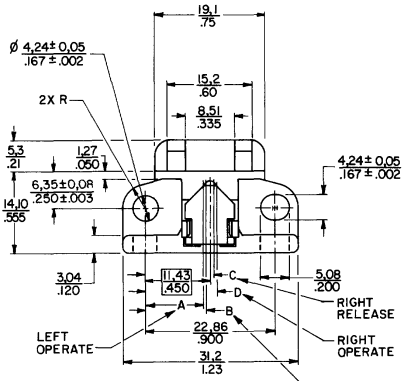
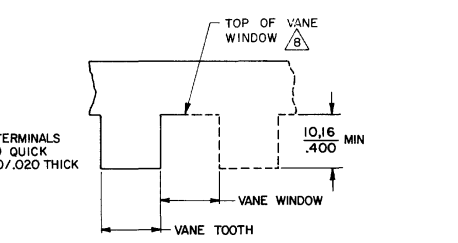
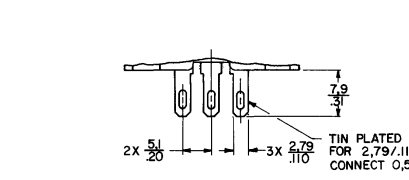
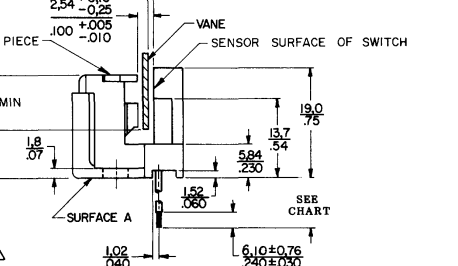
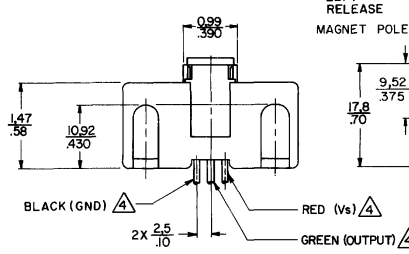


**M** 1AV SERIES CHART 2



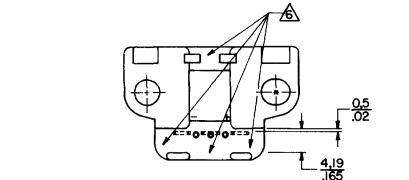
**NOTES**

- △ OVER SPECIFIED VOLTAGE AND MAXIMUM TEMPERATURE RANGE OF SPECIFIC LISTINGS SWITCH IS OFF (RELEASED CONDITION) WHEN VANE ACTUATOR (TOOTH) IS IN GAP
- △ ABSOLUTE MAXIMUM RATINGS ARE THE EXTREME LIMITS THAT THE DEVICE WILL WITHSTAND WITHOUT DAMAGE TO THE DEVICE HOWEVER, THE ELECTRICAL AND MECHANICAL CHARACTERISTICS ARE NOT GUARANTEED AS THE MAXIMUM LIMITS (ABOVE RECOMMENDED OPERATING CONDITIONS) ARE APPROACHED NOR WILL THE DEVICE NECESSARILY OPERATE AT ABSOLUTE MAXIMUM RATING
- △ LEADWIRES ARE 24 GA WITH THERMOPLASTIC ELASTOMER INSULATION
- △ MAXIMUM CHANGE IN CHARACTERISTICS WHEN GOING FROM 25°C TO OPERATING LIMITS WHEN VANE SWITCH IS MOUNTED ON SURFACE "A" THE LEAD WIRES MAY EXIT IN ANY ONE OF THESE FOUR DIRECTIONS
- 7 - LINEAR MEASURE - MM OR MM/IN
- △ THE TOP OF THE VANE WINDOW MUST BE A MINIMUM OF 0.64mm (.025 IN)
- △ NOMINAL DISTANCE FROM THE SENSOR SURFACE TO THE VANE, USING A 0.91mm/.0359 IN THICK FERROUS METAL VANE



ACTUATOR THICKNESS	MIN WINDOW	MIN TOOTH	DIM A
1.02/.040	10.16/.400	7.62/.300	0.64/.025
1.58/.082	10.16/.400	6.35/.250	0.36/.014

**RECOMMENDED VANE ACTUATOR**  
 (MATERIAL TO BE ANNEALED 1010 - 1018 COLD ROLLED STEEL OR LOWER IN CARBON)



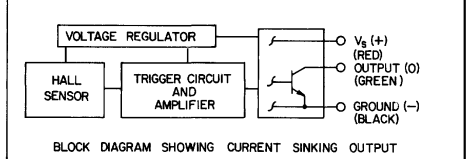
SUPPLY VOLTAGE	MECHANICAL CHARACTERISTICS							
	TEMPERATURE	OPERATE	RELEASE	DIFF	OPERATE	RELEASE	DIFF	DIFFERENTIAL
12.0	25 C	390±.030	.410±.030	.020±.014	510±.030	490±.030	.020±.014	100±.040
4.5 TO 24.0	25 C	±.005	±.005	±.002	±.005	±.005	±.002	±.005
4.5 TO 24.0	0C TO 85C	±.010	±.010	±.008	±.010	±.010	±.008	±.018
4.5 TO 24.0	-40C TO 125C	±.020	±.020	±.010	±.020	±.020	±.010	±.035

ELECTRICAL CHARACTERISTICS (OPERATING CONDITION)	
SUPPLY VOLTAGE	V <sub>cc</sub> 4.5 TO 26.5 Vdc
SUPPLY CURRENT "ON"	I <sub>cc</sub> 5 TO 18.5 mA
OUTPUT VOLTAGE "ON"	V <sub>sat</sub> 0 TO 0.4 Vdc (SINKING 20 mA)
OUTPUT VOLTAGE "OFF"	V <sub>sat</sub> 0 TO 0.5 Vdc (SINKING 40mA)
OUTPUT CURRENT "OFF"	I <sub>leak</sub> 0 TO 10 <sub>u</sub> A (PULLED UP TO 24 Vdc MAX)
OUTPUT SWITCHING RISE TIME	t <sub>r</sub> 0 TO 2.0 <sub>u</sub> S (V <sub>cc</sub> 12V, R <sub>load</sub> 1K OHM, C <sub>load</sub> 20pF MAX 25°C)
OUTPUT SWITCHING FALL TIME	t <sub>f</sub> 0 TO 1.0 <sub>u</sub> S (V <sub>cc</sub> 12V, R <sub>load</sub> 1K OHM, C <sub>load</sub> 20pF MAX 25°C)
REVERSE SUPPLY VOLTAGE CURRENT	I <sub>ccr</sub> -2.5 TO 0 mA (-30 VOLT SUPPLY, 0 VOLT OUTPUT APPLIED)

TERMINATION STYLE	LEAD LENGTH (INCH)	CATALOG LISTING
TERMINAL	0.31±0.05	1AV1F
LEADWIRE	7.00±0.50	1AV12F
LEADWIRE	24.50±1.00	1AV13F

ABSOLUTE MAXIMUM RATINGS	
SUPPLY VOLTAGE	±30 VDC
VOLTAGE APPLIED TO OUTPUT	-0.5VDC TO +30VDC
OUTPUT CURRENT	±50mA
TEMPERATURE	-40°C TO +150°C
TRANSIENT SUPPLY CURRENT	±0.5 AMP 1 <sub>u</sub> S MAX
TRANSIENT OUTPUT CURRENT	±0.5 AMP 1 <sub>u</sub> S MAX

TRANSIENT CHARACTERISTICS (REFERENCE ISO 7637-1, 25°C)			
INDUCTIVE LOAD OPENING	PULSE 1	DURATION <0.2ms	-110 VOLTS
INDUCTIVE LOAD OPENING	PULSE 1	DURATION <2ms	-100 VOLTS
SERIES CURRENT INTERRUPT	PULSE 2	DURATION <200ms	+150 VOLTS
LOAD DUMP	PULSE 5	DURATION <400ms	+120 VOLTS
FIELD DECAY	PULSE 36	DURATION <100ns	+200 VOLTS
NEGATIVE TRANSIENT	PULSE 39	DURATION <100ns	-200 VOLTS
RFI		1 MHz THROUGH 1000 MHz	> 40 V/V



THIRD ANGLE PROJECTION			
SCALE	2:1	TOLERANCES	
APPLY TO DIMENSIONS UNLESS OTHERWISE SPECIFIED			
FR	XX	MM	MM
NO PLACES	XX	1/16	0.0005
ONE PLACE	XX	1/32	0.0005
TWO PLACES	XX	0.001	0.0005
THREE PLACES	XX	0.001	0.0005
FOUR PLACES	XX	0.001	0.0005
DESIGN UNITS		US CUSTOMARY	
WEIGHT			

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**SOLID STATE VANE SWITCH**

**1AV SERIES CHART 2**

ANSI Y14.5M-1982 APPLIES