

variables/V-color

Encoder | GMI® Rotary | GMI-ROT-080-A11-ST





System Data

GMI-ROT-080-A11-ST

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



Electrical Data

	OptionAV:min.4.35Vdc.max.36Vdc
Supply voltage	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

85.35 g

**Rotor Base
Material**

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

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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