

6209 ROTARY SERIES

1KΩ, 2KΩ, 5KΩ, 10KΩ, 20KΩ • Precision Position Potentiometer 7/8" Dia. Bushing Mount Mounting Hardware Furnished

SPECIFICATIONS

Industrial / Military Grade Rotary Position Sensor

Rotational Operating Life 100 x 10⁶ Revolutions Min.

Anodized Aluminum Housing

Stainless Steel Shaft & Ball Bearings

General Requirements IAW MIL-PRF-39023

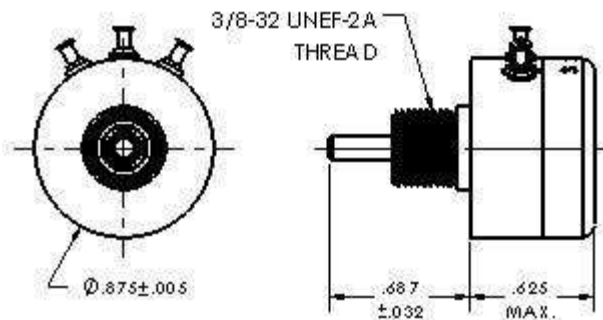
MEAS rotary potentiometer designs provide various non-linear tapers, taps, multi-sections, and electrical angles while maintaining great reliability.

ELECTRICAL CHARACTERISTICS

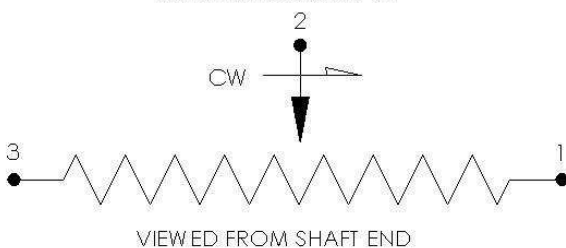
RESISTANCE	1KΩ to 20KΩ ±10%
ACTIVE ELECTRICAL ANGLE	340°
ELECTRICAL CONTINUITY ANGLE	344° MIN
INDEPENDENT LINEARITY	±0.5%
END VOLTAGE	0.5% MAX
VOLTAGE RESOLUTION	VIRTUALLY INFINITE
OUTPUT SMOOTHNESS	0.1% MAX
RESISTANCE TEMP. COEFFICIENT	400PPM/°C MAX
POWER RATING @ 70°C	1.0 WATT MAX
WIPER CONTACT CURRENT	10mA MAX
DIELECTRIC STRENGTH	750 VRMS @ 60Hz
INSULATION RESISTANCE	100mΩ MIN @ 500VDC

FEATURES

- Less Space (7/8" Dia. Sizes)
- Greater Reliability
- Resolution
- Output Smoothness
- Special Linearity Options
- Mechanical Stops Option
- Long Life
- Various Non-Linear Tapers, Taps, Multi-sections, Electrical Angles, Special Total Resistance



SCHEMATIC DIAGRAM



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MECHANICAL CHARACTERISTICS

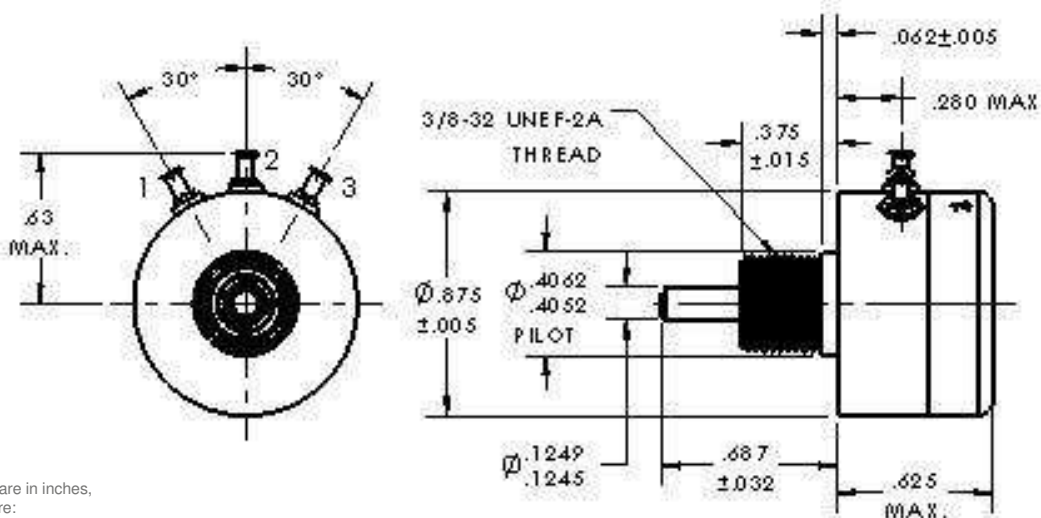
MECHANICAL ROTATION	CONTINUOUS
STARTING TORQUE	0.25 Oz.-In. MAX
RUNNING TORQUE	0.20 Oz.-In. MAX
TOTAL WEIGHT (1-GANG)	0.9 Oz. MAX
PILOT RUNOUT	0.001 In. TIR
SHAFT RUNOUT	0.001 In. TIR
SHAFT ENDPLAY	0.003 MAX
SHAFT RADIAL PLAY	0.001 In. TIR
LATERAL RUNOUT	0.002 In. TIR

STANDARD MATERIALS

HOUSING AND COVER	ANODIZED ALUMINUM
SHAFT & BALL BEARINGS	STAINLESS STEEL
RESISTANCE ELEMENT	CO-MOLDED CONDUCTIVE PLASTIC
ELECTRICAL CONTACTS	MULTI-FINGER PRECIOUS METAL
SOLDER TERMINALS	GOLD PLATED BRASS

ENVIRONMENTAL CHARACTERISTICS

OPERATING TEMP. RANGE	-65°C to +125°C
ROTATIONAL OPERATING LIFE	100 x 10 ⁶ REVOLUTIONS MIN.



Dimensions are in inches,
tolerances are:
Angular = $\pm 2^\circ$
.XX = $\pm .01$
.XXX = $\pm .005$
.XXXX = $\pm .0005$

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AVAILABLE OPTIONS / CUSTOMIZATION

- ◆ Resistance Values
 - 500 Ω to 50K Ω
- ◆ Tolerances
 - As low as $\pm 5\%$
- ◆ Special Linearity
 - As low as 0.15%
 - Absolute (Indexed)
 - Or Independent over specified regions
- ◆ Additional Taps, Current or Voltage
- ◆ Current Limit Resistors
- ◆ Internal Circuit Components
 - Caps, Diodes, etc.
- ◆ Special Electrical Angles
 - Up to 355° MAX
- ◆ Wire Leads or Cable in place of Terminals
- ◆ Special Transfer Functions
 - Non-Linear Outputs
 - Load Compensation
 - Trig, Log, & Exponential Outputs
- ◆ Multi-gang Construction
 - Up to 6 on a common shaft (+ .320 Length per gang) or concentric shafting
- ◆ Shaft Modifications
 - Lengths
 - Rear Extensions
 - Flats
 - Slots
 - Steps
- ◆ Torque or Detent
 - As low as .015 Oz-In. Starting Torque
- ◆ Mounting Features
 - Anti-rotation Locking Pins
 - Bushing Flats
 - Slots
- ◆ Rotational Stops
- ◆ Ancillary Devices
 - Spring Returns
 - Clutches
 - Brakes
 - Switches
- ◆ Environmental Capabilities
 - Moisture Seals
 - High Shock & Vibe

ORDERING INFORMATION

Model Number:	Resistance:
6209-1000-030	1K Ω $\pm 10\%$
6209-1001-030	2K Ω $\pm 10\%$
6209-1002-030	5K Ω $\pm 10\%$
6209-1003-030	10K Ω $\pm 10\%$
6209-1004-030	20K Ω $\pm 10\%$

NORTH AMERICA

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