

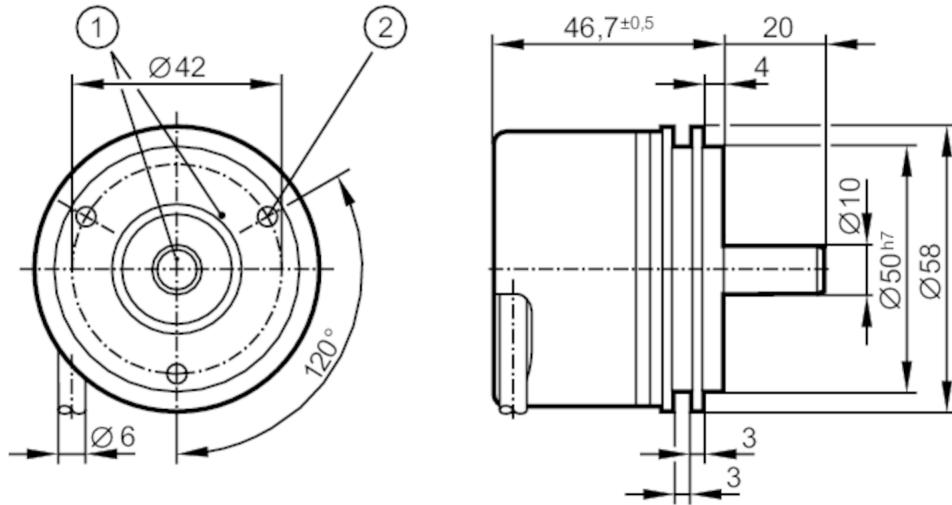
# RN6051



## Absolute singleturn encoder with solid shaft

RN-4096-S24/L1B

Article no longer available - archive entry



- 1 reference mark  
2 M4 Depth 5 mm



### Product characteristics

|                         |                                     |    |
|-------------------------|-------------------------------------|----|
| Resolution              | 4096 resolution; 4096 steps; 12 bit |    |
| Communication interface | SSI data interface                  |    |
| Shaft design            | solid shaft                         |    |
| Shaft diameter [mm]     |                                     | 10 |

### Electrical data

|                          |            |  |
|--------------------------|------------|--|
| Operating voltage [V]    | 10...30 DC |  |
| Current consumption [mA] | < 150      |  |

### Outputs

|             |   |  |
|-------------|---|--|
| Code        | Gray code; (increasing code values when turned clockwise (seen on the shaft))   |  |
| Code signal | Data input; TTL-compatible signals; clock and clock (inv.) from drivers to RS 485; data output; synchronous serial; TTL-compatible signal data and data (inv.); incremental signals; 2 sinusoidal incremental signals (A and B) ; phase shifted by 90°; 1 Vss 512 signal periods per revolution |  |

### Measuring/setting range

|            |                                     |  |
|------------|-------------------------------------|--|
| Resolution | 4096 resolution; 4096 steps; 12 bit |  |
|------------|-------------------------------------|--|

### Interfaces

|                         |                    |  |
|-------------------------|--------------------|--|
| Communication interface | SSI data interface |  |
|-------------------------|--------------------|--|

### Operating conditions

|                                |                     |  |
|--------------------------------|---------------------|--|
| Ambient temperature [°C]       | -40...85            |  |
| Max. relative air humidity [%] | 75; (briefly: 95 %) |  |
| Protection                     | IP 64               |  |

### Tests / approvals

|                  |              |  |
|------------------|--------------|--|
| Shock resistance | 100 g (6 ms) |  |
|------------------|--------------|--|

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Vibration resistance

30 g (55...2000 Hz)

## Mechanical data

|   |         |                             |
|---|---------|-----------------------------|
| Dimensions                                | [mm]    | $\varnothing 58 / L = 66.7$ |
| Material                                  |         | aluminum                    |
| Max. revolution, mechanical               | [U/min] | 12000                       |
| Max. starting torque                      | [Nm]    | 1                           |
| Reference temperature torque              | [°C]    | 20                          |
| Shaft design                              |         | solid shaft                 |
| Shaft diameter                            | [mm]    | 10                          |
| Shaft material                            |         | steel (1.4104)              |
| Max. shaft load axial (at the shaft end)  | [N]     | 10                          |
| Max. shaft load radial (at the shaft end) | [N]     | 20                          |

## Remarks

|         |   |
|---------|---|
| Remarks | Wires/pins not connected (n.c.) must not be used. |
|---------|---|

## Electrical connection

Cable: 1 m, PUR; Maximum cable length: 150 m; radial, can also be used axially

|                |                |
|----------------|----------------|
| black          | n.c.           |
| red            | n.c.           |
| green          | n.c.           |
| brown          | n.c.           |
| brown/green    | 10...30V (Up)  |
| lilac          | clock          |
| yellow         | clock inverted |
| screen         | housing        |
| white/green    | 0V (Un)        |
| blue / black   | B+             |
| red/black      | B-             |
| grey           | data           |
| green / black  | A+             |
| yellow / black | A-             |
| pink           | data inverted  |

## Diagrams and graphs

Pulse diagram

