Using the RM Young Wind Monitor with Symphonie Loggers

INTRODUCTION

The RM Young model 05103 Wind Monitor combines a propeller anemometer and a wind vane in one sensor. These instructions explain how to connect the Wind Monitor combination sensor to NRG SymphoniePLUS3, SymphoniePLUS or Symphonie loggers.

The wind direction portion of the Wind Monitor is compatible with standard logger vane channels. The sensor's wind speed output requires a modified SCM card (#3746) to accommodate its high frequency. This SCM card has been modified to be compatible with the Wind Monitor anemometer section.

CHANNEL CONFIGURATION

This modified wind speed SCM card may be used in any of the counter SCM sockets, configuring channel 4, 5, or 6 for the Wind Monitor speed signal. This discussion assumes that you will use channel 4 for the Wind Monitor speed channel. If you use channel 5 or 6, select that channel number when configuring or reading the Wind Monitor speed.
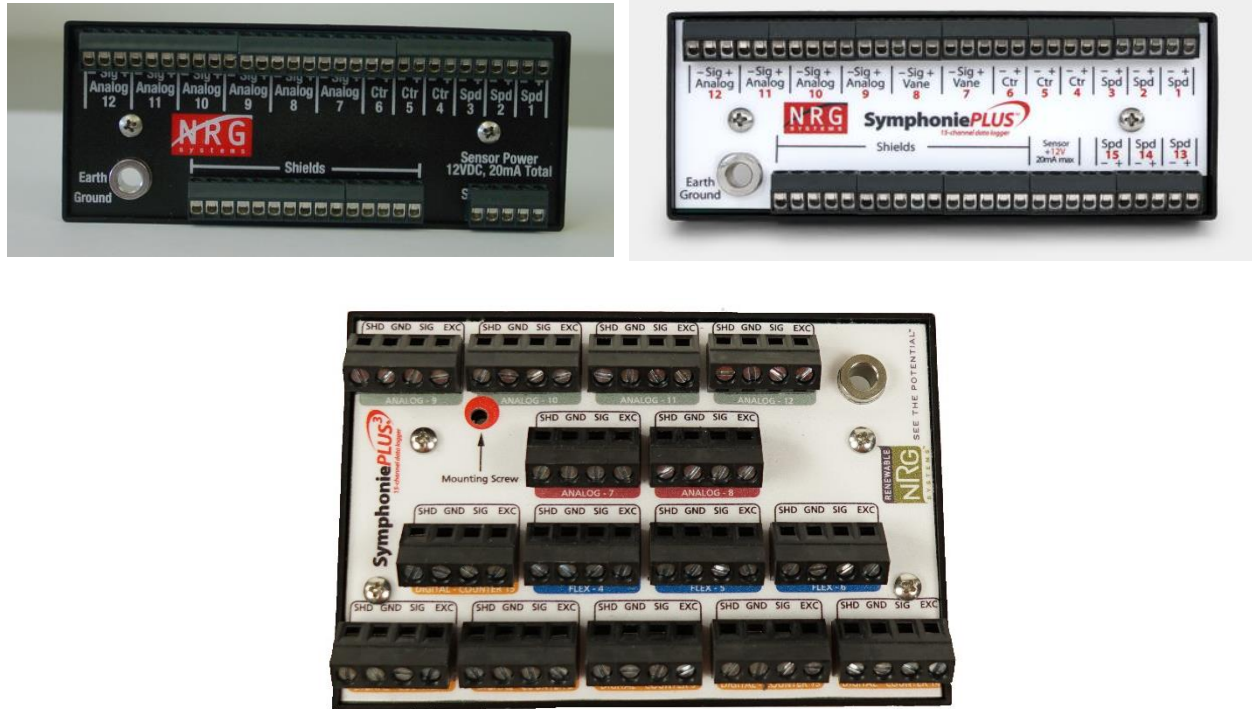
The wind direction output may be connected to channels 7 and 8 without any additional modification. To use channels 9-12 for wind direction a Wind Vane SCM card must be utilized as well. This note assumes that you will use channel 8 for the RMY Wind monitor's direction signal. If you use another channel, select that channel number when configuring or reading the Wind Monitor direction.

Refer to the logger's User Manual for more information on SCMs and configuring Symphonie logger channels.

WIRING THE INPUT SIGNALS TO THE LOGGER

All sensor signal connections are made to the wiring panel on the Symphonie loggers. Each type of Symphonie logger has a different wiring panel. The three types are shown below.

As always, ensure that the logger ground wire is connected to a suitable earth ground before connecting sensors. Discharge any static electricity by touching the earth ground before handling the sensor wires.

To connect the sensor, first connect the cable shield from the Wind Monitor's Earth terminal (Labeled "SPARE" on the Wind Monitor) to any of the "Shields" terminals on the wiring panel.

Wiring the Vane
Connect the following to the desired analog channel
"AZ REF" terminal to the "-" or "GND" terminal
"AZ SIG" terminal to the "Sig" terminal
"AZ EXC" terminal to the "+" or "EXC" terminal
If using channels 9-12: Install SCM #3152 in the corresponding channel slot

Wiring the Anemometer
Connect the following to the desired counter channel
"WS SIG" terminal to the "+" terminal
"WS REF" terminal to the "-" terminal
Install SCM #3746 in the corresponding channel slot

SCALING AND DISPLAY OF THE DATA

As with all sensors, the Symphonie logger calculates and stores data in raw units, no scaling is applied to the data in the logger. Descriptive and scaling information entered into the logger is used to display present values, and is stored with the data for later use. Refer to your logger User's Manual for more details on entering values into the Symphonie logger.

When the logger is started, it will identify the wind speed channel as an "NRG 40C Anemometer" by default. Press [Home][4][1][4], then press [SET] to change the settings for the wind speed channel. Enter a description. Press [SET] to set the scale factor. Enter the value from this table for the desired units.

Measurement Units	Scale Factor
Meters per second (m/s)	0.0980
Miles per hour (mph)	0.2192
Kilometers per hour (kmph, km/hr)	0.3528

Press [SET] to see the offset. Set the offset to 0.00. Press [SET] to see the units, enter the units you chose ("m/s, for example"). Press [SET]; enter a "sensor height" if desired. Press [SET]; enter a "sensor serial number" if desired. Press [SET] to complete the settings for the channel.

To confirm proper operation, press [Home][1], and then use the down arrow key to view the present value of channel 4.

By default, the logger will identify the Wind Monitor direction channel as a "#200P Wind Vane". Press [Home][4][2][8] then press [SET] to change the settings for the wind direction channel. Enter a description. Press [SET] to see the default wind direction scale factor 0.351. Leave this unchanged, press [SET] to see the default offset of 0.00. Leave this unchanged; press [SET] to see the default units "deg". Leave this unchanged; press [SET]; enter a "sensor height" if desired. Press [SET]; enter a "sensor serial number" if desired. Press [SET] to complete the settings for channel 9.

To confirm proper operation, press [Home][1], and then use the down arrow key to view the present value of channel 9.