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Jameco Part Number 1915915 Ver. A

Installation Instructions for the SS400 Series Temperature Compensated Hall-Effect Position Sensors

ISSUE 5

PK 88700

⚠ WARNING

PERSONAL INJURY

- DO NOT USE these products as safety or emergency stop devices, or in any other application where failure of the product could result in personal injury.

Failure to comply with these instructions could result in death or serious injury.

CAUTION

ELECTROSTATIC DISCHARGE DAMAGE

This component is sensitive to electrostatic discharge (ESD). Take normal ESD precautions in handling this product to prevent ESD-induced damage and/or degradation.

Failure to comply with these instructions will result in product damage.

SOLDERING/ASSEMBLY

Leads must be adequately supported during any forming/ shearing operation to ensure that the leads are not stressed inside the plastic case. Recommended PC board wave soldering temperature is 250 to 260°C (482 to 500°F) for 3 seconds maximum.

ABSOLUTE MAXIMUM RATINGS*

Supply voltage	-1 to +30 VDC
Voltage externally applied to output	+30 VDC max. (OFF only) -0.5 VDC min. (OFF or ON)
Output ON current	See Table A.
Storage Temperature	-65 to +160°C (-85 to +320°F)
Magnetic flux	No limit. Circuit cannot be damaged by magnetic overdrive.

* 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 ratings.

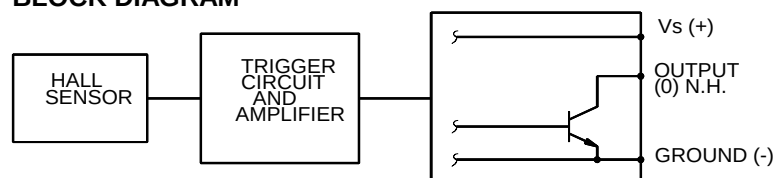
TABLE A

Output Current Absolute Limits	
Supply Voltage	Output Current Max, mA
-1 to 24	50
24 to 25	37
25 to 26	33
26 to 27	28
27 to 28	24
28 to 29	19
29 to 30	15

OPERATING CHARACTERISTICS (over Operating Voltage and Temperature, unless otherwise noted)

	Min.	Typ.	Max.	Remarks
Supply voltage	3.8	—	30	VDC
Current consumption	—	—	10	mA
Output voltage (operated)	—	0.15	0.40	Sinking 20 mA max.
Sink current (operated)	—	—	20	mA
Output leakage current (released)	—	—	10 μA	V _{OUT} = 30 VDC, V _{CC} = 30 VDC
Output switching time				
Rise, 10 to 90%	—	0.5 μs	1.5 μs	V _{CC} = 12 V, R _L = 1.6 KΩ, C _L = 20 pF
Fall, 90 to 10%	—	0.15 μs	1.5 μs	
Operating Temperature	-40 to +150°C (-40 to +302°F)			

BLOCK DIAGRAM



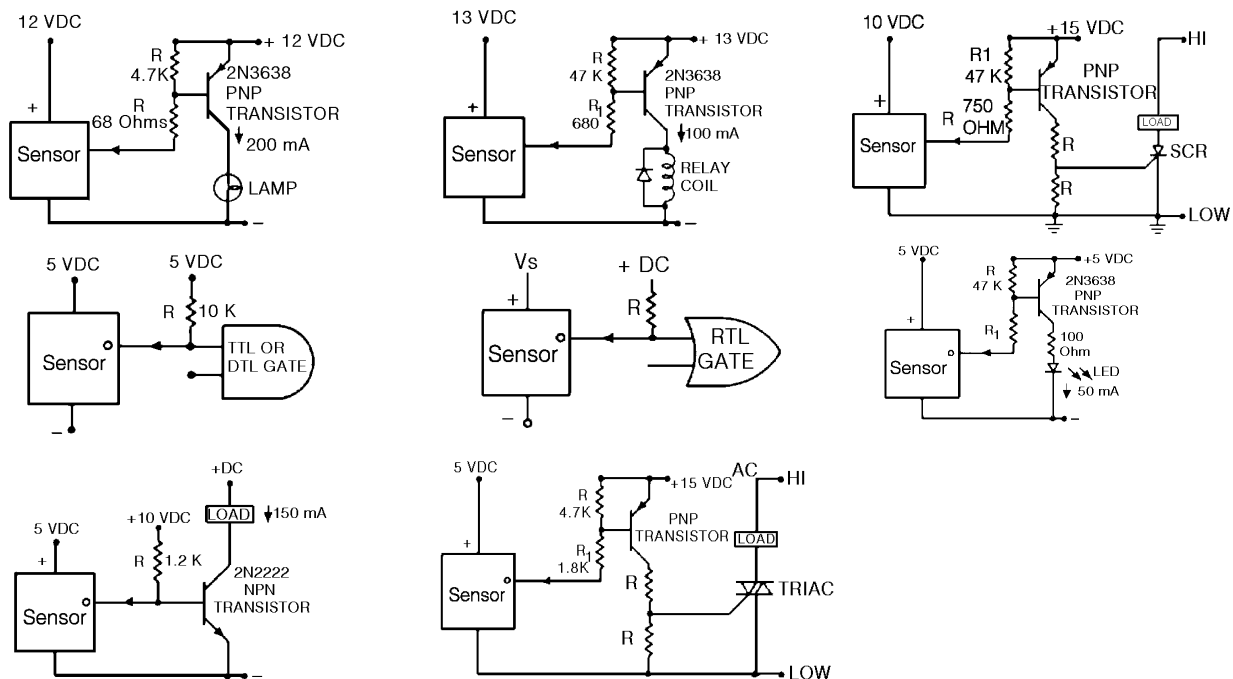
MAGNETIC CHARACTERISTICS

		SS411A	SS413A	SS441A	SS443A	SS449A	SS461A	SS466A
Magnetic Type		Bipolar	Bipolar	Unipolar	Unipolar	Unipolar	Latching	Latching
-40°C	Max. Op.	70	140	135	215	435	110	200
	Min. Rel.	-70	-140	20	80	210	-110	-200
	Min. Dif.	15	20	15	25	30	50	200
0°C	Max. Op.	65	140	117	190	400	90	185
	Min. Rel.	-65	-140	20	80	230	-90	-185
	Min. Dif.	15	20	15	25	30	50	200
25°C	Max. Op.	60	140	115	180	390	85	180
	Min. Rel.	-60	-140	20	75	235	-85	-180
	Min. Dif.	15	20	20	25	30	50	200
85°C	Max. Op.	60	140	120	180	400	85	180
	Min. Rel.	-60	-140	15	70	215	-85	-180
	Min. Dif.	12	20	15	15	30	50	190
125°C	Max. Op.	65	140	123	190	410	100	180
	Min. Rel.	-65	-140	15	60	200	-100	-180
	Min. Dif.	12	20	8	10	30	50	160
150°C	Max. Op.	70	140	125	200	420	110	185
	Min. Rel.	-70	-140	10	55	185	-110	-185
	Min. Dif.	10	20	5	5	30	50	140

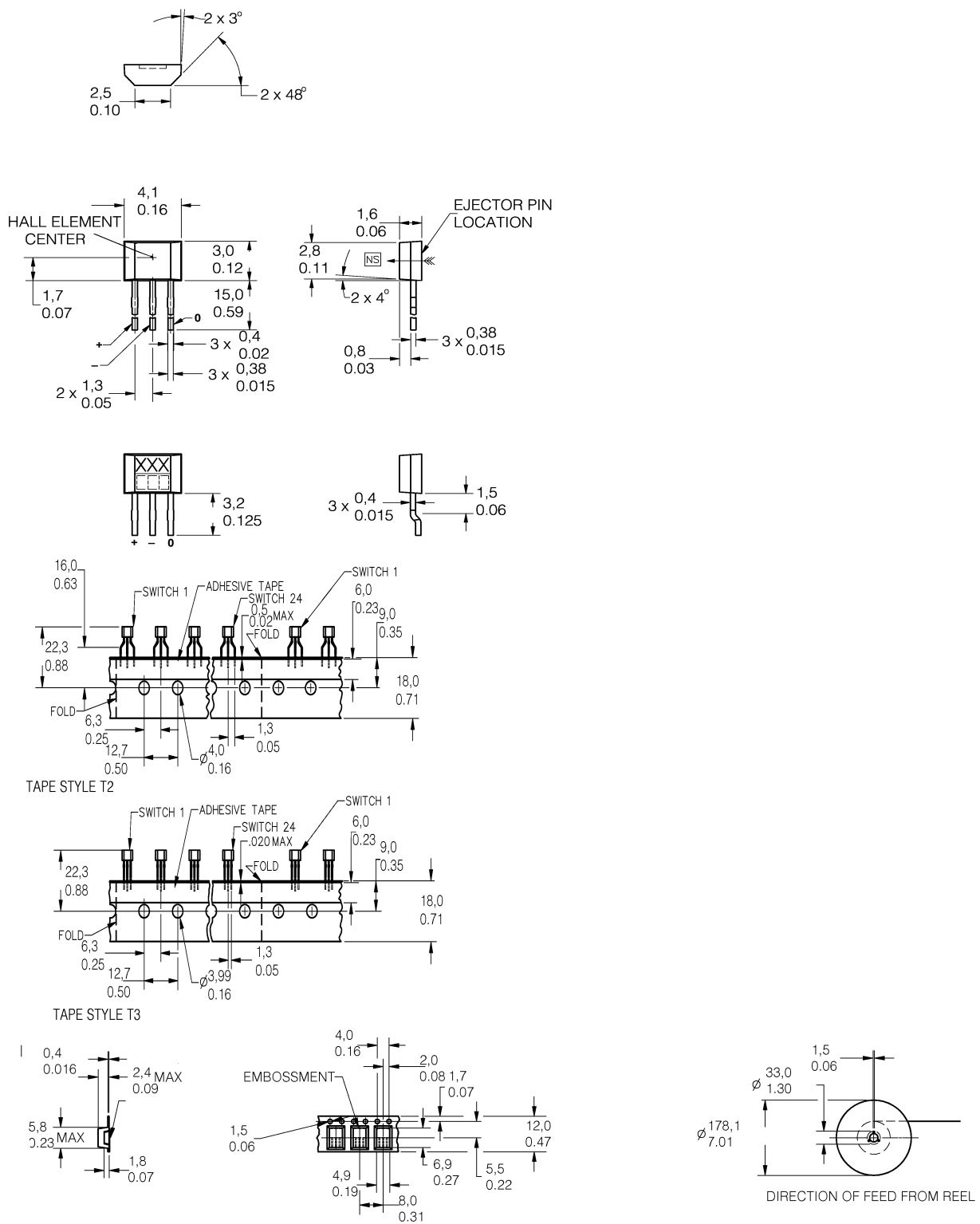
NOTICE

Bipolar Hall-effect sensors may have an initial output in either the On or Off state if powered up with an applied magnetic field in the differential zone (applied magnetic field > Brp and < Bop). Honeywell recommends allowing 10 μ sec for output voltage to stabilize after supply voltage has reached 5 volts.

INTERFACE DIAGRAMS



MOUNTING DIMENSIONS (for reference only) mm/in



WARRANTY/REMEDY

Honeywell warrants goods of its manufacture as being free of defective materials and faulty workmanship. Contact your local sales office for warranty information. If warranted goods are returned to Honeywell during the period of coverage, Honeywell will repair or replace without charge those items it finds defective. The foregoing is Buyer's sole remedy and is **in lieu of all other warranties, expressed or implied, including those of merchantability and fitness for a particular purpose.**

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While we provide application assistance personally, through our literature and the Honeywell web site, it is up to the customer to determine the suitability of the product in the application.

For application assistance, current specifications or name of the nearest Authorized Distributor, contact a nearby sales office. Or call:

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