Rotary Measuring Technology Incremental shaft encoder



Miniature Type 2400



- High performance at a competitive price
- IP 64
- \bullet Wide temperature range (-20 ... +85 °C)
- Chromated housing is resistant to cooling lubricants and other environmental influences
- Sturdy cable outlet with multiple clamping
- Temperature compensation
- Broad input voltage range (5 ... 24 V or 8 ... 30 V)

- Highly flexible cable withstands constant flexing from 0 °C ... 70 °C)
- Low power consumption despite high scanning rate
- Reverse connection protected and Short-circuit proof
- Kübler encoder type 24xx meet German Railways standard EN 50121**

Mechanical characteristics:

| Speed: | max. 12 000min ⁻¹ | | | | |
|----------------------------------------------|-----------------------------------------------|--|--|--|--|
| Rotor moment of inertia: | appr. 0,1 x 10 ⁻⁶ kgm ² | | | | |
| Starting torque: | <0,001 Nm | | | | |
| Radial load capacity of shaft: | 10 N 20 N | | | | |
| Axial load capacity of shaft:. | | | | | |
| Weight: | appr. 0,06 kg | | | | |
| Protection acc. to EN 60529: | IP 64 | | | | |
| Working temperature: | −20° C +85 °C −20° C +90 °C | | | | |
| Operating temperature: | | | | | |
| Shaft | stainless steel | | | | |
| Shock resistance acc. to DIN-IEC 68-2-27 | 1000 m/s ² , 6 ms | | | | |
| Vibration resistance acc. to DIN-IEC 68-2-6: | 100 m/s ² , 55 2000 Hz | | | | |
| | | | | | |

Electrical characteristics:

| Output circuit: | Push-pull | Push-pull | | | |
|--------------------------------------------------|-----------------------------------------------------------------------------|-------------------------|--|--|--|
| Supply voltage: | 5 24 V DC | 8 30 V DC | | | |
| Power consumption (no load): | max. 50 mA | max. 50 mA | | | |
| Permissible load/channel: | max. 50 mA | max. 50 mA | | | |
| Pulse frequency: | max. 160 kHz | max. 160 kHz | | | |
| Signal level high: | min. U _B -2,5 V | min. $U_B -3 V$ | | | |
| Signal level low: | max. 0,5 V | max. 2,5 V max. 1 μs | | | |
| Rise time t _r : | max. 1 μs | | | | |
| Fall time t _f : | max. 1 μs | max. 1 µs | | | |
| Short circuit proof outputs: | yes | yes | | | |
| Conforms to CE requirements acc. to EN 61000-6-1 | orms to CE requirements acc. to EN 61000-6-1, EN 61000-6-4 and EN 61000-6-3 | | | | |

Pulse rates available at short notice:

10, 25, 36, **50**, 60, **100**, 125, 180, **200**, 250, **360**, **500**, 512, **1000**, **1024**, 1080

** Kübler encoder type 24xx meets German Railways standard

An independent test laboratory (TTI-P-G115/96-01) approved by the German Accreditation Council (DAR) certified the compliance with the railway standard, according to EN 50121.

We will gladly send you a copy of the test report on request. When ordering an encoder to the railway standard, please be sure to state this explicitly on the order.



Applications:

- Pick and place machines
- Handling machines for electronic components
- Quality testing machines
- Medical machines

- Mail opening and mail stuffing machines
- · Check weighers
- Labeling machines
- Mole machines (camera control)

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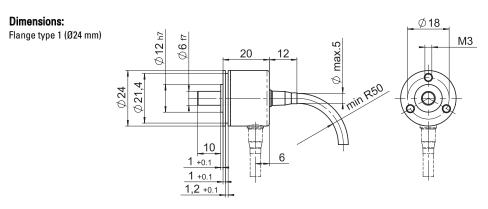
Terminal assignment

| Signal: | 0V | +U _B | Α | Ā | В | B | 0 | Ō | |
|--------------------------|----|-----------------|----|----|----|----|----|----|--|
| Colour: | WH | BN | GN | YE | GY | PK | BU | RD | |
| without inverted signal: | WH | BN | GN | | YE | | GY | | |

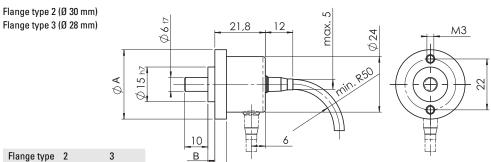
Isolate unused outputs before initial start-up

ø 30 mm

ø 28 mm



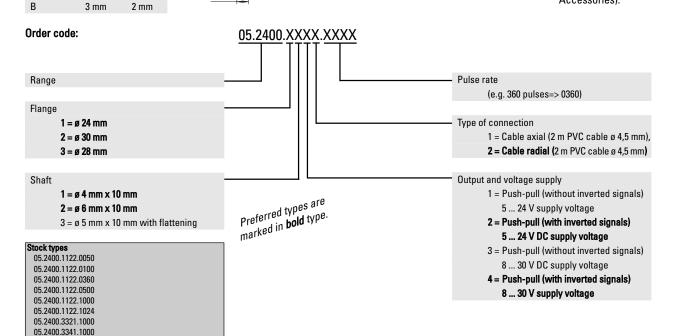
Rotary Measurement Technology Incremental Encoders



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Mounting advice:

Do not connect encoder and drive rigidly to one another at shafts and flanges! We recommend the use of suitable couplings (see chapter Accessories).



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