The Duncan 9800 Series Sensor is designed for rugged, continuous under hood environments. Features include high temperature, stable materials, insert molded integral connector/body design to eliminate weak/stress points or leaks during engine wash-down or water exposure.

To meet a variety of mounting area needs and interconnection requirements, fourteen standard models are available. For engineering assistance or special configurations of the 9800 Series to meet specific applications, contact a Duncan representative or the factory.

**ELECTRICAL SPECIFICATIONS**

Active Electrical Rotation:
85° ± 2° (See Fig. 1)

Total Resistance:
5,000 ohms ± 20%

Linearity:
Std. ± 2.0% over active electrical rotation (See Fig. 1)
Spec. ± 0.5% over active electrical rotation (See Fig. 1)

Power Rating At 70°C:
0.15 Watts

**Shaft Rotation Direction:**
- CW Models: female—9801, 9805, 9811
  - male—9803, 9807, 9813
  - leadwire—9831
- CCW Models: female—9802, 9806, 9812
  - male—9804, 9808, 9814
  - leadwire—9832

**MECHANICAL SPECIFICATIONS**

Mechanical Rotation (Nominal):
120° (Except 130° for 9831, 9832)

Mechanical Life:
- 1,000,000 full cycles
- 5,000,000 dither cycles

Stop Strength:
0.68 Nm max.

Torque:
0.11 Nm max.

Mounting Torque:
1.35 Nm max.

**ENVIRONMENTAL SPECIFICATIONS**

Temperature Limits:
-40°C to +135°C

Humidity:
95% @ 38°C

Vibration:
15 G’s, 50 to 1,000 Hz.

2 Hrs. each plane

Shock:
50 G’s

**SPRING RETURN ORIENTATION:**
Spring returns slider to counter-clockwise end on CW sensors.
Spring returns slider to clockwise end on CCW sensors.

**MATING CONNECTOR/INTERFACE INFORMATION:**

Sensor Female Connector Mates With Packard Electric Weather Pack Connector
- Three-way Tower with Seal (1 required) P/N 12015793
- Male Pin (3 required) P/N 12033674 (for 18 AWG wire)
- Wire Cable Seal (3 required) P/N 12015284

Note: Custom Drive-Arm/Actuator Configurations Available

Most specifications may be altered to meet specific requirements.

**Notes:**
1. Nominal Midpoint of Mechanical Rotation for CCW Rotation.
2. Nominal Midpoint of Mechanical Rotation for CW Rotation.
3. Nominal 10% Output Position for CCW Rotation.
4. Nominal 10% Output Position for CW Rotation.
5. Both Driving Blades and Shaft are Shown in Midpoint Position.
6. All Dimensions and Values Shown in Metric.