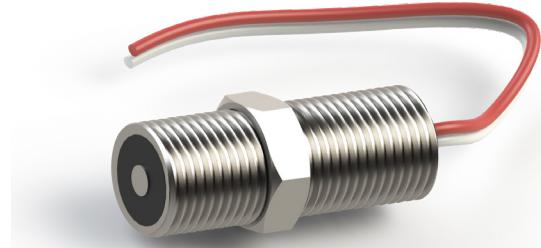


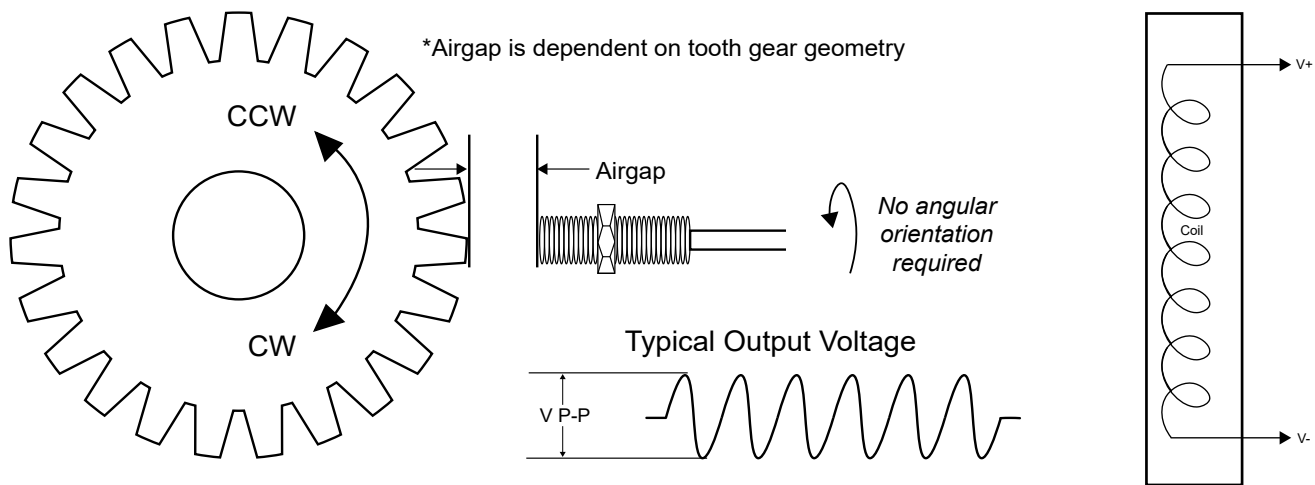
**Features and Benefits**

- Passive (no power required)
- Sinusoidal speed-dependent output
- 2 wires
- 303 stainless steel housing
- M16 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%

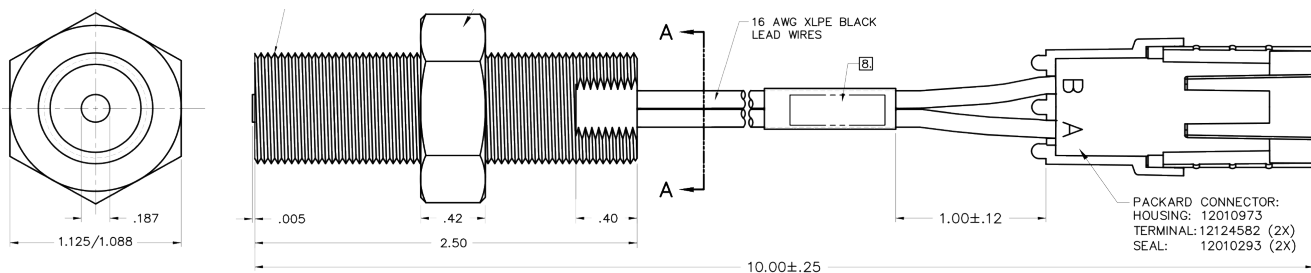


Sensor

**Application Example**



**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      | 50.0   |      |      | V P-P |
| High Pot       | Wires to Case  | 485    | 500  | 515  | VRMS  |
| Lead Pull      | Operating      | 2      |      |      | lbs   |

**Test Conditions:**

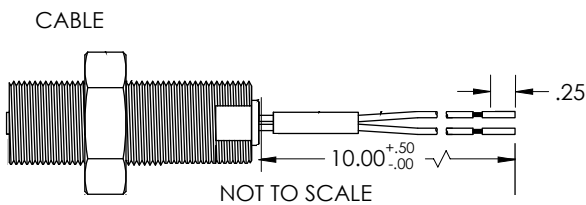
- Air Gap: .005 in
- Test Wheel: 8 pitch
- Speed: 500 i.p.s.
- Load: 100K Ohms

**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

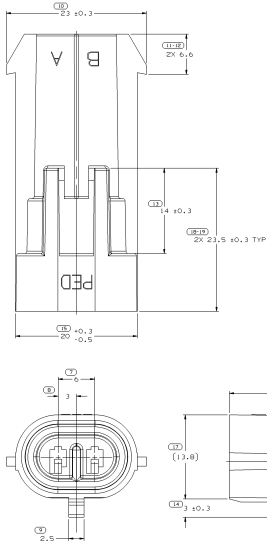
Table 3.1

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

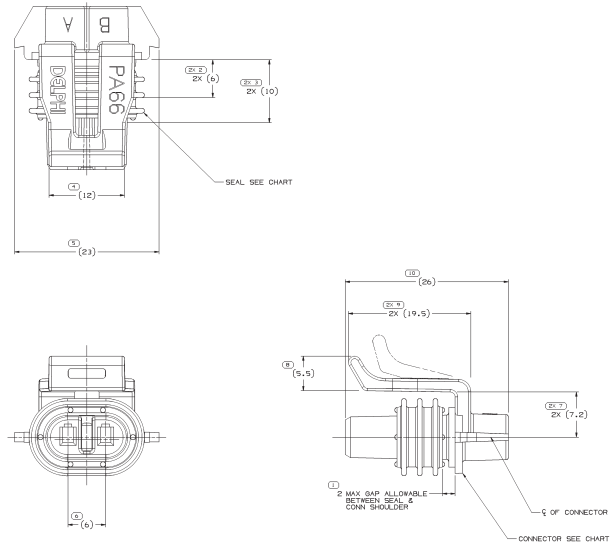
Pin 1 (white) positive with respect to Pin 2 (red) with the approach of a ferrous target

**Connector Options**

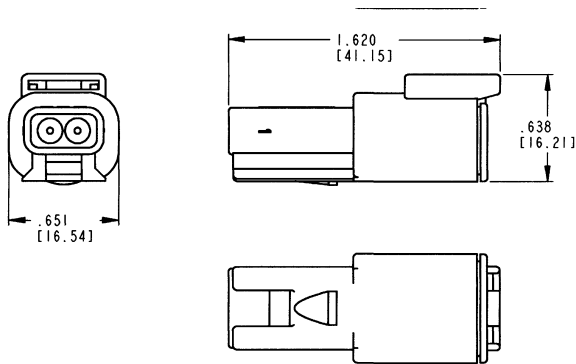
Aptiv Metri-Pack 150 Series (Male)



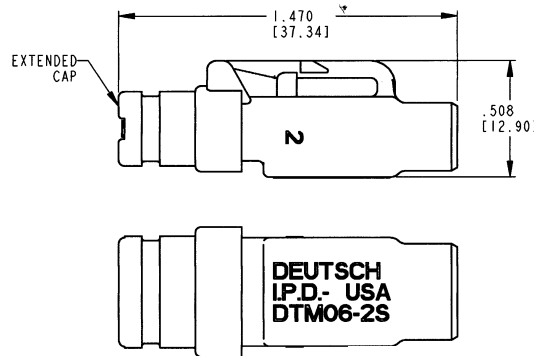
Aptiv Metri-Pack 150 Series (Female)



Deutsch DTM-04 (Male)

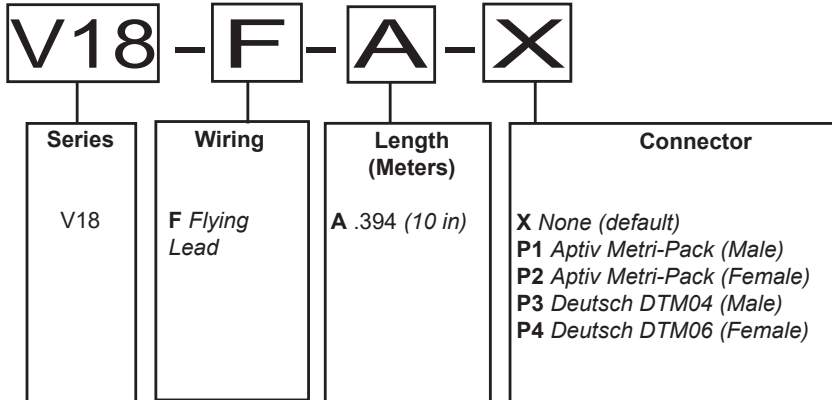


Deutsch DTM-06 (Female)



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

**Part Number Description**



Example: V18-F-A-X