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Connections for the Model 106 with Pulse Output

<u>**4-conductor cable:**</u>

RED: Connect to 12-15 VDC power (less than 55 mA typical).
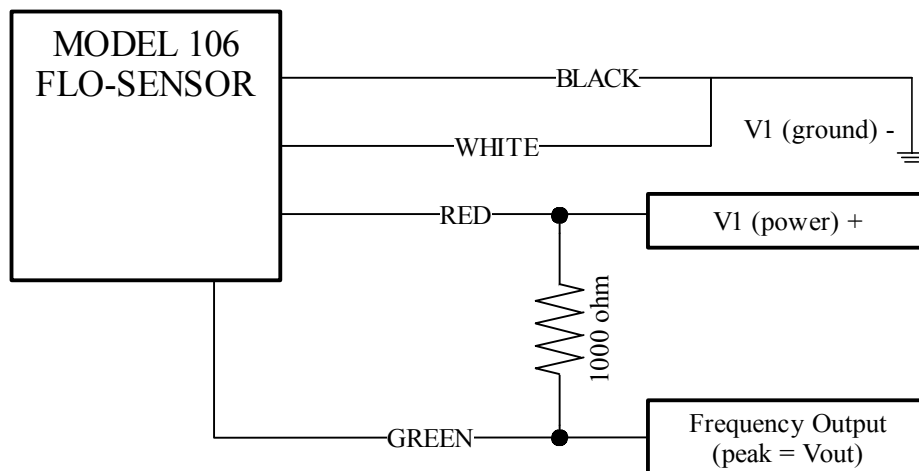For models with "E" option, connect to 18-24 VDC power.
BLACK: Power common.
WHITE: BOSFET output leg 1 (see notes below).
GREEN: BOSFET output leg 2 (see notes below).

Notes:
a. This model features a passive BOSFET pulse output, proportional to flow rate. Typical scale is 0-400 Hz (0 Hz representing zero flow, 400 Hz representing 100% rated flow). Each unit will be shipped with a calibration certificate detailing actual Hz output at 100% rated flow.

b. Consider the BOSFET pulse output similar to a fast-acting switch connected to the WHITE and GREEN wires.

c. All systems should be connected as in Figure 2 on page 2. Figure 1 below provides a typical system for a non-isolated pulse output powered by 12VDC.

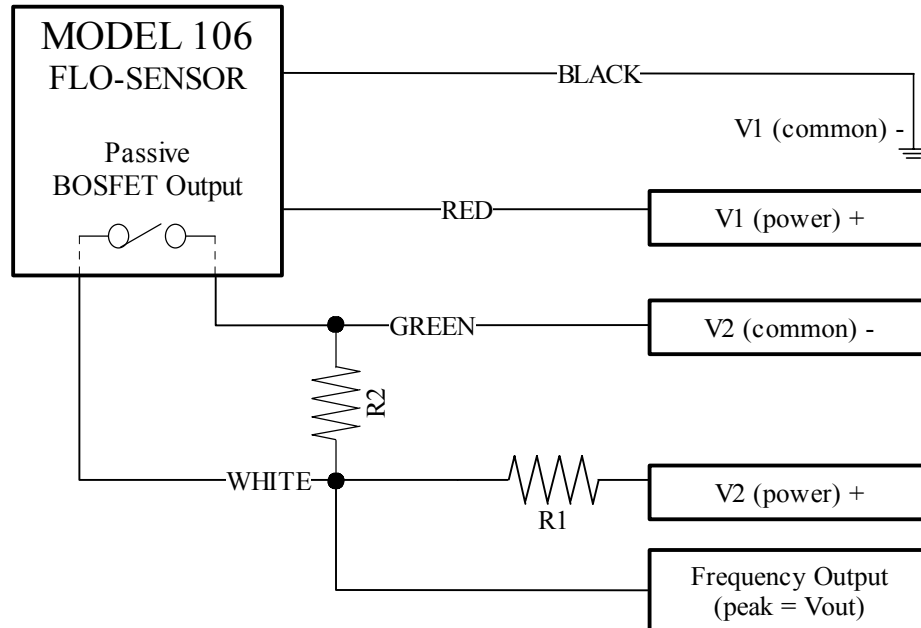### FIGURE 1. Typical Non-Isolated Pulse Output Connection

V1 = 11-15 VDC power source.   Vout will equal V1.
1000 ohm resistor should have a 1/4 watt or higher rating.
Do not use above diagram for models with "E" option.

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Connections for the Model 106 with Pulse Output

FIGURE 2. Connection diagram for all installations (isolated and non-isolated)

V1 = 11-15 VDC power source (18-24 VDC for models with "E" option)
V2 = signal power source (for isolated output, this source must be isolated from V1)

For non-isolated output, V2 can utilize V1 power source -
connect V2+ to V1+ and V2- to V1-.

Vout (pulse output peak voltage) will be approximately V2 x [R2 / (R1 + R2)]. Keep V2 less than 36 VDC. Be sure that V2 / R1 does not exceed 20 mA (.020). R1 and R2 should be calculated in ohms (1K resistor = 1000).

Resistors used to produce the desired pulse output can be standard 5% composition types – verify power to select resistor wattage. R1 wattage = V2 X V2 / R1 (example: 15 x 15 / 2000 = 0.113 worst case, so choose a 1/8 or ¼ watt resistor for R1). R2 wattage = Vout x Vout / R2 (example: 12 x 12 / 1000 = 0.144 so choose a ¼ watt resistor). R2 is not required if Vout can be equal to V2 – be sure that R1 does not allow maximum current to exceed 20 mA through the Model 106 BOSFET (V2 / R1 < .020). The V2 source should be low impedance and low noise.

If output isolation is not required, V2 can use the V1 power source (11-15 VDC or 18-24VDC for "E" option).