

OPERATING CHARACTERISTICS  $\Delta$   $\Delta$

GAUSS	
OPERATE MAX	495
RELEASE MIN	200
DIFF MIN	35

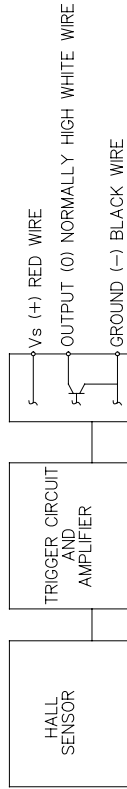
ABSOLUTE MAXIMUM RATINGS

SUPPLY VOLTAGE (Vs) $\Delta$	-10 VDC TO +25.0 VDC
VOLTAGE EXTERNALLY APPLIED TO OUTPUT	+25 VOLTS DC MAX WITH SWITCH IN "OFF" CONDITION ONLY -0.5 VOLTS MAX WITH SWITCH IN "OFF" OR "ON" CONDITION
OUTPUT CURRENT	20 mA (SINK PER OUTPUT)
TEMPERATURE OPERATE AND STORAGE	-40°C TO 100°C
MAGNETIC FLUX	NO LIMIT, THE CIRCUIT CANNOT BE DAMAGED BY MAGNETIC OVERDRIVE

ELECTRICAL CHARACTERISTICS

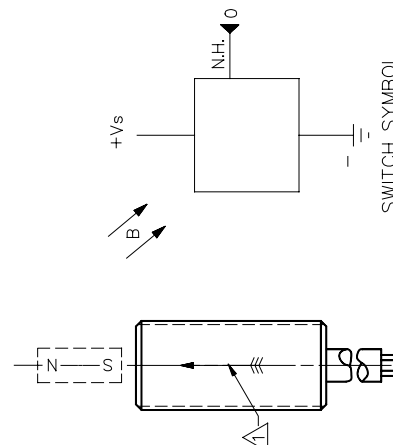
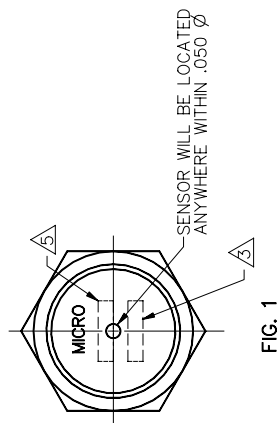
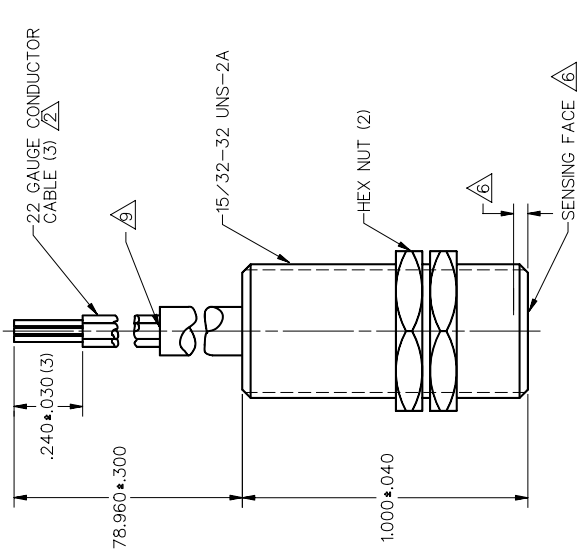
SUPPLY CURRENT (OPERATED) $\Delta$	MIN	TYP	MAX	REMARKS
OUTPUT VOLTAGE (OPERATED) $\Delta$			10.0 mA 0.4 V	ON CONDITION SINKING 20 mA PER OUTPUT
OUTPUT LEAKAGE CURRENT (RELEASED) $\Delta$			20 $\mu$ A	LEAKAGE INTO SWITCH OUTPUT
OUTPUT SWITCHING TIME (SINKING 20 mA) RISE TIME $\Delta$ FALL TIME $\Delta$			1.5 $\mu$ SEC 0.5 $\mu$ SEC	10% TO 90% 90% TO 10%

NOTE: THIS DEVICE IS NOT PROTECTED AGAINST HIGH ELECTRICAL NOISE. IF ERRATIC OPERATION OCCURS AFTER INSTALLATION, INSTALL A CAPACITOR ACROSS THE INPUT TERMINALS (0.1 MFD). IF ERRATIC OPERATION CONTINUES, YOU MAY HAVE TO USE THE INDUSTRIAL DEVICES THAT MICRO SWITCH MANUFACTURES. PLEASE CONTACT YOUR LOCAL FIELD REPRESENTATIVE FOR INFORMATION.



BLOCK DIAGRAM SHOWING CURRENT SINKING OUTPUTS

- NOTES  $\Delta$
- FLUX ENTERING THE SOUTH POLE OF THE MAGNET WILL OPERATE THE SENSOR WHEN MAGNET IS POSITIONED AS SHOWN IN FIGURE 2. THIS ASSUMES THE CONVENTION THAT THE DIRECTION OF THE EXTERNAL FLUX OF A MAGNET IS FROM THE NORTH TO THE SOUTH POLE OF THE MAGNET.
  - 22 GAUGE PVC INSULATED CONDUCTORS WITH MOLDED PVC JACKET DATE CODE LOCATED IN THIS AREA
  - FROM -40°C TO 100°C AND 4.5 TO 24 VOLTS
  - CATALOG LISTING LOCATED IN THIS AREA
  - SENSITIVE AREA IS LOCATED .050 BEHIND THE SENSING FACE AT 24\*2°C
  - Vs IS THE UNREGULATED SUPPLY VOLTAGE
  - JACKET IS CUT BACK 1.37 INCHES FROM FREE END OF LEADS



THIRD ANGLE PROJECTION	
SCALE	3:1
DO NOT SCALE PRINT	
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE	
ONE PLACE (.)	±.030
TWO PLACES (00)	±.015
THREE PLACES (000)	±.005
ANGLES	±
WEIGHT	

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**MICRO SWITCH**  
a Honeywell Division

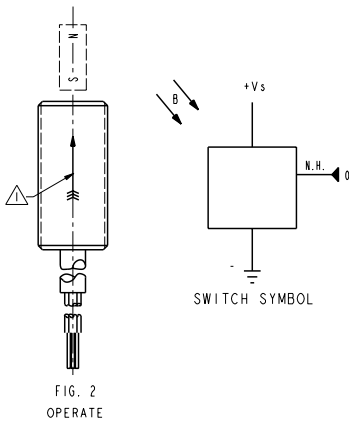
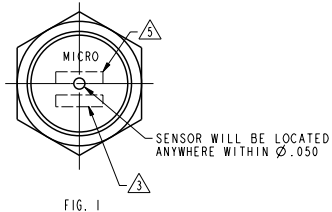
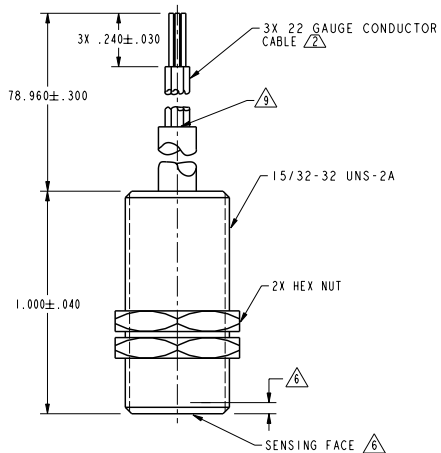
MAGNETICALLY OPERATED CYLINDRICAL HALL SWITCH

CATALOG LISTING  
**103SR13A-12**

MASTER REDUCED

FIG. 2  
OPERATE

PTC/CAD 20  
 JAS T 31AN31  
 DATE 31 JAN 91  
 CHECK MAG  
 REVISIONS  
 A 281712  
 BY  
 DATE  
 103SR13A-12  
 HONEYWELL  
 MICRO SWITCH  
 PART OF  
 18824  
 198227-SR  
 HONEYWELL



4.5 TO 24 VDC UNIPOLAR DEVICE

**103SR13A-12**

OPERATING CHARACTERISTICS

GAUSS	
OPERATE MAX	495
RELEASE MIN	200
DIFF MIN	35

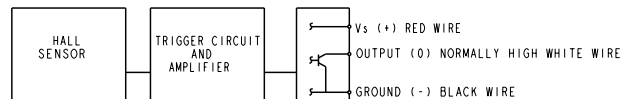
ABSOLUTE MAXIMUM RATINGS

SUPPLY VOLTAGE (Vs)	-1.0 VDC TO +25.0 VDC
VOLTAGE EXTERNALLY APPLIED TO OUTPUT	+25 VOLTS DC MAX WITH SWITCH IN "OFF" CONDITION ONLY -0.5 VOLTS MAX WITH SWITCH IN "OFF" OR "ON" CONDITION
OUTPUT CURRENT	20 mA (SINK PER OUTPUT)
TEMPERATURE OPERATE AND STORAGE	-40° C TO 100° C
MAGNETIC FLUX	NO LIMIT, THE CIRCUIT CANNOT BE DAMAGED BY MAGNETIC OVERDRIVE

ELECTRICAL CHARACTERISTICS

	MIN	TYP	MAX	REMARKS
SUPPLY CURRENT			10.0 mA	ON CONDITION
OUTPUT VOLTAGE (OPERATED)			0.4 V	SINKING 20 mA PER OUTPUT
OUTPUT LEAKAGE CURRENT (RELEASED)			20 μA	LEAKAGE INTO SWITCH OUTPUT
OUTPUT SWITCHING TIME (SINKING 20 mA)				
RISE TIME			1.5 μ SEC	10% TO 90%
FALL TIME			0.5 μ SEC	90% TO 10%

NOTE: THIS DEVICE IS NOT PROTECTED AGAINST HIGH ELECTRICAL NOISE. IF ERRATIC OPERATION OCCURS AFTER INSTALLATION, INSTALL A CAPACITOR ACROSS THE INPUT TERMINALS (0.1 MFD). IF ERRATIC OPERATION CONTINUES, YOU MAY HAVE TO USE THE INDUSTRIAL DEVICES THAT MICRO SWITCH MANUFACTURES. PLEASE CONTACT YOUR LOCAL FIELD REPRESENTATIVE FOR INFORMATION.



NOTES

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- 7 Vs IS THE UNREGULATED SUPPLY VOLTAGE
- 8 JACKET IS CUT BACK 1.37 INCHES FROM FREE END OF LEADS



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<b>MICRO SWITCH</b> a Honeywell Division	<b>MAGNETICALLY OPERATED CYLINDRICAL HALL SWITCH</b>	CATALOG LISTING <b>103SR13A-12</b>
FED. MFG. CODE 91829		
THIRD ANGLE PROJECTION		
SCALE 3:1		
DO NOT SCALE PRINT		
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE		
ONE PLACE	(.01)	±.030
TWO PLACES	(.001)	±.015
THREE PLACES	(.0001)	±.005
ANGLES		±
WEIGHT		

ANSI Y14.5M-1982 APPLIES