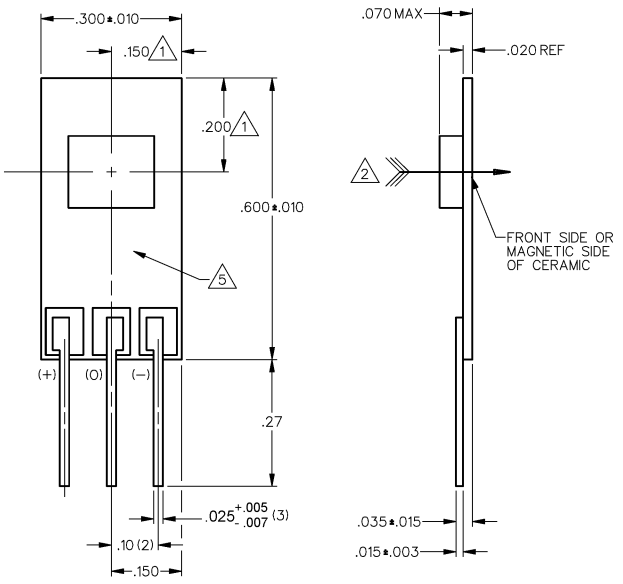
MICRO SWITCH
a Honeywell Division
FED. MFG. CODE 91929

LINEAR OUTPUT HALL EFFECT TRANSDUCER

CATALOG LISTING
SS94B1

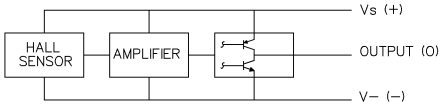
SPECIFICATIONS (6)

PARAMETER	CONDITIONS	MIN	TYP	MAX	UNITS
SENSITIVITY	TA = 25°C	3.062	3.125	3.188	mV/GAUSS
NULL	TA = 25°C	2.47	2.50	2.53	VOLTS
SUPPLY CURRENT	TA = 25°C		8	11	mA
OUTPUT CURRENT (SINK OR SOURCE)		1.0	2.0		mA
OUTPUT VOLTAGE SWING					
VOM −	−B APPLIED	.5	.4		VOLTS
VOM +	+B APPLIED	Vs −.5	Vs −.4		VOLTS
B LIMITS FOR LINEAR	−B MAX	−640	−670		GAUSS
OPERATION	+B MAX	+640	+670		GAUSS
Vnull DRIFT	B = 0	−.03		+.03	%/°C
SENSITIVITY DRIFT		−.03		+.03	%/°C
LINEARITY	−BMAX TO +BMAX	0	−.5	−1.0	% OF SPAN
SUPPLY VOLTAGE		4.5		12	VOLTS
OPERATING TEMP		−55		150	°C

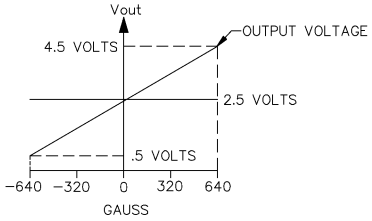


NOTES
(1) CENTERLINE OF HALL CELL(IC) ONLY. THE LOCATION OF THE CERAMIC COVER IS NOT SPECIFIED
(2) THE + MAGNETIC FLUX IS IN THIS DIRECTION (THIS ASSUMES THE CONVENTION THAT THE DIRECTION OF THE EXTERNAL FLUX OF A MAGNET IS FROM THE NORTH TO THE SOUTH POLE OF THE MAGNET)
3 − THE DEVICE CANNOT BE DAMAGED BY MAGNETIC OVERDRIVE
4 − OUTPUT TYPE − RATIOMETRIC
(5) ARTWORK IS TYPICAL
(6) ALL CHARACTERISTICS ARE −40°C TO 125°C UNLESS OTHERWISE STATED WITH Vs = 5.000 VDC

BLOCK DIAGRAM CURRENT SINKING OR SOURCING OUTPUT



TRANSFER CHARACTERISTICS AT Vs=5.0 VDC



CAUTION ELECTROSTATIC SENSITIVE DEVICES
ESD SENSITIVITY: CLASS 3

THIRD ANGLE PROJECTION
SCALE 5 : 1
DO NOT SCALE PRINT

UNLESS OTHERWISE SPECIFIED TOLERANCES ARE

ONE PLACE	(.0)	±.030
TWO PLACE	(.00)	±.015
THREE PLACE	(.000)	±.005
ANGLES		±

WEIGHT

CATALOG LISTING SS94B1 PAGE 1 OF 2
ISSUE 7
REPLACES X90102-SS
RELEASE NO. PR-18390

REVISIONS

A	CC-95704	DLM	16 MAR 00	
B	0038690	PRS	14APR08	
C	0039911	SS	19MAY08	

DRAWN	DLM	16 MAR 00	CHECK	SAV	16 MAR 00	CHECK	BLR	19MAY08	CHECK
RASTER								

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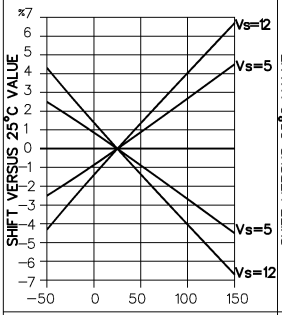
LINEAR OUTPUT HALL EFFECT TRANSDUCER

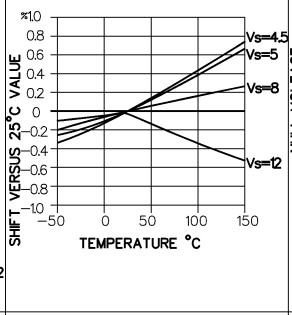
CATALOG LISTING
SS94B1

SS94B1 PAGE 2 OF 2
RELEASE NO. PR-18390
REPLACES X90102-SS
DRAWING NUMBER
ISSUE 7

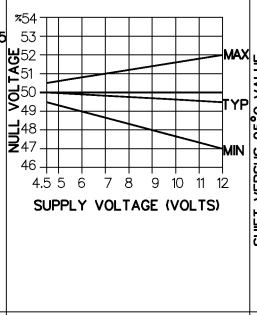
NULL SHIFT LIMITS VERSUS TEMP



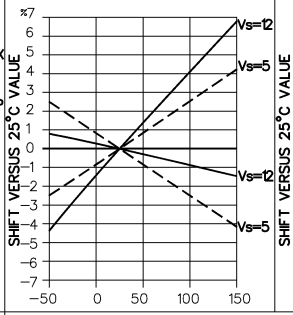
TYPICAL NULL SHIFT VERSUS TEMP



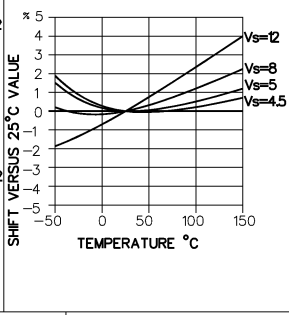
RATIO OF Vnull TO Vsupply



GAIN SHIFT LIMITS VERSUS TEMP



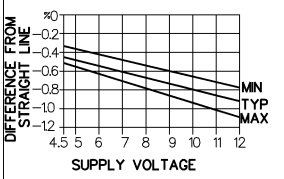
TYPICAL GAIN SHIFT VERSUS TEMP



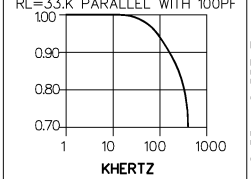
SENSITIVITY/V VERSUS SUPPLY VOLTAGE
(mV/GAUSS/V)

TO CALCULATE SENSITIVITY, MULTIPLY Y-AXIS VALUE TIMES SUPPLY VOLTAGE

LINEARITY VERSUS SUPPLY VOLTAGE
END POINTS OF SPAN METHOD

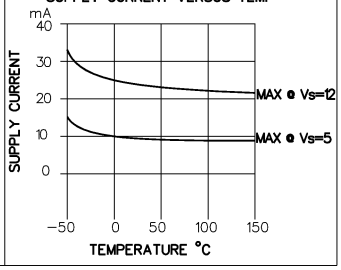


TYPICAL FREQUENCY RESPONSE
Vs=8.0
RL=33.K PARALLEL WITH 100PF



Vout
Vout @ 1KHZ

SUPPLY CURRENT VERSUS TEMP



REVISIONS

A	C069133	J A S	26 NOV 92	
B	C093789	D L T	3 NOV 98	
C	SS 98704	DLN	16 MAR 00	
D	0038690	PRS	14 APR 08	
E	0039911	SS	19MAY08	

RASTER DRAWN J A S 11 SEP 90
14 SEP 90 K A G CHECK
17 SEP 90 M J B CHECK

CAUTION ELECTROSTATIC SENSITIVE DEVICES
DO NOT OPEN OR HANDLE EXCEPT AT A STATIC-FREE WORKSTATION
ESD SENSITIVITY: CLASS 3

THIRD ANGLE PROJECTION
SCALE NONE
DO NOT SCALE PRINT

UNLESS OTHERWISE SPECIFIED TOLERANCES ARE

ONE PLACE	(.0)	±.030
TWO PLACE	(.00)	±.015
THREE PLACE	(.000)	±.005
ANGLES		±

WEIGHT