Open Collector Sinking Block Diagram

Magnet

VCC (red)
Pull-up Resistor
Output (green)
Ground (black)

When configured for VR, do not populate W1002 or W1003. These jumpers allow isolation which prevents the VR signal from getting into the 5V or GND.

Many Hall sensors are set as a open collector sinking topology. Those setups require a pull up resistor, and 1k ohm is a common size. These pull up resistors are noted as R137 and R141 on this page. You need to match these pull up resistors with your hall sensors requirements. Often you need about 5mA of drive. See snippet from Cherry hall sensors to the right. Some sensors are the inverse, and need a pull down resistor. These are less common. These pull down resistors are noted as R801 and R802 on this page and are not typically installed.

Recommended pull-up resistor values are as follows:

Volts dc	5	9	12	15	24
Ohms	1k	1.8k	2.4k	3k	3k

CRK2−D
CRK2+D
CAM+D
CAM−D

W1002 JMP
R801 pdwn 1K
R137
R102 5k
R117 5k
PWR_FLAG

R103 5k
R108 5k
PWR_FLAG

R104 5k
R109 5k
PWR_FLAG

W1003 JMP
R802 pdwn 1K
R141
R106 5k
R110 5k
PWR_FLAG

C101 1000pF
R111 5k
5V

C102 1000pF
R112 5k
5V

CONN_4 P104
1
2
3
4

CRANK /CAM HALL OR VR

U101 MAX9926/9927

16 IN1+
15 IN1−
14 VCC
13 ZERO_EN/OUT1
12 DIRN/OUT2
11 GND
10 IN2−
9 IN2+

1 IN_THRS1
2 EXT1
3 BIAS1
4 COUT1
5 COUT2
6 BIAS2
7 EXT2
8 INT_THRS2

PWR_FLAG
5V
C103 10uF
C104 0.1uF
GND

R113 10k
R114 10k
D801
D802
5V
Cout1
Cout2

P103
1 2
3 4
5 6
7 8
CONN_02X04
Cout2
Cout1

Socket_Strip_Straight_2x04

The resistors across pins 9,10 and 15,16 are not typically installed, they are only used on really hot VR signals, to dampen the signal.