



413SR10



Actual product appearance may vary.

400SR Series Unipolar Hall-Effect Digital Position Sensor with plastic module housing

Features

- Can be stacked on 0.375 in centers
- Unipolar magnetic operation
- Direct interface to solid state circuits
- Reverse voltage protection
- Rugged construction
- Sensitive area marked by crossed lines
- Terminal accepts 0.110 in x 0.020 in Faston Connector
- UL recognized, CSA certified
- Housing is flame retardant PBT polyester.

Product Specifications	
Product Type	Hall-Effect Solid State Switch
Transistor State	Normally Off
Package Style	Plug-In Module
Supply Voltage	4.5 Vdc to 24.0 Vdc
Output Type	Sink
Termination Type	Male Faston Terminal
Magnetic Actuation Type	Unipolar
Operating Temperature Range	-40 °C to 150 °C [-40 °F to 302 °F]
Output Voltage	0.4 Vdc max.
Switching Time Rise (10 % to 90 %)	1.5 µs max.
Switching Time Fall (90 % to 10 %)	0.5 µs max.
Availability	Global

Supply Current (max. @ 25 °C)	15.5 mA
Output Current (max.)	20 mA
Operate Point @ 25 °C	43 mT [430 G] max.
Release Point @ 25 °C	16 mT [160 G] min.
Differential	4.0 mT [40 G] min.
Series Name	400SR

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OPERATING CHARACTERISTICS ⁴

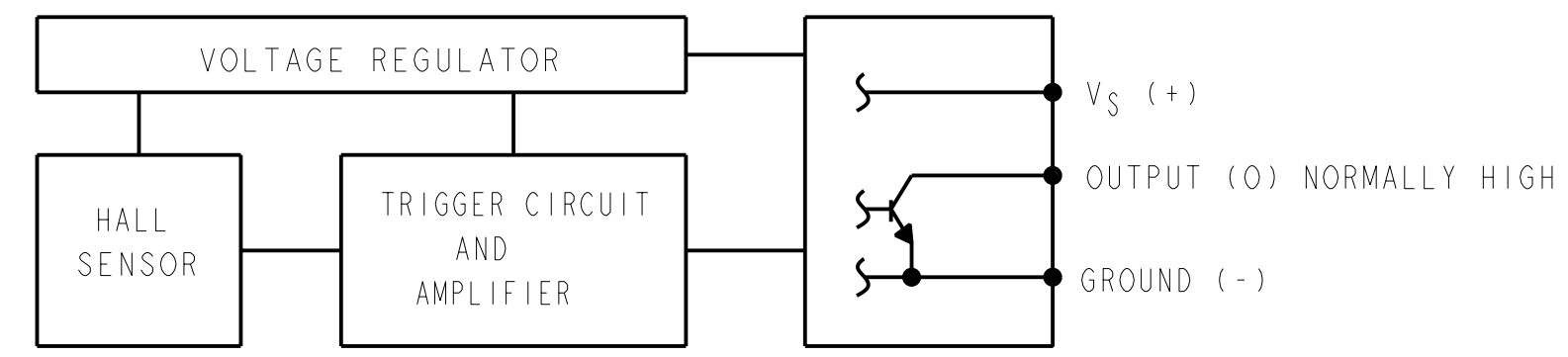
GAUSS	
OPERATE MAX	430
RELEASE MIN	160
DIFF MIN	40

ABSOLUTE MAXIMUM RATINGS

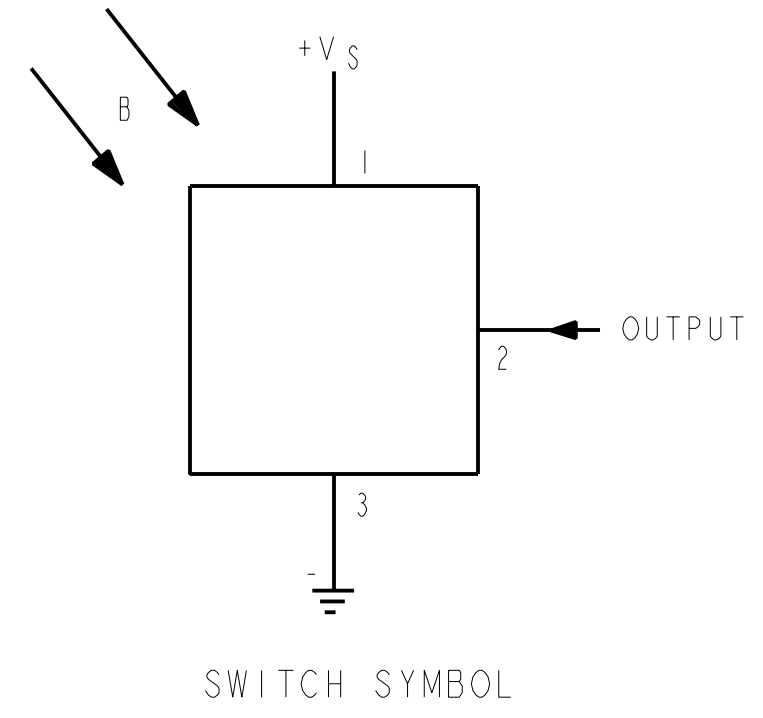
SUPPLY VOLTAGE (V _S) ⁶	-28 VDC TO +28 VDC
VOLTAGE EXTERNALLY APPLIED TO OUTPUT	+28 VOLTS DC MAX WITH SWITCH IN "OFF" CONDITION ONLY -0.5 VOLTS DC MIN WITH SWITCH IN "OFF" OR "ON" CONDITION
OUTPUT CURRENT	40 mA
TEMPERATURE OPERATE AND STORAGE	-40° C TO 150° C
MAGNETIC FLUX	NO LIMIT, THE CIRCUIT CANNOT BE DAMAGED BY MAGNETIC OVERDRIVE

ELECTRICAL CHARACTERISTICS

	MIN	TYP	MAX	REMARKS
SUPPLY CURRENT		11 mA	15.50 mA	PLUS LOAD CURRENT V _S = 4.5 TO 24 VDC ⁶ ¹⁰
OUTPUT VOLTAGE (OPERATED) ⁴		.15 VOLTS	0.4 VOLTS	SINKING 10mA
OUTPUT LEAKAGE CURRENT (RELEASED) ⁴			20μ A	LEAKAGE INTO SWITCH OUTPUT
OUTPUT SWITCHING TIME (SINKING 20 mA) ⁴		0.2μ SEC	1.5μ SEC	10 - 90%
RISE TIME ⁴		1.0μ SEC	0.5μ SEC	90 - 10%
FALL TIME				



BLOCK DIAGRAM SHOWING CURRENT SINKING OUTPUTS



SWITCH SYMBOL

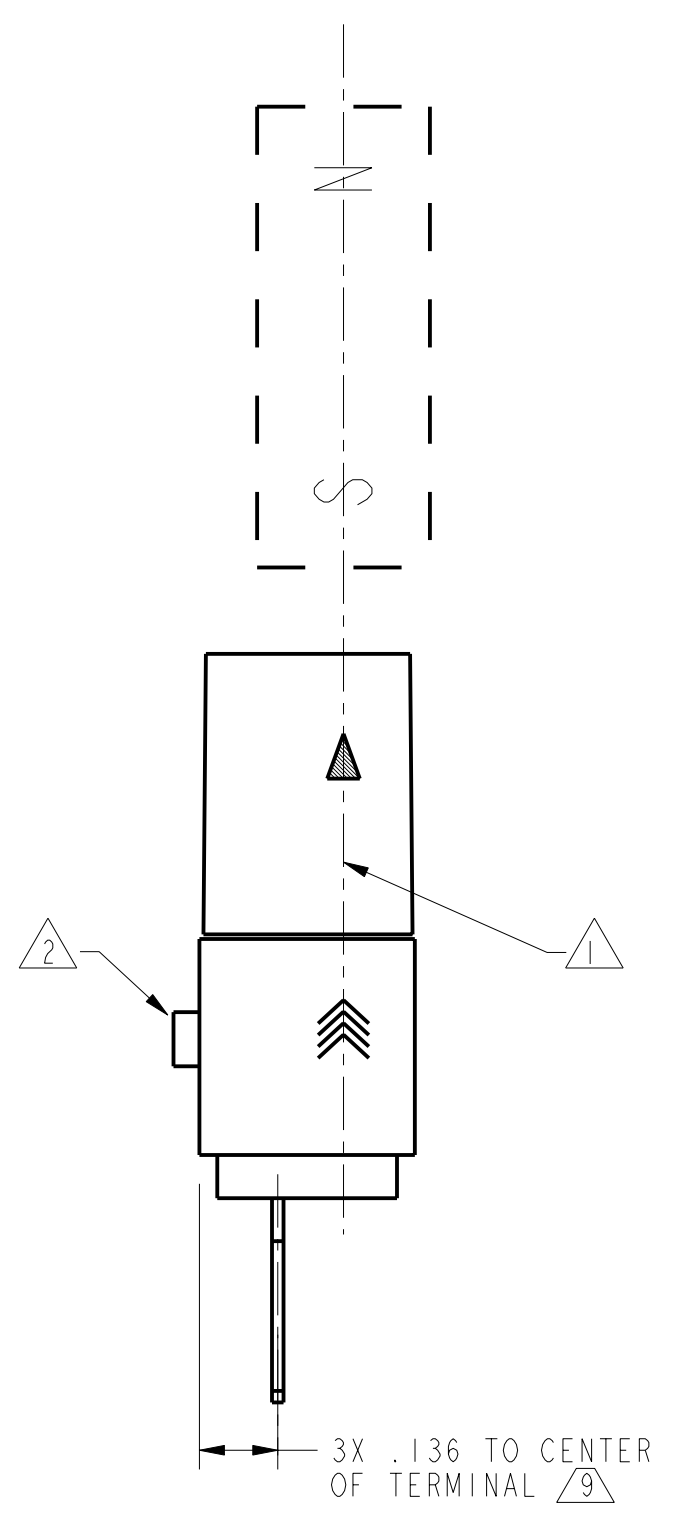
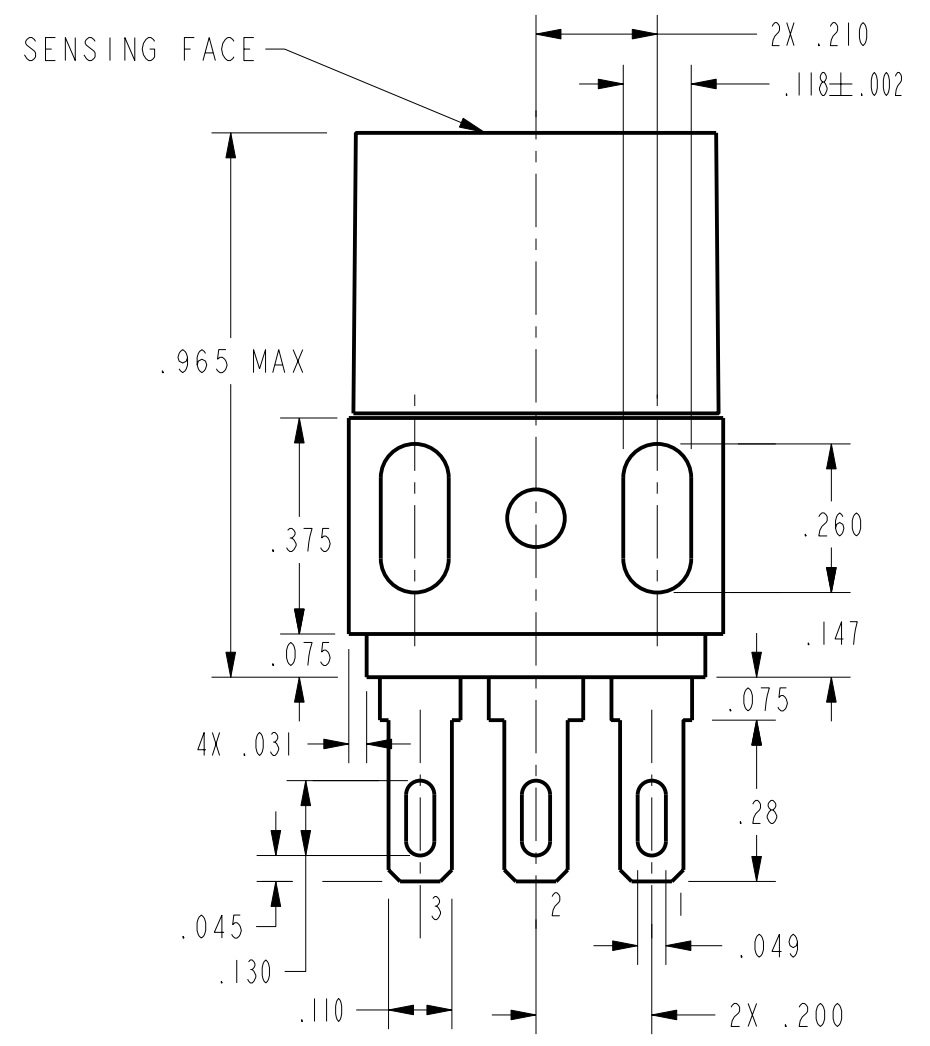
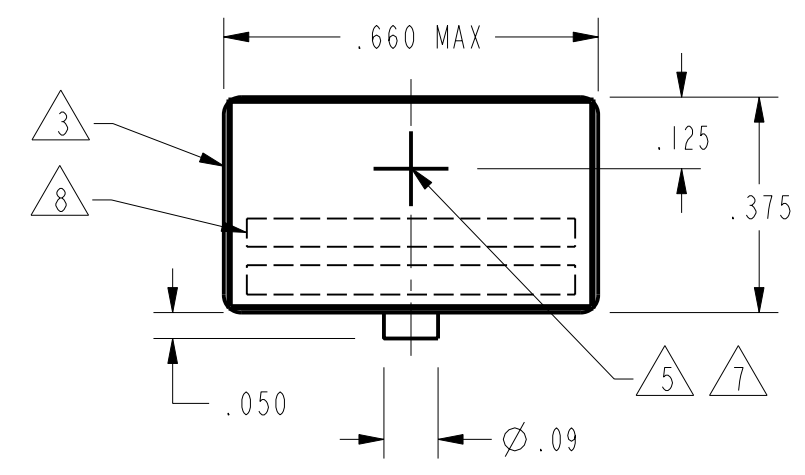


FIG. 1

NOTES

- ¹ FLUX ENTERING THE SOUTH POLE OF THE MAGNET WILL OPERATE THE SENSOR WHEN MAGNET IS POSITIONED AS SHOWN IN FIGURE 1. THIS ASSUMES THE CONVENTION THAT THE DIRECTION OF THE EXTERNAL FLUX OF A MAGNET IS FROM THE NORTH TO SOUTH POLE OF THE MAGNET
- ² CAN BE STACKED ON .375 INCH CENTERS
- ³ CATALOG LISTING AND DATE CODE ARE LOCATED ON THE SIDE OF THE DEVICE
- ⁴ AT SUPPLY VOLTAGE OF 4.5 TO 24 VOLTS AND FULL TEMPERATURE RANGE
- ⁵ SENSITIVE AREA IS LOCATED WITHIN .025 OF THIS POINT AND .065 BEHIND THIS POINT
- ⁶ V_S IS THE UNREGULATED SUPPLY VOLTAGE
- ⁷ SENSITIVE AREA MARKED BY CROSSED LINES
- ⁸ MICRO SWITCH LOGO LOCATED IN THIS AREA
- ⁹ TERMINAL ACCEPTS .110 X .020 FASTON CONNECTOR
- ¹⁰ AT 24°C ± 2°C

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REVISIONS

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RELEASE NO. CO-95088-A

REPLACES XII11367-SR

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MICRO SWITCH a Honeywell Division	MAGNETICALLY OPERATED HALL SWITCH	CATALOG LISTING 413SR10
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FED. MFG. CODE 91929

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