# 9800 SERIES | THROTTLE POSITION / AND INDUSTRIAL CONTROL SENSOR MODULES

THROTTLE POSITION AND INDUSTRIAL CONTROL SENSOR MODULES

### **Product Description**

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.

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**Technologies** 



#### **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

#### **Environmental Specifications**

Temperature Limits	-40°C to +135°C
Vibration	15 G's 50 to 1,000 Hz 2 Hrs. each plane
Humidity	95% @ 38°C
Shock	50 G's



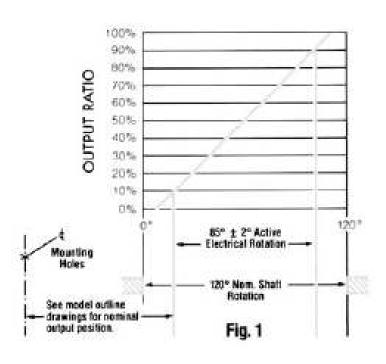
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## **Mechanical Specifications**

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.



### Figure 1



### Spring Return Orientation

Spring returns slider to counter-clockwise end on CW sensors. Spring returns slider to clockwise on CCW sensors.

#### Mating Connector / Interface Information

Sensor Female Connector Mates with Packard Electric Weather Pack Connector

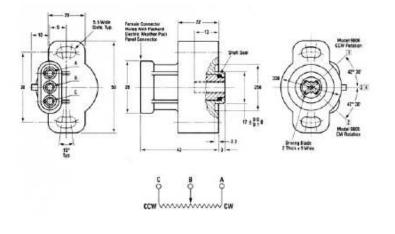
- Three-way Tower with Seal (1 Required) P/N 12015793
- Male Pin (3 required) P/N 12033674 (for 18 AWG wire)
- Wire Cable Seal (3 required) P/N 12015284

Note: Custom Drive-Arm/ Actuator Configurations Available Most specifications may be altered to meet specific requirements





#### 9805 (CW) and 9806 (CCW)



#### Models 9805-9808 Offset Connector Style



#### 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.

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