

OPERATING CHARACTERISTICS ¹/₄

GAUSS	
OPERATE MAX	495
RELEASE MIN	200
DIFF MIN	35

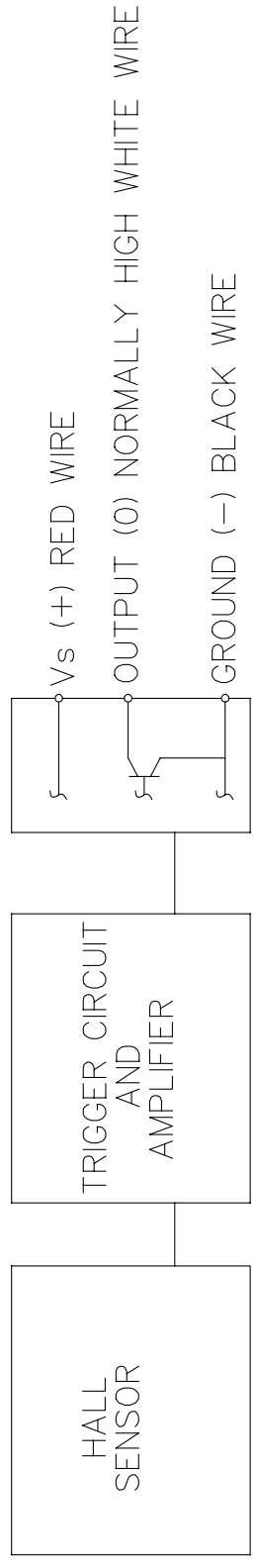
ABSOLUTE MAXIMUM RATINGS

SUPPLY VOLTAGE (Vs) ⁸	-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 ⁷			10.0 mA	ON CONDITION
OUTPUT VOLTAGE (OPERATED) ⁴			0.4 V	SINKING 20 mA PER OUTPUT
OUTPUT LEAKAGE CURRENT (RELEASED) ⁴			20μ A	LEAKAGE INTO SWITCH OUTPUT
OUTPUT SWITCHING TIME (SINKING 20 mA) ⁴			1.5 μSEC	10% TO 90%
FALL TIME ⁴			0.5 μSEC	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
- ¹ 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
 - ² 22 GAUGE PVC INSULATED CONDUCTORS WITH MOLDED PVC JACKET
 - ³ DATE CODE LOCATED IN THIS AREA
 - ⁴ FROM -40°C TO 100°C AND 4.5 TO 24 VOLTS
 - ⁵ CATALOG LISTING LOCATED IN THIS AREA
 - ⁶ SENSITIVE AREA IS LOCATED .050 BEHIND THE SENSING FACE AT 24±2°C
 - ⁷ Vs IS THE UNREGULATED SUPPLY VOLTAGE
 - ⁸ 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	(.0)	±.030
TWO PLACES	(.00)	±.015
THREE PLACES	(.000)	±.005
ANGLES		±

WEIGHT

THIS DRAWING COVERS A PROPRIETARY ITEM AND IS THE PROPERTY OF MICRO SWITCH, A DIVISION OF HONEYWELL. THIS DRAWING IS NOT TO BE COPIED OR USED WITHOUT THE APPROVAL OF MICRO SWITCH.

MICRO SWITCH
a Honeywell Division

CATALOG LISTING
103SR13A-12

MASTER REDUCED

FIG. 2 OPERATE

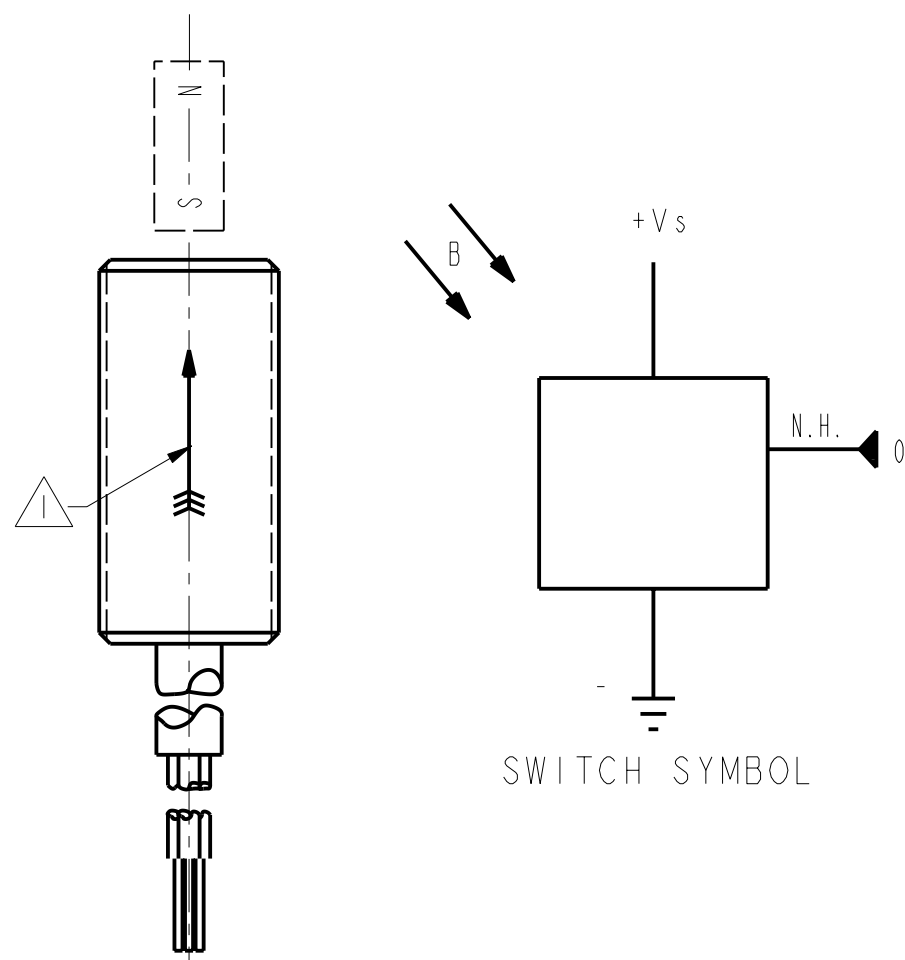
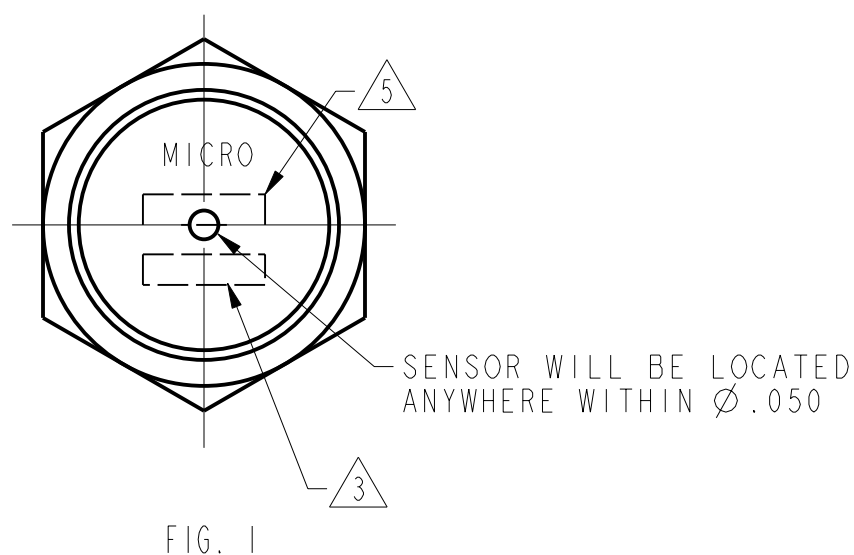
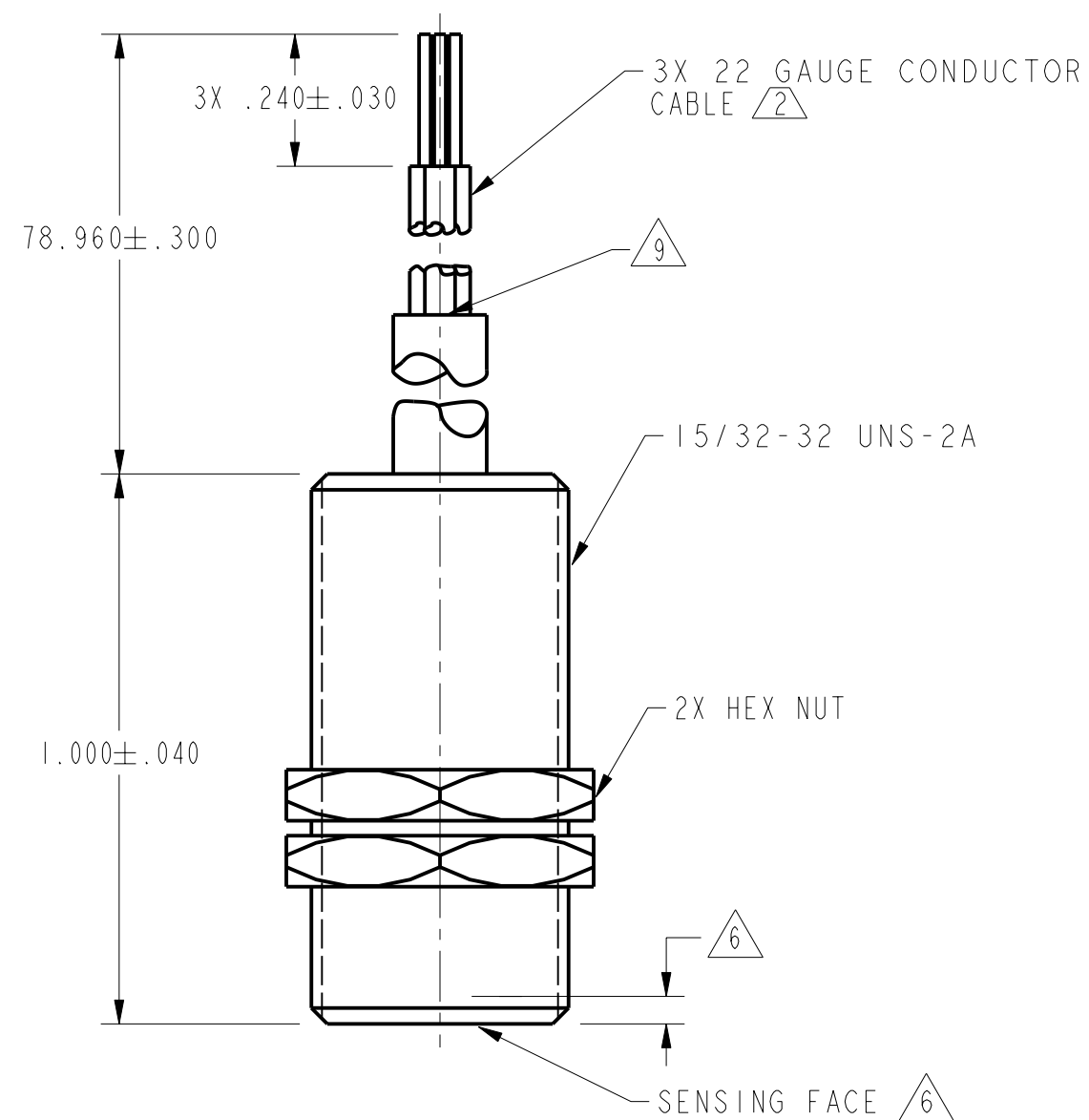


FIG. 2
OPERATE

OPERATING CHARACTERISTICS $\triangle 1 \triangle 4$

GAUSS	
OPERATE MAX	495
RELEASE MIN	200
DIFF MIN	35

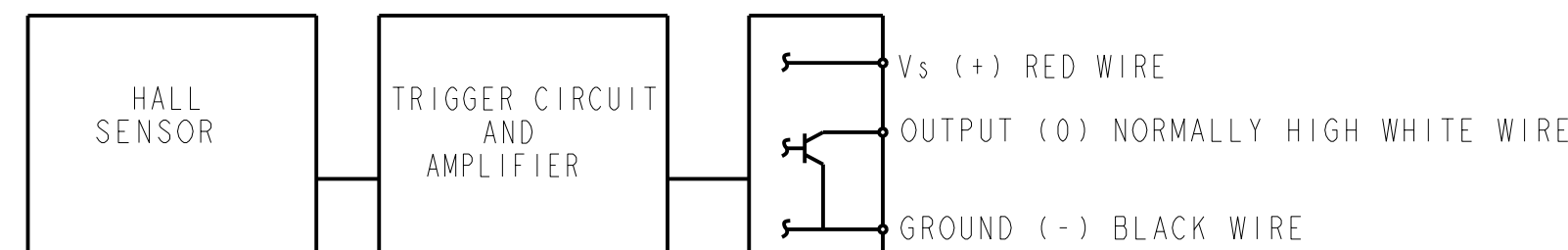
ABSOLUTE MAXIMUM RATINGS

SUPPLY VOLTAGE (V_s) $\triangle 8$	-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 $\triangle 7$			10.0 mA	ON CONDITION
OUTPUT VOLTAGE (OPERATED) $\triangle 4$			0.4 V	SINKING 20 mA PER OUTPUT
OUTPUT LEAKAGE CURRENT (RELEASED) $\triangle 4$			20 μ A	LEAKAGE INTO SWITCH OUTPUT
OUTPUT SWITCHING TIME (SINKING 20 mA)				
RISE TIME $\triangle 4$			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.



BLOCK DIAGRAM SHOWING CURRENT SINKING OUTPUTS

NOTES

- $\triangle 1$ 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
- $\triangle 2$ 22 GAUGE PVC INSULATED CONDUCTORS WITH MOLDED PVC JACKET
- $\triangle 3$ DATE CODE LOCATED IN THIS AREA
- $\triangle 4$ FROM -40° C TO 100° C AND 4.5 TO 24 VOLTS
- $\triangle 5$ CATALOG LISTING LOCATED IN THIS AREA
- $\triangle 6$ SENSITIVE AREA IS LOCATED .050 BEHIND THE SENSING FACE
- $\triangle 7$ AT 24 \pm 2° C
- $\triangle 8$ V_s IS THE UNREGULATED SUPPLY VOLTAGE
- $\triangle 9$ 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	(.0) \pm .030
TWO PLACES	(.00) \pm .015
THREE PLACES	(.000) \pm .005
ANGLES	\pm
WEIGHT	

THIS DRAWING COVERS A PROPRIETARY ITEM AND IS THE PROPERTY OF MICRO SWITCH, A DIVISION OF HONEYWELL. THIS DRAWING IS NOT TO BE COPIED OR USED WITHOUT THE APPROVAL OF MICRO SWITCH.

MICRO SWITCH
a Honeywell Division

MAGNETICALLY OPERATED CYLINDRICAL HALL SWITCH

CATALOG LISTING
103SR13A-12

P.T.C./CAD [20] DRAWN 3JAN91 CHECK KAG 3JAN91
 JAS 3JAN91 CHECK KAG 3JAN91
 REVISIONS
 A 201747 JEL DECOO
 ISSUE 4
 DRAWING NUMBER 103SR13A-12
 RELEASE NO. PR-18944
 REPLACES X90227-SR