

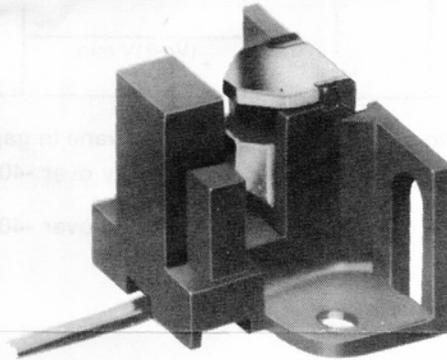
**Installation instructions**  
**1AV vane sensors**

**PK 8757 1**

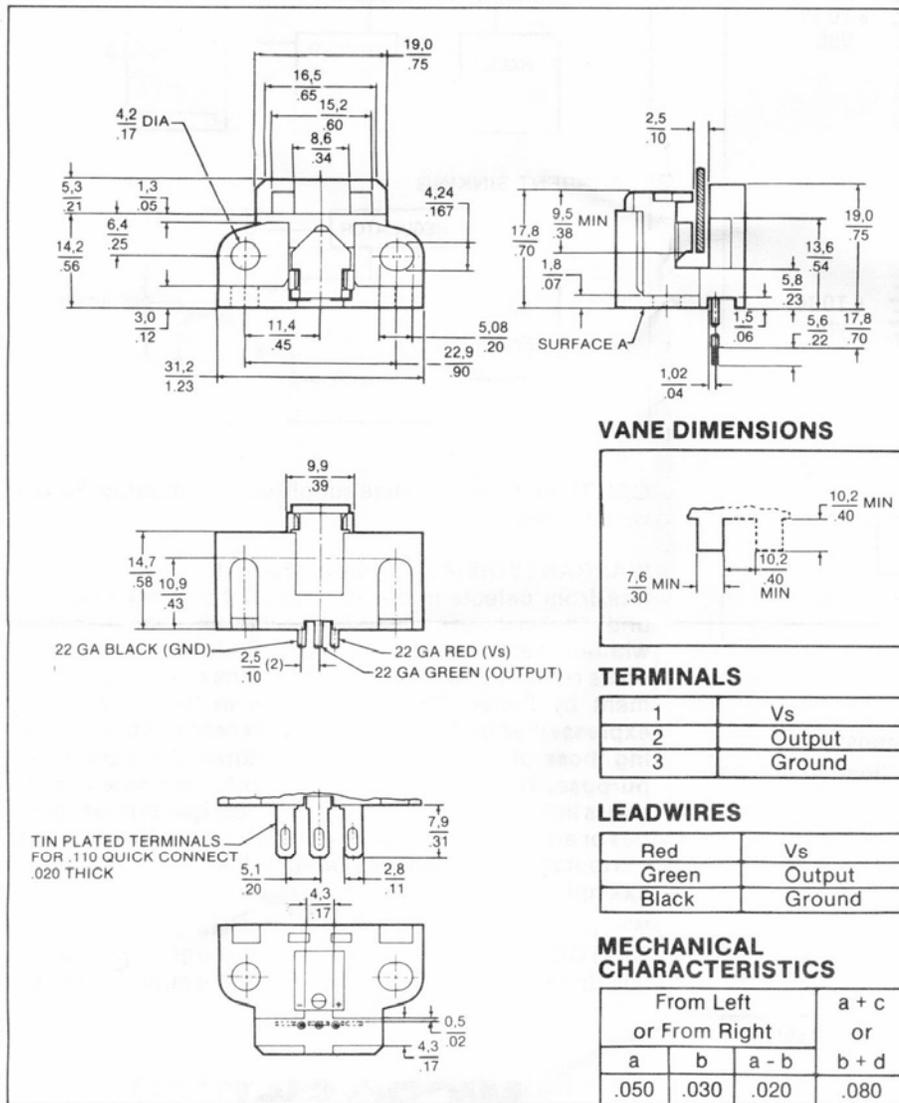
**GENERAL INFORMATION**

1AV Hall effect vane sensors include a Hall effect sensor and a magnet in a common package. They are operated by passing a ferrous vane through the gap between the magnet and the sensor.

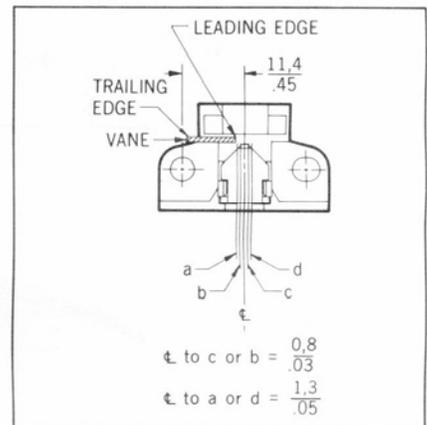
With no vane in gap, output is Operated (conducting).  
With vane in gap, output is Released (non-conducting).  
Vane actuator is a low carbon cold rolled steel, type AISI, 1018 or lower in carbon content. Minimum recommended vane dimensions of .30 inch (7,6 mm) tooth width and .40 inch (10,1 mm) window width are required to assure appropriate operating characteristics.



**MOUNTING DIMENSIONS**



**ACTUATION**



- With no vane in gap - output is conducting (Sinking is Low, Sourcing is High).
- Vane movement Left to Right - when the leading edge reaches "b", the output voltage stops conducting (Sinking goes High, Sourcing goes Low).
- After leading edge reaches "b":
  - Assuming the vane **moves on** through the gap; as the trailing edge reaches "d", the output voltage will be conducting.
  - Assuming direction of vane travel **reverses**; as the leading edge reaches "a", output voltage will be conducting.
- For vane movement from Right to Left, output is nonconducting when leading edge reaches "c", and conducting when trailing edge reaches "a".

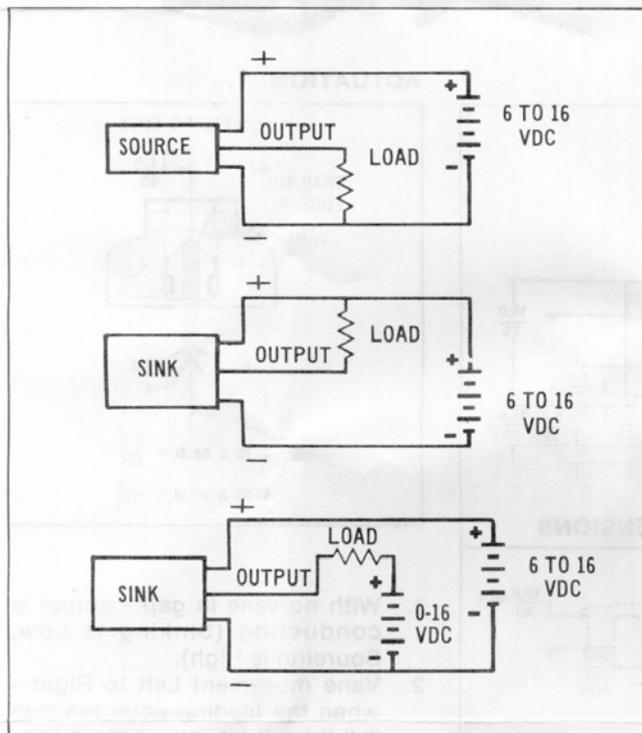
**1AV ELECTRICAL CHARACTERISTICS**

Supply Voltage (VDC)	Supply Current (mA max)	Output Voltage (Operated)	Output Current Load	Output Type	Termination	Catalog Listings
6-16 (11 ± 5)	13	0.4V max.	20 mA	Sinking	Leadwires	1AV2A
		(Vs-2)V min.		Sourcing	Solder/Q.C.	1AV3A
					Leadwires	1AV2B
					Solder/Q.C.	1AV3B

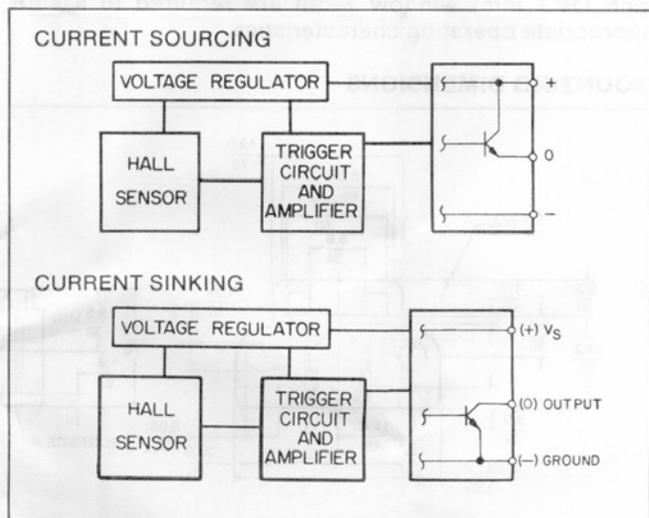
Output transistors are normally **on** with no vane in gap.

**Temperature range:** 6-16VDC power supply over -40 to +125°C (-40 to +257°F)  
 8-16VDC power supply over -40 to +150°C (-40 to +302°F)

**WIRING DIAGRAMS**



**CIRCUIT DIAGRAMS**



**TROUBLE SHOOTING**

If sensor does not operate, follow these steps:

1. Make certain all wiring is correct (load must be connected).
2. Measure supply voltage across positive and ground leads (terminals) to verify that proper supply voltage is present.
3. Connect positive lead of voltmeter to output lead (terminal), and negative lead of voltmeter to ground (terminal). Readings should be:

No vane in gap	Vane in gap	Type	Listing
0.4V max.	Vs	Sinking	1AV2A
			1AV3A
(Vs - 2)V min.	0	Sourcing	1AV2B
			1AV3B

**CAUTION:** Do not reverse supply voltage polarity. Sensor will be damaged.

**WARRANTY/REMEDY** - Seller warrants its products to be free from defects in design, material and workmanship under normal use and service. Seller will repair or replace without charge any such product it finds to be so defective on its return to Seller within 18 months after date of shipment by Seller. **The foregoing is in lieu of all other expressed or implied warranties (except of title), including those of merchantability and fitness for a particular purpose.** The foregoing is also Purchaser's sole remedy and is in lieu of all other guarantees, obligations, or liabilities or any consequential, incidental, or punitive damages attributable to negligence or strict liability, all by way of example.

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