housing with bore (accessory)                                                                     |                                          |                |                |                |                                                               |
| Moment of inertia of rotor                 | Shaft Ø 4 mm: 0.28 · 10 <sup>–6</sup> kgm <sup>2</sup><br>Shaft Ø 6 mm: 0.27 · 10 <sup>–6</sup> kgm <sup>2</sup><br>Shaft Ø 8 mm: 0.25 · 10 <sup>–6</sup> kgm <sup>2</sup> |                                          |                |                |                |                                                               |
| Mech. permiss. shaft speed <i>n</i>        | ≤ 30000 rpm                                                                                                                                                                |                                          |                |                |                |                                                               |
| Permissible axial motion of measured shaft | ±0.1 mm                                                                                                                                                                    | ±0.05 mm                                 |                |                |                |                                                               |
| Vibration 55 Hz to 2000 Hz<br>Shock 6 ms   | ≤ 100 m/s <sup>2</sup> (EN 60068-2-6)<br>≤ 1000 m/s <sup>2</sup> (EN 60068-2-27)                                                                                           |                                          |                |                |                |                                                               |
| Operating temperature                      | –10 °C to 70 °C                                                                                                                                                            |                                          |                |                |                |                                                               |
| Protection EN 60529                        | With PCB connector: IP00<br>With cable outlet: IP40 <sup>2)</sup>                                                                                                          |                                          |                |                |                |                                                               |
| Mass                                       | ≈ 0.07 kg                                                                                                                                                                  |                                          |                |                |                |                                                               |
| Part number                                | 360732-xx                                                                                                                                                                  | 360736-xx                                |                |                |                | 360738-xx                                                     |

**Bold:** This preferred version is available on short notice  
 \* Please select when ordering  
 1) When not mounted; additional deviations due to mounting and bearing of the measured shaft are not taken into account  
 2) Upon request, cable (1 m), radial, unassembled cable end (not for ERO 1470)