

thiNcoder™ Rotor Specifications

Mechanical	
Standard Outside Diameter	0.70" / 18mm
Shaft Diameter	0.236" / 6mm
Body Height	0.138" / 3.5mm
Shaft Type	Round with Flat (Custom Available)
Shaft Flat Angle to Location Lug	Custom
Shaft Length	0.300" / 7.6mm (Custom Available)
Length of Flat	0.270" / 6.8mm
Screw Slot	Custom Available
Dimension from Shaft Back to Flat	0.178" / 4.5mm (Custom Available)
Angle of Throw	15°, 22.5° (Custom Available)
Stopper Plate Positions	Custom Available
Stop Strength	≥ 7.5 lb.in. / 0.8Nm
Rotational Life (360°)	≥ 100,000 cycles

Electrical (Switch Type and Codes)	
Quadrature (2 Bit Gray Code)	16, 24 Positions Standard (Custom Available)
Binary	Custom Available
Gray Code	16, 24 Positions, Standard (Custom Available)
On/Off Switch	Custom Available
Analog Potentiometer	Custom Available
Analog Potentiometer Resistance	1K - 1 Meg Ohm
Voltage	3 to 50 VDC
Current	50 mA Max
Electrical Life (360°)	> 100,000 Cycles
Maximum Contact Resistance	100 Ohms
Open Circuit and Insulation Resistance	> 20 Meg Ohms (Betw een Mutually Insulated Parts)
Voltage Breakdown	>600 VAC (Peak to Peak, Betw een Mutually Insulated Parts)

Detent	
Number of Positions	16, 24 (Custom Available)
Ball & Spring Detent	Custom Available
Ball Detent Rotational Torque	3.5 - 6.5 oz. In. / 25mNm - 45mNm
Multi-Deck Capability	Custom Available
Concentric Shaft Rotary Switch	Custom Available
Concentric Shaft Push-Button Switch	Custom Available
Custom Shaft Colors	Custom Available
Panel Seal	Yes
Ball Armature Contacts	Standard
Disk Armature	Custom Available
Ball Retainer	Custom Available

Environment	
Storage Temperature	95°C
Operating Temperature	-40°C to 85°C
Thermal Shock	-40°C to 85°C
Humidity Resistance	95% RH
Salt Fog, 5% Solution	24 Hours

Materials	
Rotor / Shaft	Engineering Thermoplastic
Cover	Corosion Resistant Metal
Magnet Material	Rare Earth

Mechanical Testing	
Shock	To 100 g's
Drop	3 Feet



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