

variables/V-color

# **Encoder | GMI® Rotary | GMI-ROT-080- B11-ST**







## System Data

### GMI-ROT-080-B11-ST

|  |   |
|--|---|
| <b>Type</b>                                    | Axial, frameless, true absolute Giant Magneto Impedance encoder GMITechnology-FLUX GmbH proprietary |
| <b>Standard Resolution</b>                     | 23 bits   |
| <b>ENOB in entire mounting tolerance range</b> | 21 bits   |
| <b>High Accuracy</b>                           | $\pm 14''$ , $\pm 0.004^\circ$ , $\pm 70\mu\text{rad}$  |
| <b>Standard Accuracy</b>                       | $\pm 25''$ , $\pm 0.007^\circ$ , $\pm 144\mu\text{rad}$   |
| <b>Thickness</b>                               | 7.50  |
| <b>Hysteresis</b>                              | none  |
| <b>Repeatability</b>                           | 1 resolution count  |
| <b>Position update rate and signal latency</b> | Real-time   |
| <b>Power-up Time</b>                           | max. 0.8 sec  |



## Electrical Data

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

**Material**    Aluminum (option-AL) CTE~24ppm/°C

**Stator Weight**                                  85.35 g

**Rotor Base Material**                      Stainless steel (option-ST) CTE~10ppm/°C

**Material**    Aluminum (option-AL) CTE~24ppm/°C

**Rotor Weight**                                  28.14 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

|   |                                |
|---|--------------------------------|
| <b>Temperature Range - Standard Operating</b> | -20°C .. +85°C                 |
| <b>Temperature Range - Standard Storage</b>   | -20°C .. +85°C                 |
| <b>Temperature Range - Extended Operating</b> | -40°C .. +105°C                |
| <b>Temperature Range - Extended Storage</b>   | -55°C .. +125°C                |
| <b>Ingress Protection</b>                     | IP67                           |
| <b>EMC Immunity</b>                           | complies with EN IEC 61000-6-2 |
| <b>EMC Emission</b>                           | 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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