



Optical rotary encoder for quick and simple adjustment of digital values.

- Mounting height 9,6 mm only.
- For direct soldering in printed circuits.
- 20 pulses per revolution.
- Optional with or without detent mechanism.
- Low wear through electronic impulse generation.
- Recognition of rotation sense via two output signals.

1.0 Construction

| | |
|---------------------------------|--|
| 1.1 Function | Optical rotary encoder with and without rest |
| 1.2 Distribution over 360° | 20 |
| 1.3 Detent angle | 18° |
| 1.3 Contacts | Soldering pins or soldering contacts |
| 1.4 Mounting at the front panel | Central mounting |

2.0 Electrical Data

| | | |
|------------------------|---|--|
| 2.1 Nominal voltage | 5 V- | |
| 2.2 Input current max. | 20 mA | |
| 2.3 Frequency max. | 100 Hz | |
| 2.4 Life expectancy | without detent mechanism with detent mechanism | 2 x 10 ⁶ revolutions 1 x 10 ⁶ revolutions |
| 2.5 Output signal | high rectangular low | ≤ +4 V ≤ +0,5 V |
| 2.6 Impulse per output | 20, 50, 100 or 200 | |

3.0 Mechanical Data

| | |
|------------------------|------------------------|
| 3.1 Impulse generation | Optical |
| 3.2 Operating torque | ≥ 0,5 Ncm |
| 3.3 Fly-wheel effect | 0,023 Ncm ² |
| 3.4 Dust protection | Sealed wafers |

4.0 Other Data

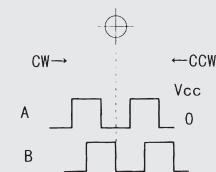
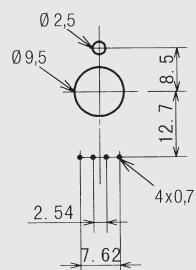
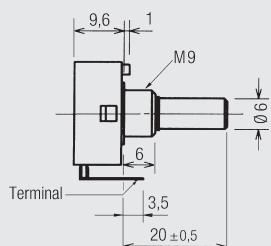
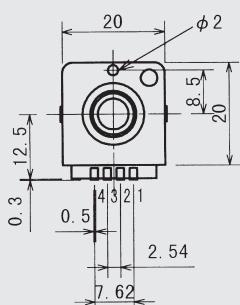
| | |
|------------------------------------|---------------|
| 4.1 Ambient temperature | 0 to + 60°C |
| 4.2 Storage temperature | -20 to + 80°C |
| 4.3 Soldering time and temperature | 5s to 260°C |

Ordering Codes

| | |
|---------------------------|---|
| Designation of type | EC 204 |
| 1. Detent graduations | 20 |
| 2. Shaft length from seat | 20 mm = standard |
| 3. Shaft design | A = standard |
| 4. Detent mechanism | R = with, O = without |
| 5. Contacts | P = pins for printed circuits L = soldering contacts |

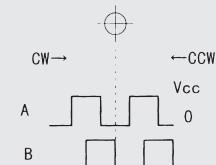
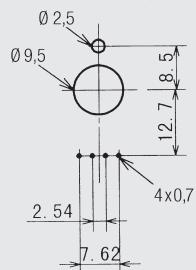
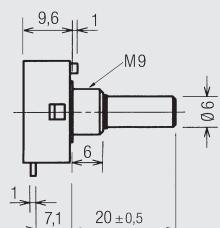
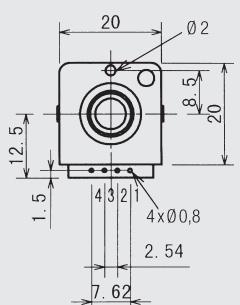
The bold-typed data in the yellow order blocks remain unchanged.
Blanks need to be completed according to the ordering details on the previous page.

Dimensional Drawings · Dimensions in mm



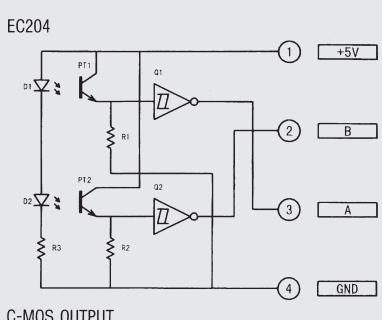
EC 204 - 1 - 2 - 3 - 4 - **P5**

EC 204 · Optical rotary encoder with soldering pins

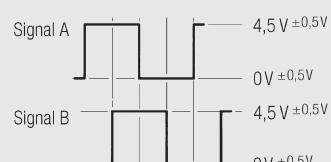


EC 204 - 1 - 2 - 3 - 4 - **L5**

EC 204 · Optical rotary encoder with soldering contact



EC 204 · Circuit and contacts



EC 204 · Output signal