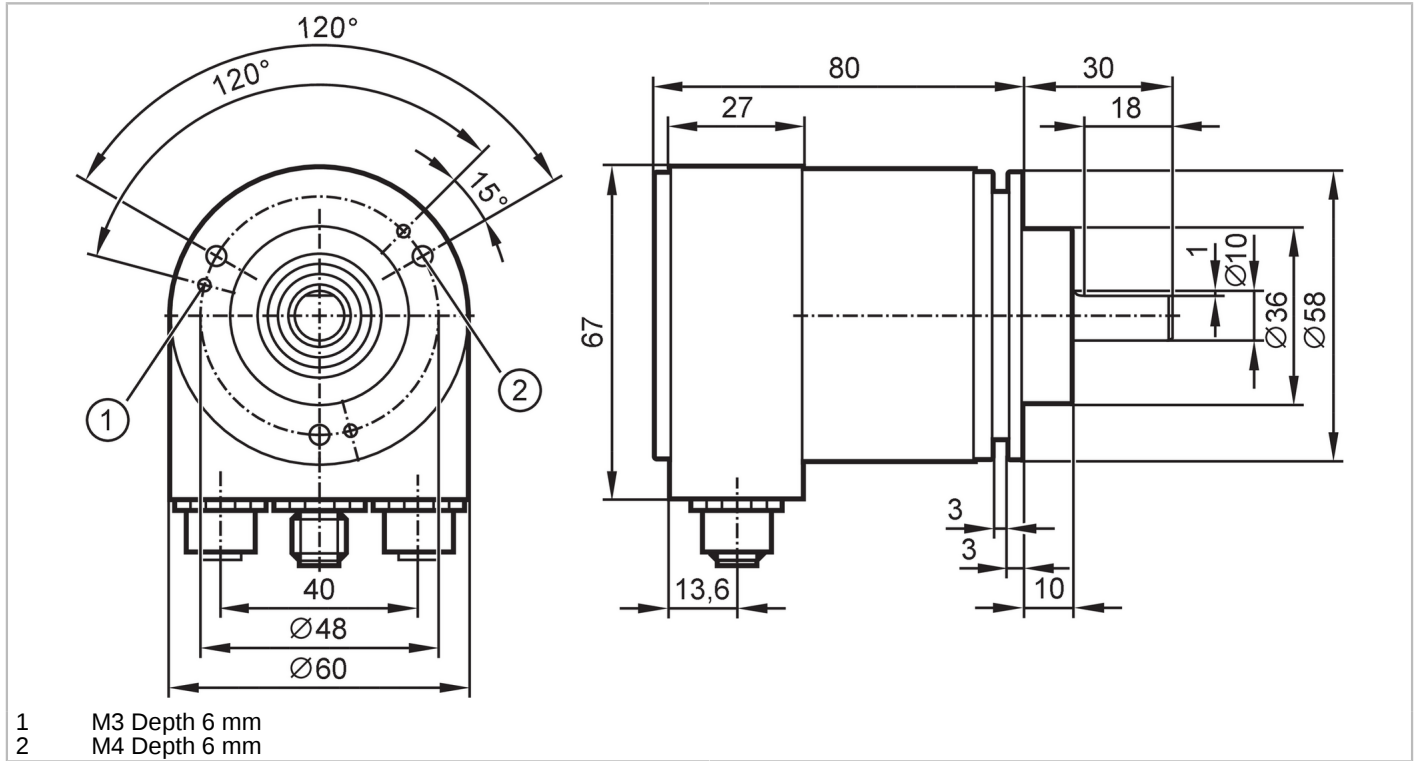


# RM3011



## Absolute multiturn encoder with solid shaft

RMV10FRU41312bPRN



## Product characteristics

|                         |                                            |
|-------------------------|--------------------------------------------|
| Resolution              | 8192 steps; 4096 revolutions; 25 bit       |
| Communication interface | ProfiNet-IO; PROFINET encoder profile V4.2 |
| Shaft design            | solid shaft                                |
| Shaft diameter [mm]     | 10                                         |

## Application

|                    |           |
|--------------------|-----------|
| Function principle | absolute  |
| Revolution type    | multiturn |

## Electrical data

|                             |      |               |
|-----------------------------|------|---------------|
| Operating voltage           | [V]  | 10...30 DC    |
| Current consumption         | [mA] | 100; ((24 V)) |
| Reverse polarity protection |      | yes           |

## Outputs

|                          |        |
|--------------------------|--------|
| Short-circuit protection | yes    |
| Code                     | binary |

### Measuring/setting range

|            |                                      |
|------------|--------------------------------------|
| Resolution | 8192 steps; 4096 revolutions; 25 bit |
|------------|--------------------------------------|

### Accuracy / deviations

|              |     |        |
|--------------|-----|--------|
| 14 - 16 Bits |     |        |
| Accuracy     | [°] | 0.0439 |
| <13 Bits     |     |        |
| Accuracy     | [°] | 0.022  |



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| Software / programming                                                              |                                                                                                                                                      |                                    |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|
| Parameter setting options                                                           | resolution per revolution; total resolution; direction of rotation; preset value; provision of a speed value; IP address; MRP; MRPD; rotational axis |                                    |
| Addressing                                                                          | Software                                                                                                                                             |                                    |
| Interfaces                                                                          |                                                                                                                                                      |                                    |
| Communication interface                                                             | ProfiNet-IO; PROFINET encoder profile V4.2                                                                                                           |                                    |
| Operating conditions                                                                |                                                                                                                                                      |                                    |
| Ambient temperature                                                                 | [°C]                                                                                                                                                 | -40...85                           |
| Storage temperature                                                                 | [°C]                                                                                                                                                 | -40...85                           |
| Max. relative air humidity                                                          | [%]                                                                                                                                                  | 98; (condensation not permissible) |
| Protection                                                                          | IP 67; (on the housing: IP 67; on the shaft: IP 67)                                                                                                  |                                    |
| Tests / approvals                                                                   |                                                                                                                                                      |                                    |
| Shock resistance                                                                    | DIN EN 60068-2-27                                                                                                                                    | 100 g (6 ms) / half-sine           |
| Continuous shock resistance                                                         | DIN EN 60068-2-29                                                                                                                                    | 10 g (16 ms) / half-sine           |
| Vibration resistance                                                                | DIN EN 60068-2-6                                                                                                                                     | 20 g (20...1000 Hz)                |
| MTTF                                                                                | [years]                                                                                                                                              | 95                                 |
| Mechanical data                                                                     |                                                                                                                                                      |                                    |
| Weight                                                                              | [g]                                                                                                                                                  | 558                                |
| Housing                                                                             | cylindrical                                                                                                                                          |                                    |
| Dimensions                                                                          | [mm]                                                                                                                                                 | Ø 58 / L = 110                     |
| Materials                                                                           | aluminium                                                                                                                                            |                                    |
| Max. revolution, mechanical                                                         | [U/min]                                                                                                                                              | 3000                               |
| Shaft design                                                                        | solid shaft                                                                                                                                          |                                    |
| Shaft diameter                                                                      | [mm]                                                                                                                                                 | 10                                 |
| Shaft material                                                                      | steel (1.4104)                                                                                                                                       |                                    |
| Max. shaft load axial (at the shaft end)                                            | [N]                                                                                                                                                  | 40                                 |
| Max. shaft load radial (at the shaft end)                                           | [N]                                                                                                                                                  | 110                                |
| Fixing flange                                                                       | clamping flange                                                                                                                                      |                                    |
| Remarks                                                                             |                                                                                                                                                      |                                    |
| Pack quantity                                                                       | 1 pcs.                                                                                                                                               |                                    |
| Electrical connection - Ethernet                                                    |                                                                                                                                                      |                                    |
| Connector: 1 x M12; coding: D; Contacts: 4                                          |                                                                                                                                                      |                                    |
|  |                                                                                                                                                      |                                    |
| 1                                                                                   | Tx +                                                                                                                                                 |                                    |
| 2                                                                                   | Rx +                                                                                                                                                 |                                    |
| 3                                                                                   | Tx -                                                                                                                                                 |                                    |
| 4                                                                                   | Rx -                                                                                                                                                 |                                    |

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### Electrical connection - voltage supply

Connector: 1 x M12; coding: A; Contacts: 4



|   |              |
|---|--------------|
| 1 | 10...30 V DC |
| 2 | not used     |
| 3 | GND 0 V      |
| 4 | not used     |