MSC-82 Met Signal Conditioner
Use And Connection Instructions

The MSC-82 is designed to fill the role for the Model 8872 previously provided by the Met Card in the Model 8816 and 8832 series data loggers.   These roles include:
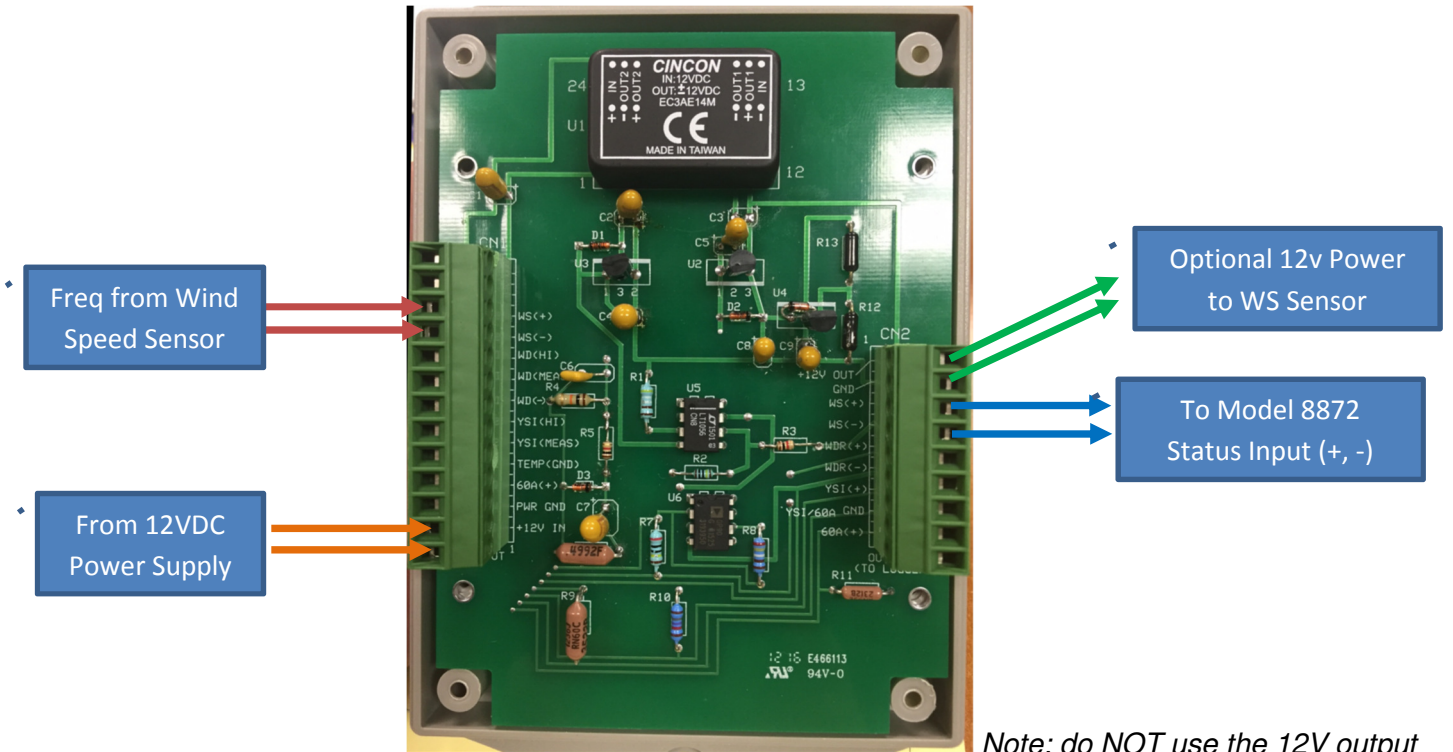
- Thresholding and amplification of low voltage WSP pulse/AV wave inputs from wind speed sensors
- Provide precision excitation voltage for resistive (potentiometer) wind direction sensors.
- Provide low-current 12V power for sensors
- Provide reference and resistor networks for Met One 06X and YSI 44018 temperature sensors.

The MSC-82 is designed to be wired in between these unconditioned sensor inputs and the Model 8872s Status Input or Voltage inputs.   It is not a stand-alone input device
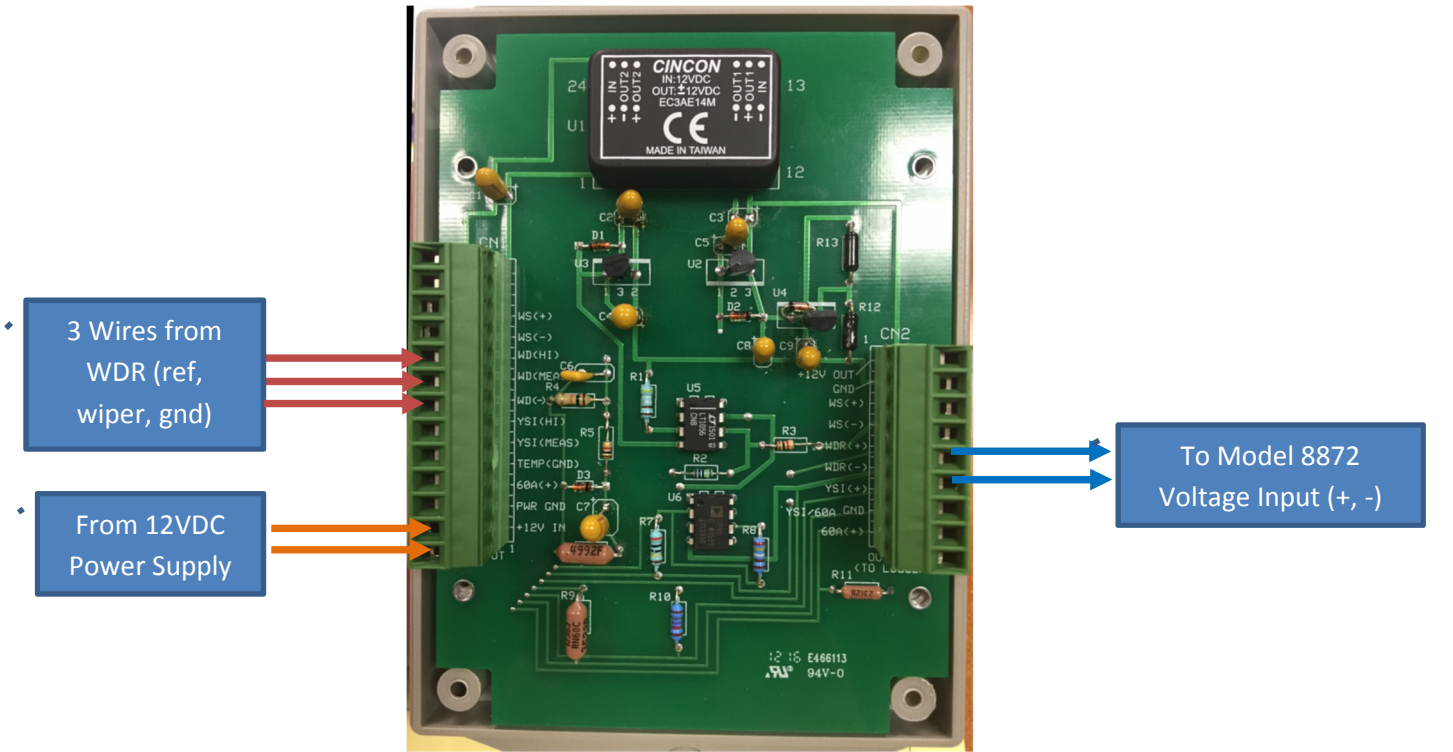

When you open the case, you will see CN1 on your left, which represent the sensor inputs, and CN2 on your right, which represents the outputs to go to the Model 8872 Status / Voltage Inputs.   The bottom left side also has the input for a 12VDC power supply to power the device.   Not all the inputs and outputs must be used (e.g., the device may be used only for wind speed, or a temperature input, and the others may be left open).   The pairing and use of inputs and outputs is as follows:

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1 | P a g e

Pulse Wind Speed (up to 1500 Hz, minimum 50 mV pulse)

Freq from Wind Speed Sensor

From 12VDC Power Supply

Optional 12v Power to WS Sensor

To Model 8872 Status Input (+, -)

Note: do NOT use the 12V output to power any sensor heater!

Resistive Wind Direction (typ 10K ohm resistance)

3 Wires from WDR (ref, wiper, gnd)

From 12VDC Power Supply

To Model 8872 Voltage Input (+, -)

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Met One 060 / 062 Temp Sensor

White/Ref to 60(+), Common to TEMP(GND)

From 12VDC Power Supply

To Model 8872 Voltage Input (+, -)
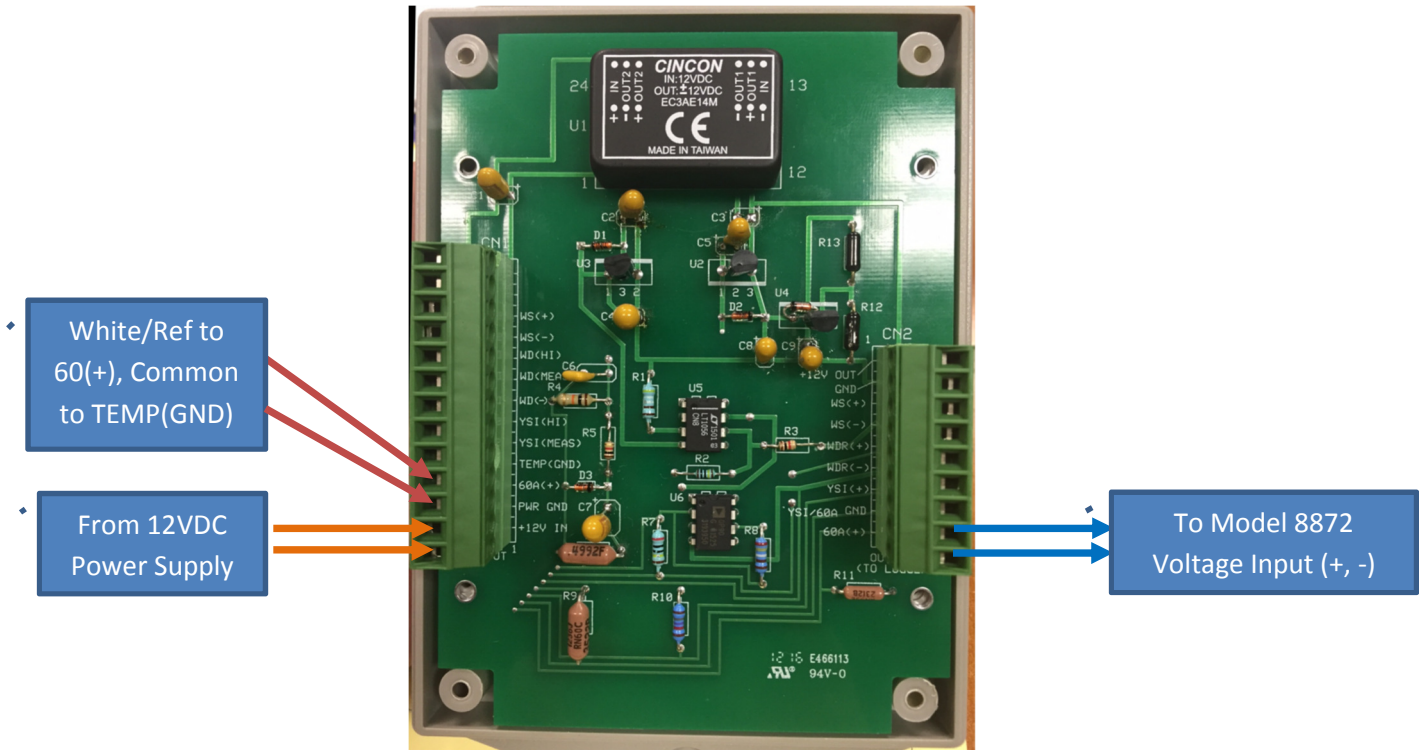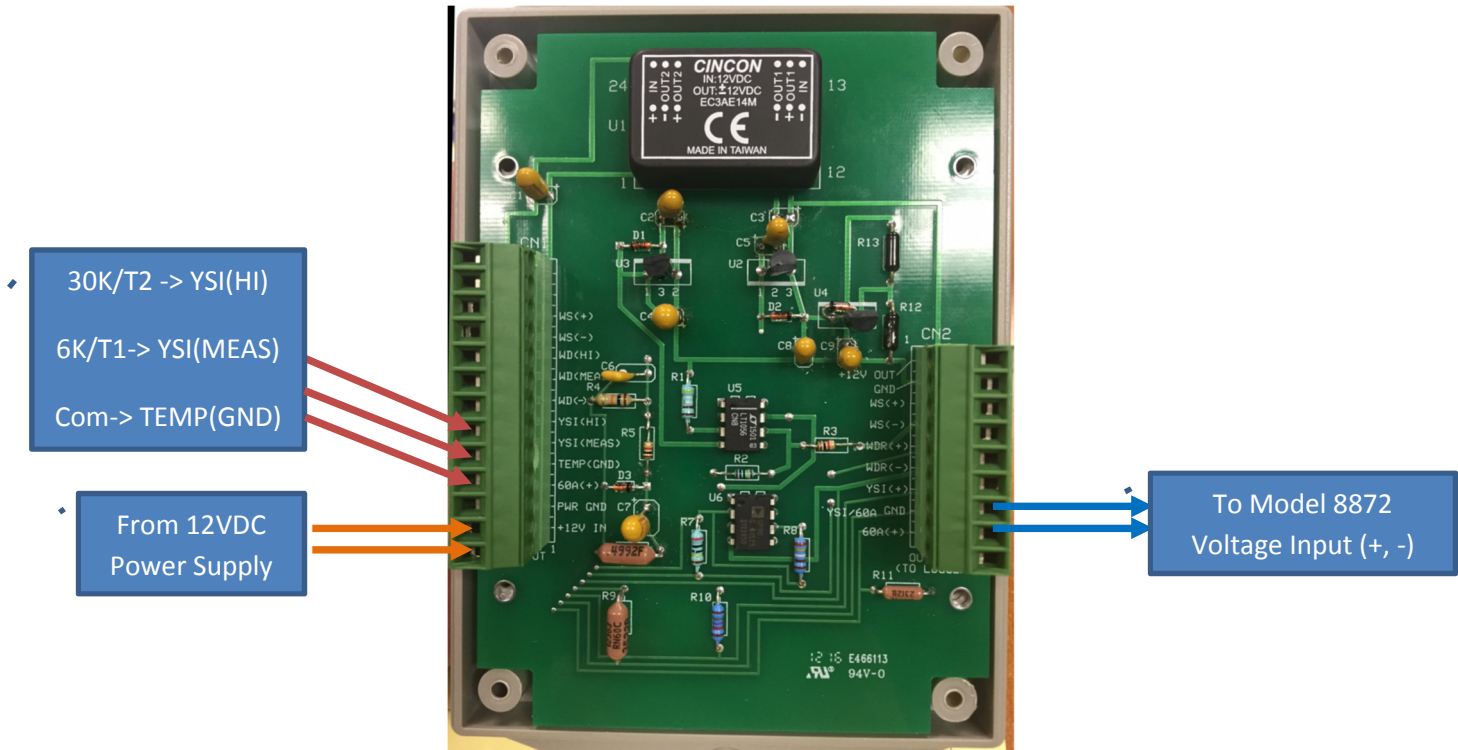
To configure the channel (degC):
- Set the APAX range to 0-5V
- Set Channel High Output = -251.79
- Set Low Output = 105.99

Based on:

Volts	DegC
5	-251.789
2.18	-50
0.7825	50
0	105.9928
mv/degC	0.013975

YSI 44018 Temp Sensor

30K/T2 -> YSI(HI)

6K/T1-> YSI(MEAS)

Com-> TEMP(GND)

From 12VDC Power Supply
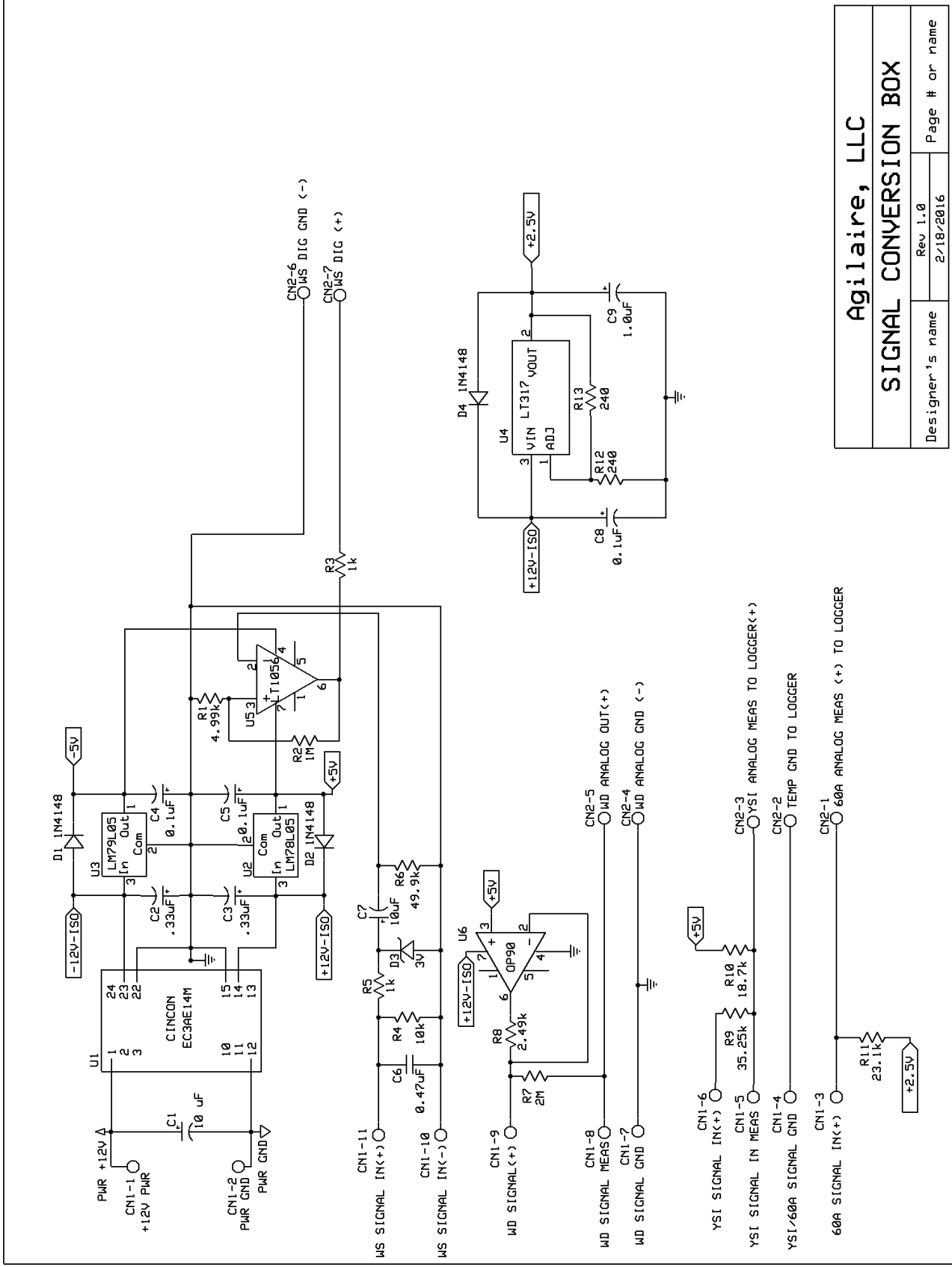
To Model 8872 Voltage Input (+, -)

To configure the channel (degC):
- Set the APAX range to 0-5V
- Set Channel High Output = -51.33
- Set Low Output = 95.782

Based on:

V/V	DegC
1	-51.3314
0.855	-30
0.3112	50
0	95.78154
mv/degC	0.006798

SIGNAL CONVERSION BOX

Agilaire, LLC

Designer's name

Rev 1.0
2/18/2016

Page # or name

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