

## 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.



#### SPECIFICATIONS

##### Electrical Specifications

<b>Active Electrical Rotation</b>	85° ± 2° (See Fig. 1)	
<b>Total Resistance</b>	5,000 ohms ±20%	
<b>Linearity</b>	Std ±2.0% over active electrical rotation (See Fig. 1) Spec. ±0.5% over active electrical rotation (See Fig. 1)	
<b>Power Rating at 70°C</b>	0.15 Watts	
<b>Shaft Rotation Direction</b>	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

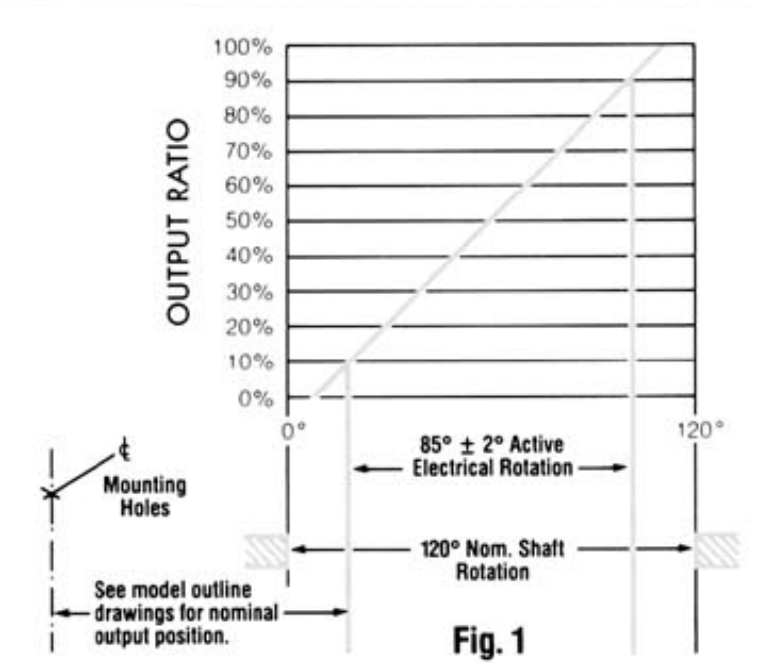
<b>Temperature Limits</b>	-40°C to +135°C
<b>Vibration</b>	15 G's 50 to 1,000 Hz 2 Hrs. each plane
<b>Humidity</b>	95% @ 38°C
<b>Shock</b>	50 G's

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.

CURVES AND INFO

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

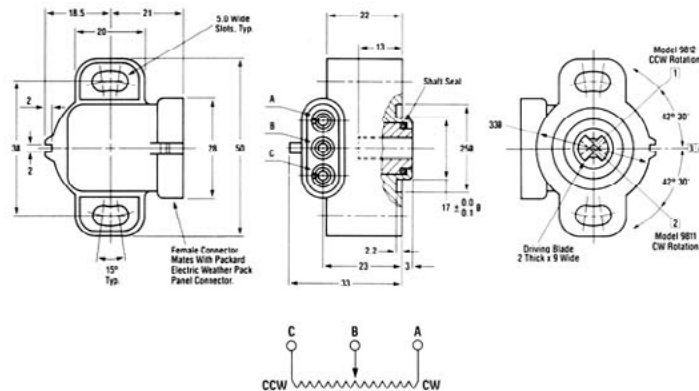
Note: Custom Drive-Arm/ Actuator Configurations Available  
**Most specifications may be altered to meet specific requirements**



## DIMENSIONS AND DIAGRAMS

Dimensions in mm

### 9811 (CW) and 9812 (CCW)



### Models 9811-9814 90° 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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