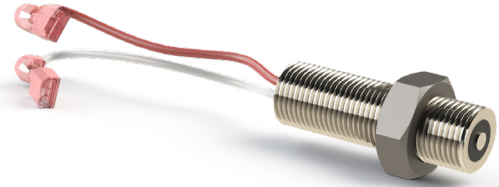


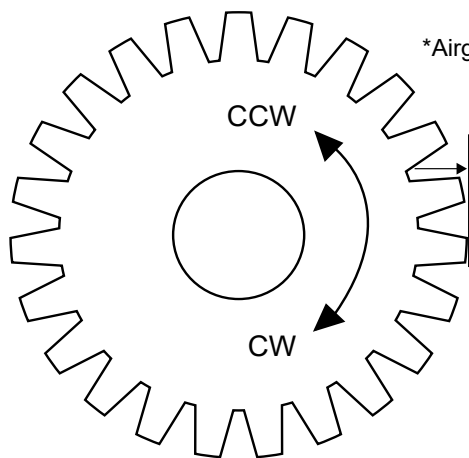
**Features and Benefits**

- Passive (no power required)
- Sinusoidal speed-dependent output
- 2 wires
- 303 stainless steel housing
- M18 x 1.5 thread
- Non-magnetic stainless steel nut
- Environmentally sealed
- Resistant to shock and vibration
- Corrosion proof and fungus resistant
- Humidity up to 100%

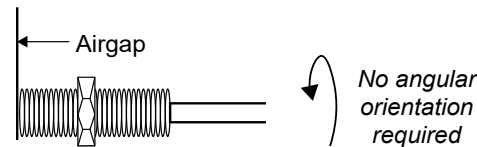


Sensor

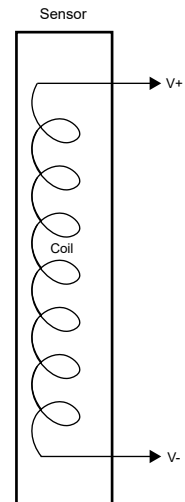
**Application Example**



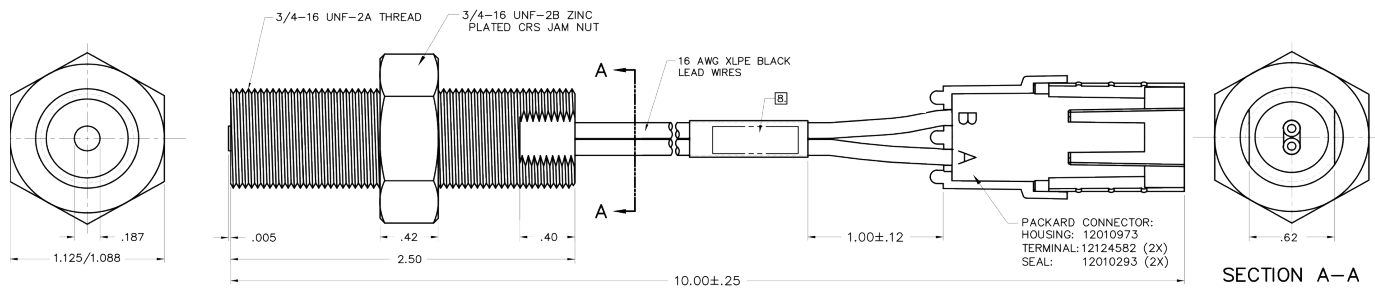
\*Airgap is dependent on tooth gear geometry



Typical Output Voltage



**Physical Outline**



**Sensor Characteristics** ( $T = -40$  to  $125^{\circ}\text{C}$ )

Table 2.2

| Characteristic | Test Condition | Limits |      |      |       |
|----------------|----------------|--------|------|------|-------|
|                |                | Min.   | Typ. | Max. | Units |
| Resistance     | 25°C           | 144    | 180  | 216  | Ohm   |
| Inductance     | 25°C           |        | 60   |      | mH    |
| Output Voltage | Operating      | 15.0   |      |      | V P-P |
| High Pot       | Wires to Case  | 485    | 500  | 515  | VRMS  |
| Lead Pull      | Operating      | 2      |      |      | lbs   |

**Test Conditions:**

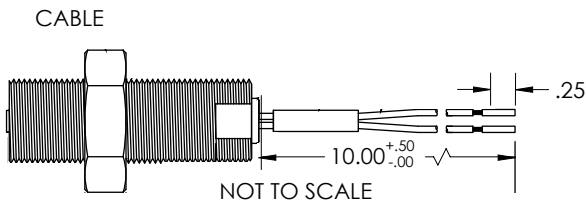
- Air Gap: .015 in
- Test Wheel: 10 pitch, 126 teeth
- Speed: 1406 rpm
- Load: 100K Ohms

**Sensor Operation**

The V Series provides an analog voltage output that is both frequency and amplitude dependent on target attributes, target speed, and the air gap between sensor and target. The output is typically a sinusoid when the target presented has regularly spaced areas of material/no material such as a spur gear.

One requirement of a target is that the material **MUST** be ferrous (iron, steel and 400 series or stainless steels). The output characteristics that you will achieve are difficult to predict and performance testing must take place. As a general rule, to maximize output, you would use a target that is iron/steel (low-carbon) with large teeth. As you move away from this combination, the output of the sensor will decrease at a given speed and air gap. V Series are passive, that is they do not require external power and are 2-wire versus a typical active Hall Effect gear tooth speed sensor, which is 3-wire. This can be an advantage in many applications.

**Wiring**



- 18 AWG
- PVC Insulation

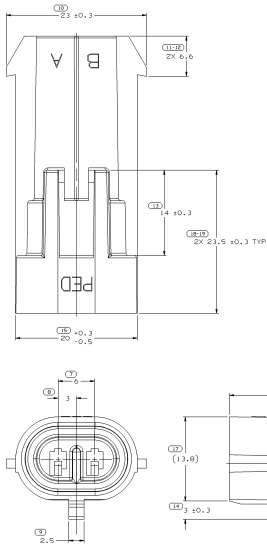
Table 3.1

| Standard Wiring Color Code |       |
|----------------------------|-------|
|                            | Cable |
| Pin 1                      | Red   |
| Pin 2                      | White |

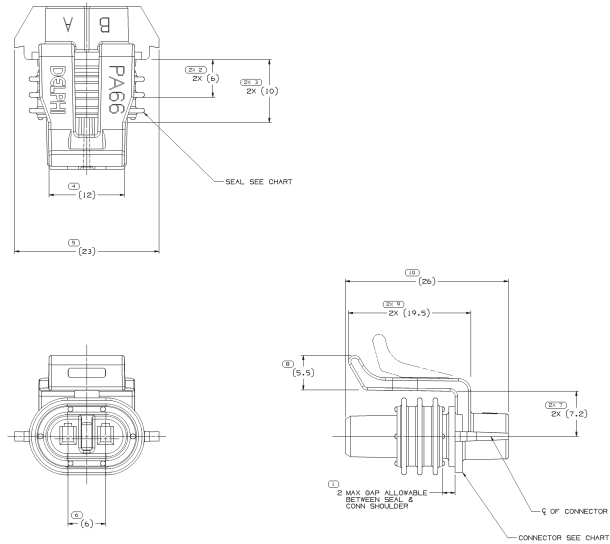
Pin 1 (red) positive with respect to Pin 2 (white) with the approach of a ferrous target

**Connector Options**

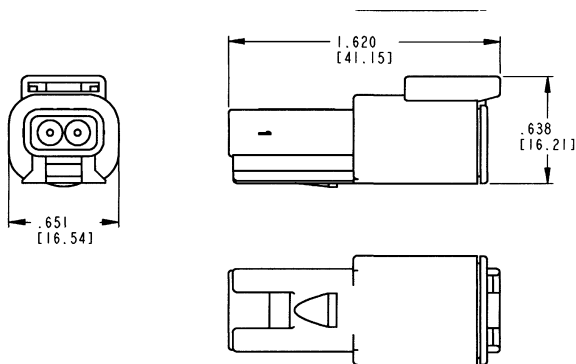
Aptiv Metri-Pack 150 Series (Male)



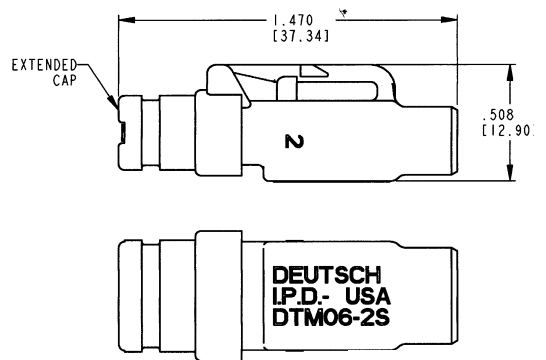
Aptiv Metri-Pack 150 Series (Female)



Deutsch DTM-04 (Male)

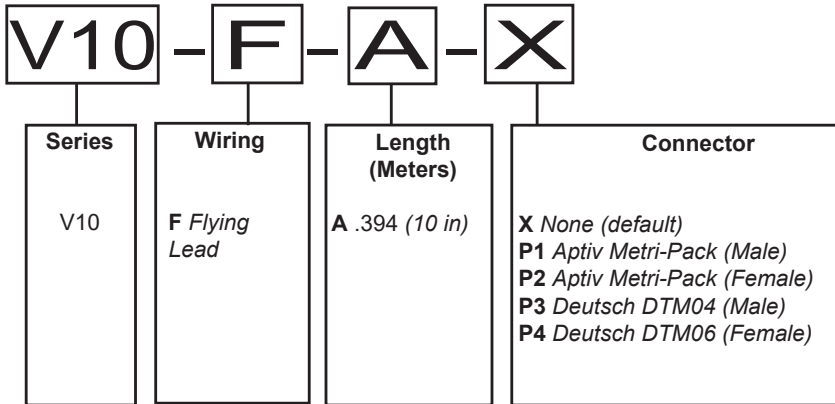


Deutsch DTM-06 (Female)



Need a different connector? Contact [sales@phoenixamerica.com](mailto:sales@phoenixamerica.com).

**Part Number Description**



Example: V10-F-A-X