

variables/V-color

## **Encoder | GMI® Rotary | GMI-ROT-055-B11-AL**







## System Data

### GMI-ROT-055-B11-AL

|                                                        |                                                                                                           |
|--------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| <b>Type</b>                                            | Axial, frameless, true absolute Giant Magneto<br>Impedance encoder GMITechnology-FLUX<br>GmbH proprietary |
| <b>Standard Resolution</b>                             | 21 bits                                                                                                   |
| <b>ENOB in entire<br/>mounting tolerance<br/>range</b> | 20 bits                                                                                                   |
| <b>High Accuracy</b>                                   | $\pm 36''$ , $\pm 0.010^\circ$ , $\pm 175\mu\text{rad}$                                                   |
| <b>Standard Accuracy</b>                               | $\pm 50''$ , $\pm 0.014^\circ$ , $\pm 244\mu\text{rad}$                                                   |
| <b>Thickness</b>                                       | 7.50                                                                                                      |
| <b>Hysteresis</b>                                      | none                                                                                                      |
| <b>Repeatability</b>                                   | 1 resolution count                                                                                        |
| <b>Position update rate<br/>and signal latency</b>     | Real-time                                                                                                 |
| <b>Power-up Time</b>                                   | max. 0.8 sec                                                                                              |



## Electrical Data

|                       |                                |
|-----------------------|--------------------------------|
|                       | OptionAV:min.4.35Vdc.max.36Vdc |
| <b>Supply voltage</b> | Option5V:min.4.35Vdc.max.6Vdc  |
|                       | Option24V:min.6Vdc.Max.30Vdc   |

**Reverse polarity  
protection**

yes

**Current Consumption**

max. 150 mA @ 25 Vdc, max. 140 mA @  
24 Vdc



## Mechanical Data

**Stator Base  
Material**

Stainless steel (option-ST) CTE~10ppm/°C  
Aluminum (option-AL) CTE~24ppm/°C

**Stator Weight**

45.22 g

**Rotor Base  
Material**

Stainless steel (option-ST) CTE~10ppm/°C  
Aluminum (option-AL) CTE~24ppm/°C

**Rotor Weight**

15.80 g

**Vibration**

EN 60068-2-6, 20 g, 55 .. 2000 Hz

**Shock**

EN 60068-2-27, 200 g, 6 ms



## Mounting Tolerances

**Nominal Axial (air-gap)** 0.30 mm

**Axial Tolerance**

-0.20 mm, +0.50 mm

**Radial Tolerances**

0.20 mm



## Environmental Data

**Temperature Range - Standard Operating**

-20°C .. +85°C

**Temperature Range - Standard Storage**

-20°C .. +85°C

**Temperature Range - Extended Operating**

-40°C .. +105°C

**Temperature Range - Extended Storage**

-55°C .. +125°C

**Ingress Protection**

IP67

**EMC Immunity**

complies with EN IEC 61000-6-2

**EMC Emission**

complies with EN IEC 61000-6-4



**Advantages**



**Benefits**

- Plug-n-play
- No field calibration required
- Wide mounting tolerances
- High accuracy
- Low installation cost
- Low integration effort
- Easy installation



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