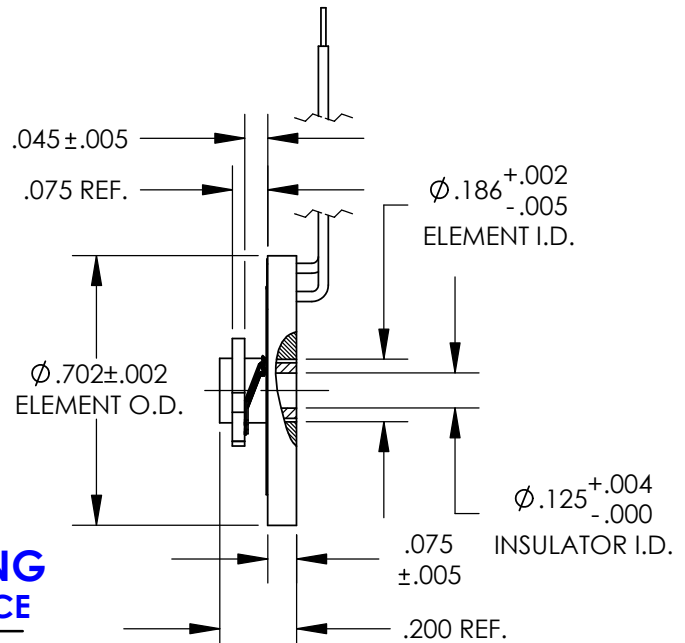
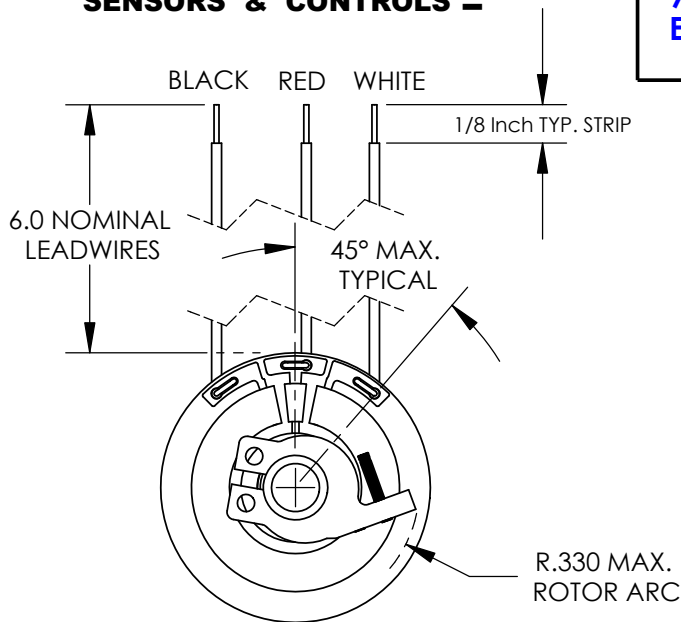
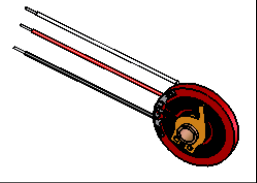




6909 Series

7/8 In. Dia. POTENTIOMETER
ELEMENT ROTOR/WIPER KIT



STANDARD PRODUCT OFFERING

SS&C PART NUMBER	RESISTANCE
6909-1000-030	1K Ω $\pm$ 10%
6909-1002-030	5K Ω $\pm$ 10%
6909-1003-030	10K Ω $\pm$ 10%

ELEMENT ONLY P/N 6909-1000-070

ELEMENT ONLY P/N 6909-1002-070

ELEMENT ONLY P/N 6909-1003-070

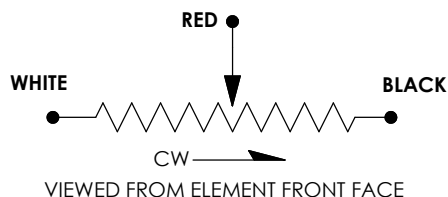
STANDARD MODEL ELECTRICAL CHARACTERISTICS

RESISTANCE, 6909-1000-030:	1k Ω $\pm$ 10%
6909-1002-030:	5k Ω $\pm$ 10%
6909-1003-030:	10k Ω $\pm$ 10%
ACTIVE ELECTRICAL ANGLE:	320°
ELECTRICAL CONTINUITY ANGLE:	330° MIN.
INDEPENDENT LINEARITY:	$\pm$ 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:	10 MilliAmps MAX.

STANDARD MODEL MECHANICAL CHARACTERISTICS

MECHANICAL ROTATION:	CONTINUOUS
TOTAL WEIGHT (ELEMENT ONLY):	0.75 Gm. MAX.
WIRE LEAD LENGTH:	6.0 Inches NOMINAL
ELEMENT OUTER DIAMETER:	0.702 $\pm$.005 Inch
ELEMENT INNER DIAMETER:	0.186 $\pm$.002/-0.005 Inch
ROTOR OPERATING RADIUS:	0.330 MAX.
STANDARD ROTOR PART No:	6909-0000-060
INSULATOR INSIDE DIAMETER:	0.127 $\pm$.002 Inch
INSULATOR LENGTH:	0.200 $\pm$.000/-0.005
STANDARD INSULATOR PART No:	7040-0005-015

SCHEMATIC DIAGRAM



STANDARD ENVIRONMENTAL CHARACTERISTICS

OPERATING TEMP. RANGE:	-65°C To $\pm$ 125°C
ROTATIONAL OPERATING LIFE:	100 x 10 ⁶ REVOLUTIONS MIN.

STANDARD MATERIALS OF CONSTRUCTION

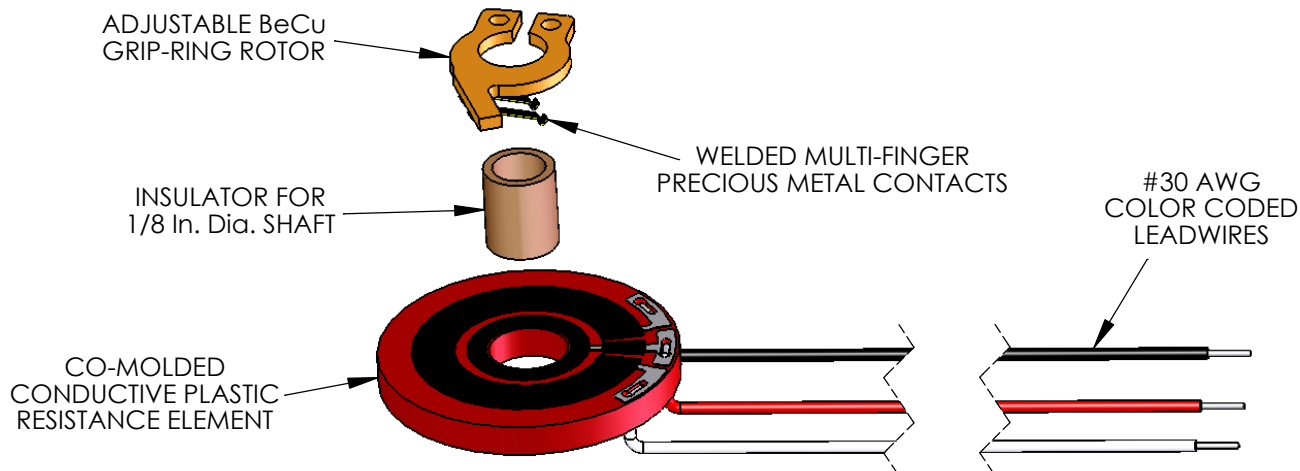
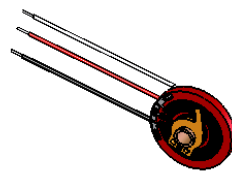
RESISTANCE ELEMENT:	CO-MOLDED CONDUCTIVE PLASTIC
GRIP-RING ROTOR:	HEAT-TREATED BERYLLIUM COPPER
INSULATOR:	HIGH-TEMP. MOLDED PLASTIC
ELECTRICAL CONTACTS:	MULTI-FINGER PRECIOUS METAL
LEADWIRES:	DIRECTLY WELDED TO ROTOR #30 AWG TYPE ET STRANDED WIRE TEFLON INSULATED (250V)

CONTACT:

SPECTRUM SENSORS & CONTROLS, INC.
424 CROWN POINT CIRCLE, GRASS VALLEY, CA 95945
(800) 880-7730 (530) 273-4608 FAX: (530) 273-0769
E-MAIL: sales@specsensors.com

6909 Series

7/8 In. Dia. POTENTIOMETER
ELEMENT ROTOR/WIPER KIT



STANDARD ELECTRICAL CHARACTERISTICS

RESISTANCES ($\pm 10\%$):	1K Ω , 5K Ω , and 10k Ω
ACTIVE ELECTRICAL ANGLE:	320°
ELECTRICAL CONTINUITY ANGLE:	330° MIN.
INDEPENDENT LINEARITY:	$\pm 0.5\%$
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:	10 MilliAmps MAX.

STANDARD MECHANICAL CHARACTERISTICS

MECHANICAL ROTATION:	CONTINUOUS
TOTAL WEIGHT (ELEMENT):	0.75 Gm. MAX.
WIRE LEAD LENGTH:	6.0 Inches NOMINAL
ELEMENT OUTER DIAMETER:	0.702 $\pm$.005 Inch
ELEMENT INNER DIAMETER:	0.186 $\pm$.002/-0.005 Inch
ROTOR OPERATING RADIUS:	0.330 MAX.
INSULATOR INSIDE DIAMETER:	0.127 $\pm$.002 Inch

STANDARD ENVIRONMENTAL CHARACTERISTICS

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

STANDARD MATERIALS OF CONSTRUCTION

RESISTANCE ELEMENT:	CO-MOLDED CONDUCTIVE PLASTIC
GRIP-RING ROTOR:	HEAT-TREATED BERYLLIUM COPPER
INSULATOR:	HIGH-TEMP. MOLDED PLASTIC
ELECTRICAL CONTACTS:	MULTI-FINGER PRECIOUS METAL DIRECTLY WELDED TO ROTOR
LEADWIRES:	#30 AWG TYPE ET STRANDED WIRE TEFLON INSULATED (250V)

AVAILABLE OPTIONS

CUSTOM RESISTANCE VALUES (500 Ω TO 50k Ω)
AND TOLERANCES AS LOW AS $\pm 5\%$

SPECIAL LINEARITIES AS LOW AS 0.25% ABSOLUTE
(INDEXED) OR INDEPENDENT OVER SPECIFIED
REGIONS.

ADDITIONAL TAPS, CURRENT OR VOLTAGE

SPECIAL ELECTRICAL ANGLES UP TO 350° MAX.

SPECIAL WIRE LEADS OR CABLES

SPECIAL TERMINATIONS OR CONNECTORS

SPECIAL TRANSFER FUNCTIONS:
NON-LINEAR OUTPUTS
LOAD COMPENSATION
TRIG, LOG, AND EXPONENTIAL OUTPUTS

SPECIAL ELEMENT DIMENSIONS OR FEATURES
SUCH AS LOCATING NOTCHES, SCRIBE MARKS,
CUSTOM SUBSTRATE SHAPES.

CUSTOM ROTOR OR INSULATOR DIMENSIONS
AND FEATURES.

CUSTOM MARKING, IDENTIFICATION OR LOGO.

SPECIAL ENVIRONMENTAL CAPABILITIES SUCH AS
HIGH SHOCK AND VIBRATION.

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