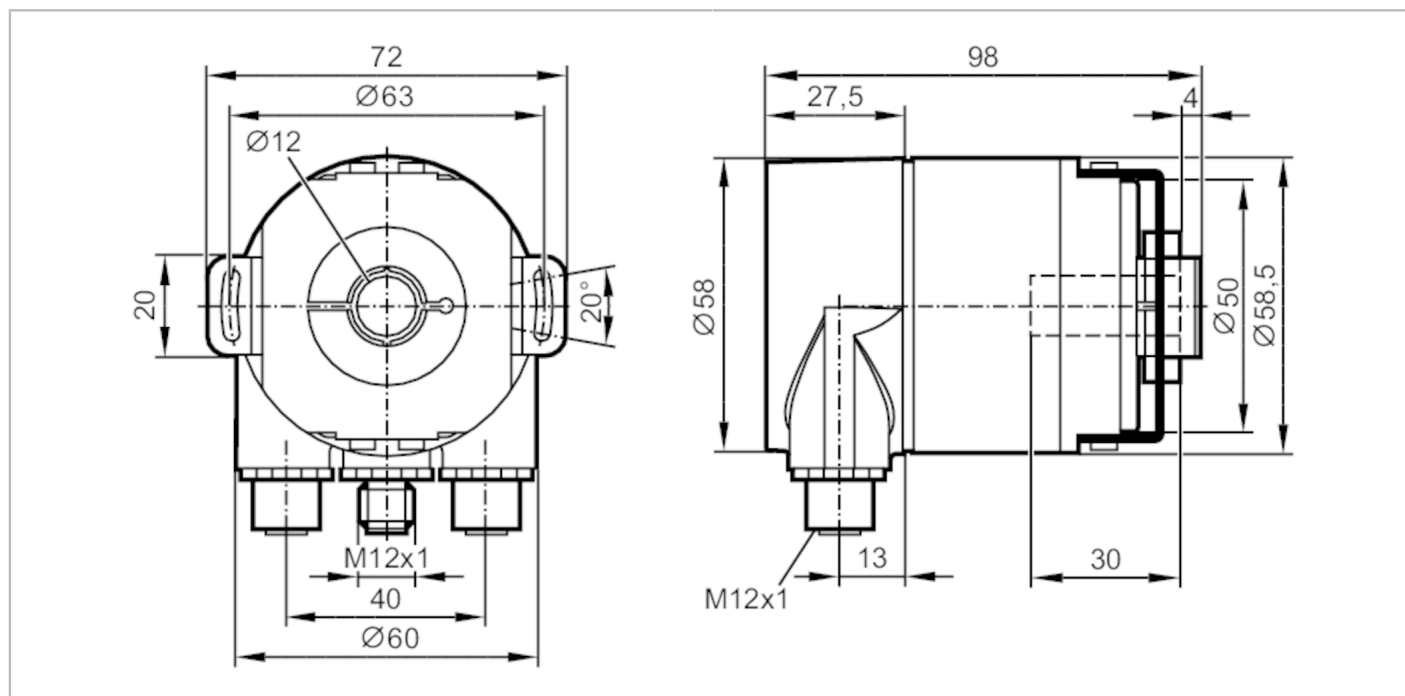


# RM3010



## Absolute multiturn encoder with hollow shaft

RMO12BRU41312bPRN



| Product characteristics     |      |                                            |
|-----------------------------|------|--------------------------------------------|
| Resolution                  |      | 8192 steps; 4096 revolutions; 25 bit       |
| Communication interface     |      | ProfiNet-IO; PROFINET encoder profile V4.2 |
| Shaft design                |      | hollow shaft open to one side              |
| Shaft diameter              | [mm] | 12                                         |
| 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                                      |



## Absolute multiturn encoder with hollow shaft

RM012BRU41312bPRN

| 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]                                                                                                                                                  | 601                                |
| Dimensions                                                                                     | [mm]                                                                                                                                                 | Ø 58.5 / L = 98                    |
| Materials                                                                                      | aluminium; clamping ring: brass                                                                                                                      |                                    |
| Max. revolution, mechanical                                                                    | [U/min]                                                                                                                                              | 3000                               |
| Shaft design                                                                                   | hollow shaft open to one side                                                                                                                        |                                    |
| Shaft diameter                                                                                 | [mm]                                                                                                                                                 | 12                                 |
| 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                                                                                  | Stator coupling                                                                                                                                      |                                    |
| Electrical connection - Ethernet                                                               |                                                                                                                                                      |                                    |
| Connector: 1 x M12; coding: D                                                                  |                                                                                                                                                      |                                    |
| <div></div> |                                                                                                                                                      |                                    |
| 1                                                                                              | Tx +                                                                                                                                                 |                                    |
| 2                                                                                              | Rx +                                                                                                                                                 |                                    |
| 3                                                                                              | Tx -                                                                                                                                                 |                                    |
| 4                                                                                              | Rx -                                                                                                                                                 |                                    |

# RM3010



## Absolute multiturn encoder with hollow shaft

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### Electrical connection - power supply

Connector: 1 x M12; coding: A



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