

Willburger System GmbH

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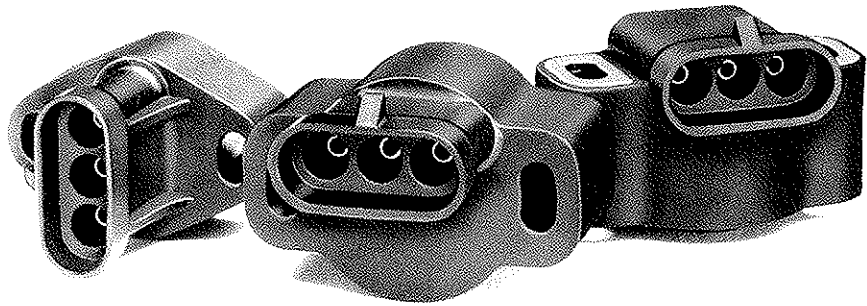
Geschäftsführer: Ulrich Willburger, Sitz der Gesellschaft: Seehausen, Handelsregister. München HRB 74107

Throttle Position and Industrial Control Sensors

9800 Series

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, ten 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

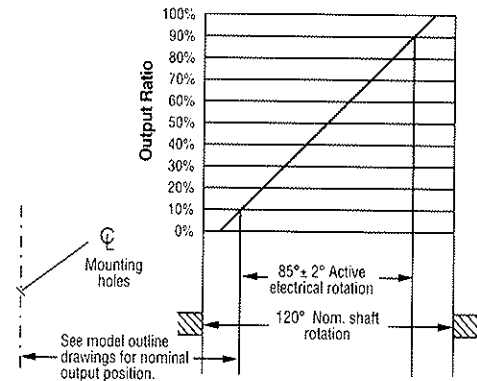
- Active Electrical Rotation:
85° ± 2° (See Fig. 1)
- Total Resistance:
5,000 ohms ± 20%
- Linearity:
Std. ± 2.0% over active electrical rotation (See Fig. 1)
Spec. ± 0.5% over active electrical rotation (See Fig. 1)
- Power Rating At 70°C:
0.15 Watts
- Shaft Rotation Direction:
CW Models:
female drive— 9805,9811
male drive— 9807, 9813
lever drive— 9831
CCW Models:
female drive— 9806,9812
male drive— 9808,9814
lever drive— 9832

Mechanical Specifications

- Mechanical Rotation (Nominal):
120°, key drive options 180°
- 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
- Vibration:
15 Gs, 50 to 1,000 Hz
2 Hrs. each plane
- Humidity:
95% @ 38°C
- Shock:
50 Gs



Note: For rotation outside 85° active electrical rotation, linearity may exceed specified tolerances.

Fig. 1

Spring Return Orientation:

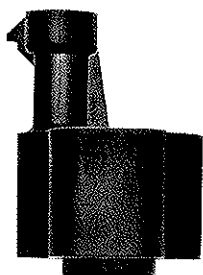
Spring returns slider to counter-clockwise end on CW sensors.

Spring returns slider to clockwise end on CCW sensors.

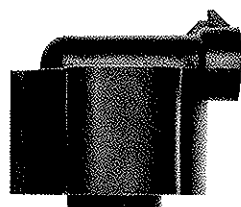
Mating Connector/Interface Information:

- 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 12089040

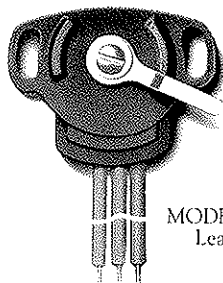
Note: Custom Drive-Arm/Actuator Configurations Available
 Most specifications may be altered to meet specific requirements



MODELS 9805-9808
Offset Connector Style



MODELS 9811-9814
90° Connector Style



MODELS 9831-9832
Leadwire Style

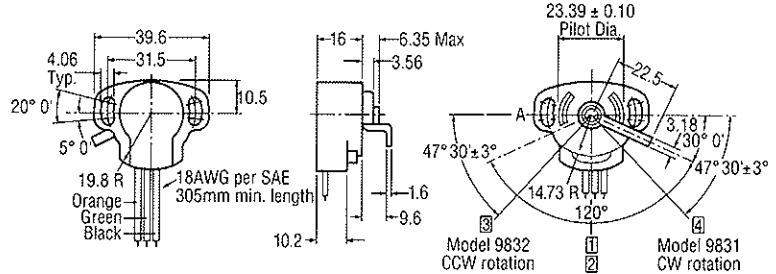
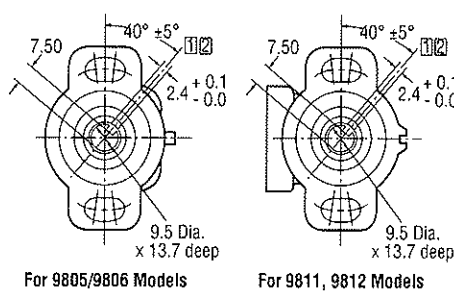
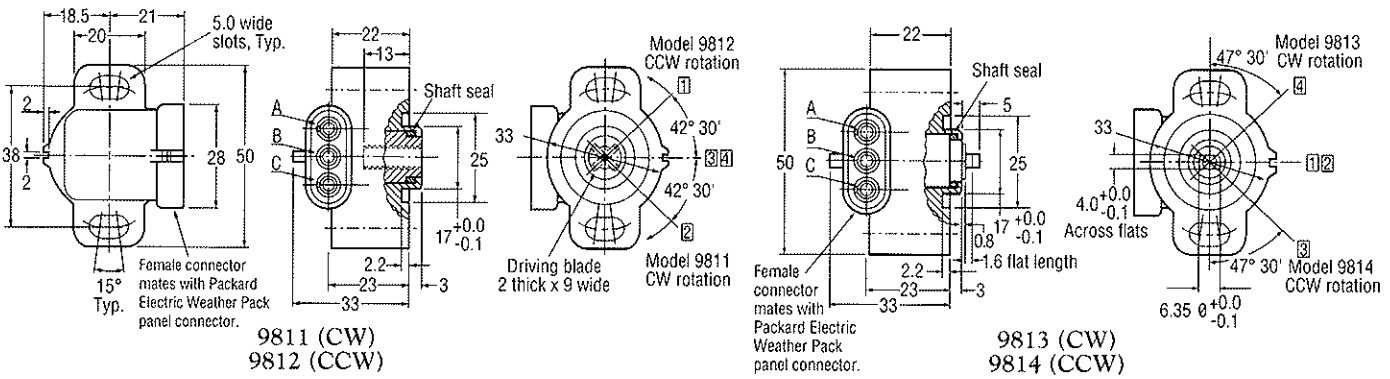
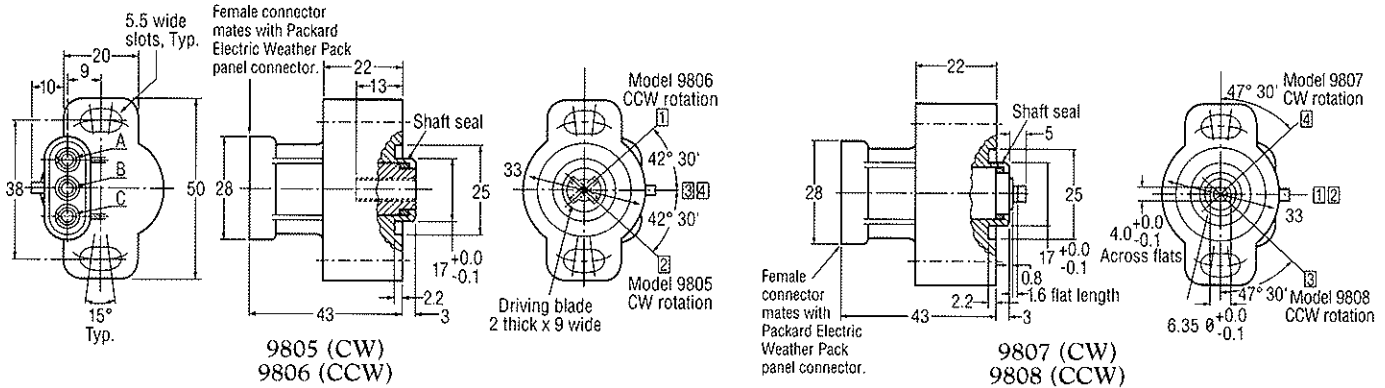
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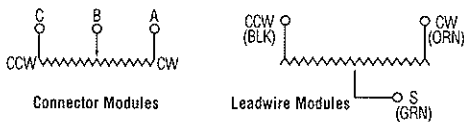
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KEY DRIVE OPTIONS FOR MODELS 9805, 9806, 9811, 9812



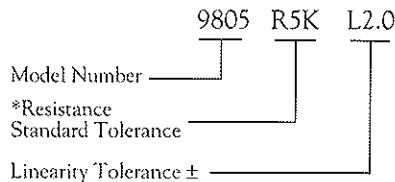
Notes:

- 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.

Tolerances unless otherwise specified: ± 0.8 mm

Ordering Information

When ordering a standard DUNCAN position sensing module, indicate the part number which includes the model number, resistance and linearity tolerance. The letters "R" and "L" precede the resistance and linearity respectively.



* If the resistance is other than standard, show the tolerance in parentheses () after the resistance.