

# 5903 Series

5/16 In. Dia. LINEAR MOTION PRECISION POTENTIOMETERS 1/2 In. ACTIVE STROKE

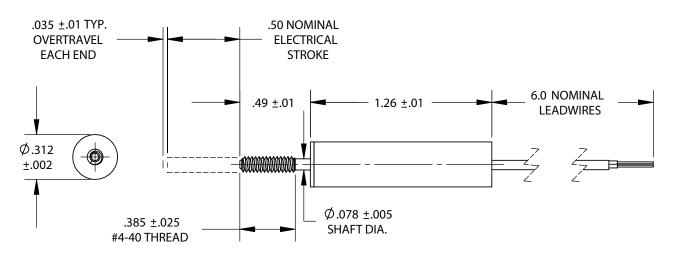


## STANDARD PRODUCT OFFERING

**MS PART NUMBER** 

**RESISTANCE** 

 $1K\Omega \pm 10\%$ 5903-0105-030 5903-0505-030  $5K\Omega \pm 10\%$ 5903-1005-030 10KO +10% STANDARD PRODUCTS ALSO AVAILABLE WITH .75 In., 1.0 In., 1.5 In. AND 2.0 In. **STROKE LENGTHS** 



### STANDARD MODEL **ELECTRICAL CHARACTERISTICS**

**RESISTANCE: ACTIVE ELECTRICAL STROKE:** 

 $1k\Omega$  TO  $10k\Omega \pm 10$ 0.50 In. NOMINAL OTHER STROKE LENGTHS **AVAILABLE AS NOTED** 

**ELECTRICAL CONTINUITY STROKE:** INDEPENDENT LINEARITY:

**END VOLTAGE: VOLTAGE RESOLUTION: OUTPUT SMOOTHNESS:** RESISTANCE TEMP. COEFFICIENT: POWER RATING @ 70°C: WIPER CONTACT CURRENT:

DIELECTRIC STRENGTH:

**INSULATION RESISTANCE:** 

0.75 WATT MAX. 10 MilliAmps MAX. 1000 VRMS 100 Meg $\Omega$  MIN.

OVER MECH. STROKE +1.00.5 MAX. VIRTUALLY INFINITE 0.1 MAX. 500PPM/°C MAX.

## STANDARD MODEL **MECHANICAL CHARACTERISTICS**

MECHANICAL STROKE: **ACTUATING FORCE:** SHAFT ROTATION: TOTAL WEIGHT (1-GANG): ALLOWABLE SHAFT PLAY: 0.570±.020 0.75 Oz. MAX. CONTINUOUS (NO EFFECT) 0.70 Oz. MAX. .005 MAX. MISALIGNMENT

## **STANDARD ENVIRONMENTAL CHARACTERISTICS**

**OPERATING TEMP. RANGE:** -65°C To +125°C OPERATING LIFE: 100 x 106 STROKES MIN.

### **STANDARD** MATERIALS OF CONSTRUCTION

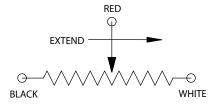
HOUSING: SHAFT AND GUIDE RODS: RESISTANCE ELEMENT: **ELECTRICAL CONTACTS:** REARINGS:

LEADWIRES / JACKET:

STAINLESS STEEL (TUBING) STAINLESS STEEL CO-MOLDED CONDUCTIVE PLASTIC

MULTI-FINGER PRECIOUS METAL VECTRA E130i PLASTIC #30 AWG TYPE ET (TEFLON) SHRINK TUBING JACKET

#### SCHEMATIC DIAGRAM

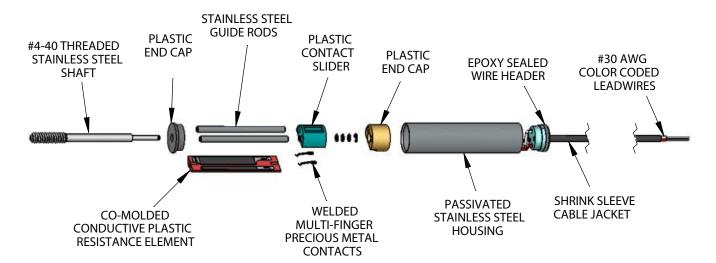




## 5903 Series

5/16 In. Dia. LINEAR MOTION PRECISION POTENTIOMETERS





# STANDARD ELECTRICAL CHARACTERISTICS

RESISTANCES ( $\pm 10$ ): 1K $\Omega$ , 2K $\Omega$ , and 5k $\Omega$ 

ACTIVE ELECTRICAL STROKE: 0.5, 0.75, 1.0, 1.5, and 2.0 Inches ELECTRICAL CONTINUITY: THROUGHOUT MECH. STROKE

POWER RATING @ 70°C: 1.0 WATT MAX. PER STROKE INCH

# STANDARD MECHANICAL CHARACTERISTICS

MECHANICAL STROKE: ACTIVE STROKE + 0.07 IN.
SHAFT ACTIVATION FORCE: 0.75 Oz. MAX.
MAX. SHAFT MISALIGNMENT: 0.005 In. PERMISSIBLE

# STANDARD ENVIRONMENTAL CHARACTERISTICS

OPERATING TEMP. RANGE:  $-65^{\circ}$ C To  $+125^{\circ}$ C ROTATIONAL OPERATING LIFE:  $100 \times 10^{6}$  STROKES MIN.

# STANDARD MATERIALS OF CONSTRUCTION

HOUSING: STAINLESS STEEL SHAFT AND GUIDE RODS: STAINLESS STEEL

STAINT AND GIBE RODS.
STAINTS STEELE

CO-MOLDED CONDUCTIVE PLASTIC

ELECTRICAL CONTACTS:
MULTI-FINGER PRECIOUS METAL

LEADWIRES / CABLE:
#30 AWG TYPE ET (TEFLON)

#### **AVAILABLE OPTIONS**

CUSTOM RESISTANCE VALUES  $\,$  (500  $\!\Omega$  TO 30k  $\!\Omega$  ) and Tolerances as low as  $\pm 5$ 

SPECIAL LINEARITIES AS LOW AS 0.2 , ABSOLUTE (INDEXED) OR INDEPENDENT OVER SPECIFIED REGIONS.

SPECIAL ELECTRICAL STROKES (3.5 Inch MAX.)

SPECIAL CABLE OR CONNECTORS

SPECIAL SHAFT LENGTHS AND FEATURES SUCH AS FLATS, SLOTS, STEPS, YOKES, CLAMPS, AND ROD ENDS.

SPECIAL ENVIRONMENTAL CAPABILITES SUCH AS MOISTURE SEALS, HIGH SHOCK AND VIBRATION CAPABILITIES.