

# Solid State Sensors

## SR16/17 Hall Effect Vane Sensors

## SR16/17 Series

### ELECTRICAL CHARACTERISTICS -20°C TO 85 °C, 3.8 TO 30 VDC

|                                   | Min.                            | Max.        | Remarks                                                                          |
|-----------------------------------|---------------------------------|-------------|----------------------------------------------------------------------------------|
| Supply voltage                    |                                 | 3.8 to 30   | VDC                                                                              |
| Current consumption               | —                               | 9           | mA (off) 10 mA (on)                                                              |
| Output voltage (operated)         | —                               | 0.40 V      | Sinking 20 mA max.                                                               |
| Sink current (operated)           | —                               | 20          | mA                                                                               |
| Output leakage current (released) | —                               | 10 $\mu$ A  | V <sub>OUT</sub> = 30 VDC, V <sub>CC</sub> = 24 VDC                              |
| Output switching time             |                                 |             |                                                                                  |
| Rise, 10 to 90%                   | —                               | 1.5 $\mu$ s | V <sub>CC</sub> = 12 V, R <sub>L</sub> = 1.6 K $\Omega$ , C <sub>L</sub> = 20 pF |
| Fall, 90 to 10%                   | —                               | 1.5 $\mu$ s | V <sub>CC</sub> = 12 V, R <sub>L</sub> = 1.6 K $\Omega$ , C <sub>L</sub> = 20 pF |
| Operating Temperature             | -20°C to +85°C (-4°F to +185°F) |             |                                                                                  |

### MECHANICAL CHARACTERISTICS

Operating Range 12 VDC @ 25°C

| Operate         | Release         |
|-----------------|-----------------|
| 1.5° $\pm$ 2.0° | 3.0° $\pm$ 2.5° |

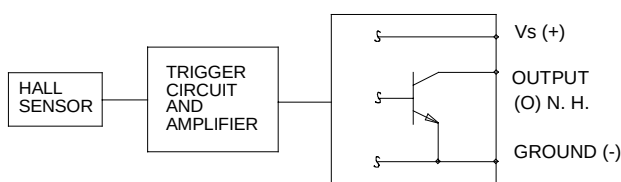
### CONDITIONS

Target engagement distance 0.150 in to 0.300 in

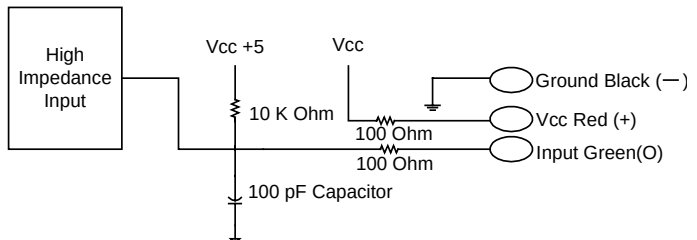
RPMs 0 to 5000

Slot depth 0.250 in min.

### BLOCK CIRCUIT WIRING DIAGRAM

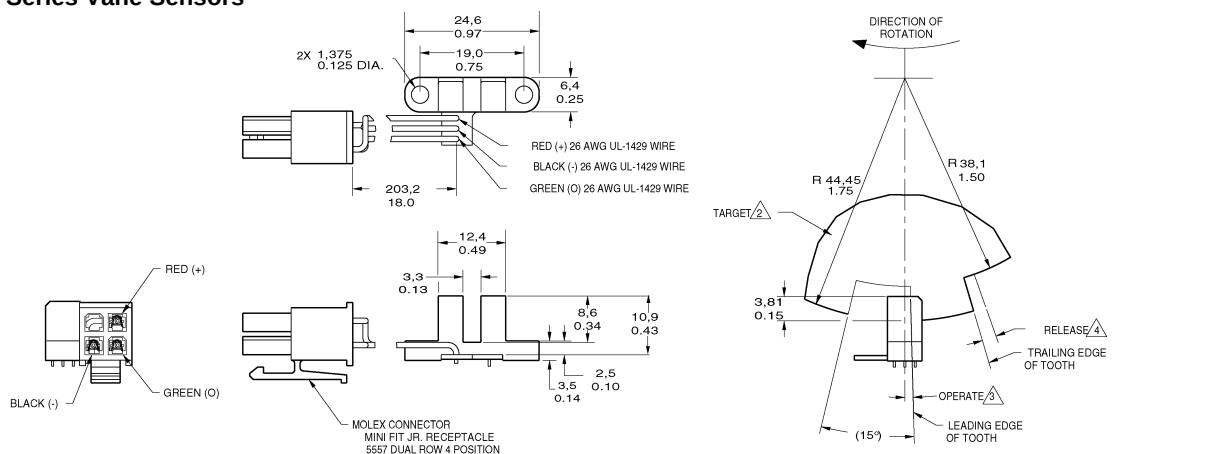


### SPEED SENSING INTERFACE



### MOUNTING DIMENSIONS (for reference only) mm/in

#### SR16/17 Series Vane Sensors



#### SR16C-J4

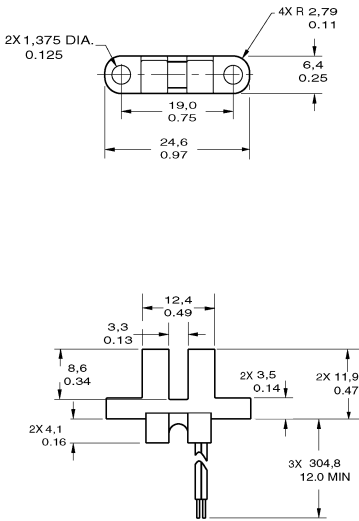
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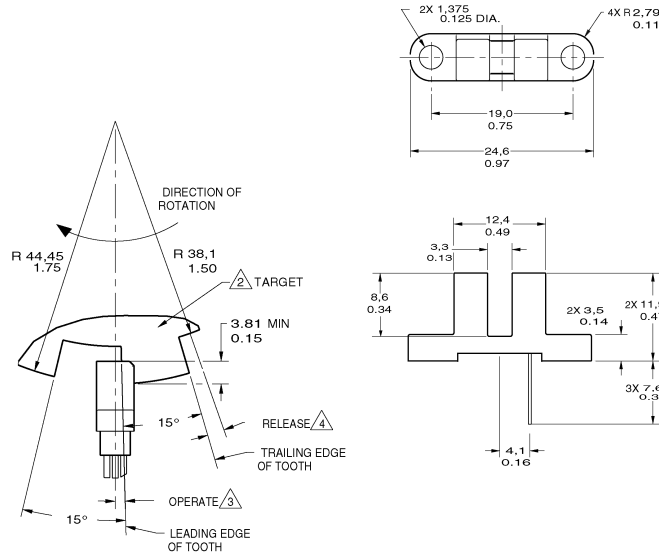
## SR16/17 Series

### MOUNTING DIMENSIONS (for reference only) mm/in

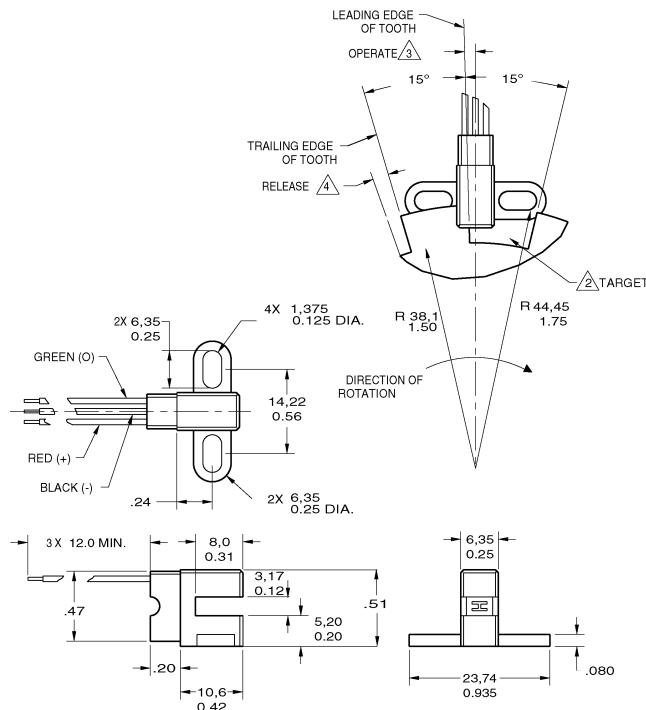
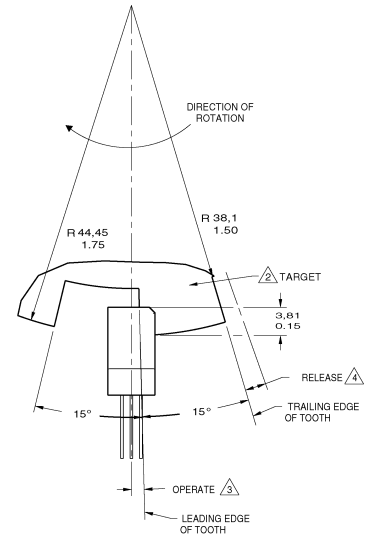
#### SR16/17 Series Vane Sensors



SR16C-J6



SR16C-N



SR17C-J6

#### Notes:

1. Mounting specification: non-ferrous #4 machine head screws with .25 OD washers torqued to 3-5 in-lbs.
2. Suggested target configuration, material: .045 low carbon steel, high permeability, low residual induction.
3. Operate (degrees) is the angular distance from the leading edge of the tooth to the centerline of the sensor.
4. Release (degrees) is the angular distance from the trailing edge of the tooth to the centerline of the sensor.
5. Operating specification is based on target shown.