



# METEOROLOGICAL INSTRUMENTS

## INSTRUCTIONS

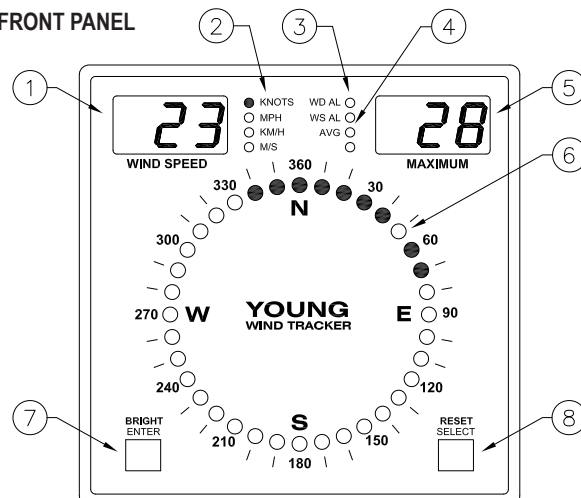
**WIND TRACKER  
MODEL 06201**



# **MODEL 06201 WIND TRACKER**



## FRONT PANEL



1. Wind speed display
2. Wind speed units indicator
3. Alarm status indicators
4. Data averaging indicator
5. Maximum wind speed or direction display
6. Wind direction and variability display
7. Brightness control (operate) or Enter key (setup)
8. Maximum Reset (operate) or Select (setup)

## INTRODUCTION

The YOUNG Model 06201 Wind Tracker is a compact wind speed and direction display with advanced features for use in a wide range of applications.

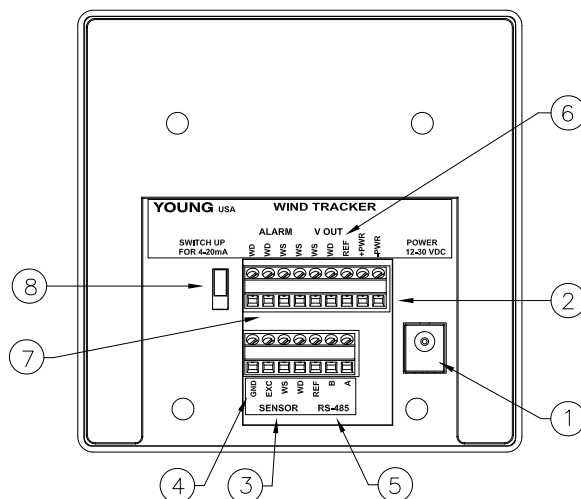
## FEATURES

- 3-digit wind speed display
- 3-digit maximum wind speed or wind direction display
- Multi-color wind direction display with variability
- Wind speed and direction alarms with delay
- RS-485 serial connections
- Calibrated 0-5 VDC outputs
- Display brightness control
- Compatible with YOUNG wind sensors & 4-20 mA inputs

## PRECAUTIONS

- INDOOR USE ONLY unless placed in approved enclosure
- Operating temperature range 0-50°C (32-122°F), 0-95% RH
- Use only recommended power sources. 12-30 VDC, 3.5 W
- Disconnect power when connecting or servicing
- Alarm contact rating 24 VAC/30 VDC, 5 A resistive, 2 A inductive maximum

## BACK PANEL



1. Power input coaxial jack (12-30 VDC)
2. Power input terminals (12-30 VDC)
3. Sensor or 4-20 mA inputs
4. Earth ground connection
5. RS-485 serial input/output
6. 0-5 VDC calibrated outputs
7. Alarm relay connections (Normally Open)
8. Input Selector Switch

## MOUNTING AND START-UP

- For best visibility, place the Wind Tracker in a location free of direct sunlight. Mount it using the attached bracket or remove bracket for flush mounting to a bulkhead or panel cutout. Panel cutout dimensions are given in the specifications. An optional rack mounting panel (Model 06280) and protective enclosure (Model 06260) are available from your YOUNG supplier.

- Connect cables to terminals according to wiring diagram.

**IMPORTANT NOTE! Please observe correct position of back-panel Input Selector Switch according to wiring diagram.**

- Connect GND terminal to suitable earth ground.
- Insert power supply plug into power jack, plug power supply into a suitable AC wall outlet or connect to suitable 12 to 30 VDC power source to terminals.

**IMPORTANT NOTE! Do not connect more than one power source to the Wind Tracker at the same time.**

- When power is applied, the Wind Tracker will display firmware version number then begin to display wind information as follows:

- Wind speed
- Wind speed units
- Maximum wind speed or direction degrees
- Wind direction (single orange indicator)
- Direction variability (green indicators)
- Alarm status indicators (if selected)
- Wind speed & direction averaging indicator (if selected)

- Observe display to confirm proper operation.

## CHANGING SETTINGS

Wind Tracker parameters may be inspected or changed in SETUP mode which is enabled by simultaneously pressing both **ENTER** and **SELECT** keys for about 4 seconds. When SETUP mode is active, abbreviations identify each function and available options as listed below. The **SELECT** key changes options or values. The **ENTER** key saves and moves to the next parameter.

**Appearance of options depends on parameter settings. Some options may be hidden.**

DISPLAY	SETUP FUNCTION
---------	----------------

		<b>Input / Sensor Type</b>
InP	03	Wind Sentry
	04	Wind Monitor-Jr
	05	Wind Monitor
	05A	Wind Monitor-AQ
	09	Wind Monitor-SE or YOUNG sonic anemometer
	SEr	Serial input when used as remote display
	Ld2	Line Driver 4-20mA input (0-100 m/s)
	Hd	Wind Monitor HD
	Ldi	Line Driver 4-20mA input (0-50 m/s)

**SPd    unt    Wind Speed Units (annunciator blinks)**  
SELECT key changes units. ENTER to save

**dSP    no    Display Averaging (annunciator blinks)**  
**YES**    Instantaneous data displayed  
Average data displayed

**PEr    030    Set averaging period in seconds (0-999).**  
Display will update at this interval.

**dSP    SPd    Right Display Window Selection**  
**dir**    Maximum wind speed  
Wind Direction degrees

**ALr    no    Wind Direction Alarm (annunciator blinks)**  
**YES**    Direction alarm not armed  
Direction alarm armed  
**ALr    dir    SELECT key sets direction alarm sector start.**  
ENTER key saves.  
**ALr    SPn    SELECT key sets direction alarm sector span.**  
ENTER key saves.

**ALr    no    Wind Speed Alarm (annunciator blinks)**  
**YES**    Speed alarm not armed  
Speed alarm armed  
**ALr    000    Speed alarm set-point. SELECT key increments value.**  
ENTER key saves.

**dLY    030    Alarm Delay Time**  
Alarm delay time in seconds (0-999). SELECT key increments value. ENTER key saves.

**Snd    no    Sound**  
**YES**    No sound  
Audible beep with alarm activations or average update.

**dir    360    Wind Direction Voltage Output Scale**  
**540**    0-360 degrees  
0-540 degrees

**Out    bin    Serial Output Type**  
**ASC**    Binary output for remote Wind Tracker displays  
ASCII text wind speed & direction

**tSt    no    Test Functions**  
**YES**    No test  
Test  
**tSt    ALr    SELECT key closes alarm relays.**  
**CAL    0.00    SELECT key alternates between 0.00 and**  
5.00 VDC output to calibrate external devices.  
**tSt    dsP    SELECT key tests display sections.**

## OPERATION

### ALARMS

Wind speed and direction alarms each have their own set-point, LED status indicator, and relay contacts. The Alarm Delay parameter establishes time duration in or out of the set-point range needed for the alarm to change state. Front panel LEDs indicate alarm status during operation.

LED Off = Alarm not armed and OFF. Relay open  
LED Steady = Alarm armed and OFF. Relay open  
LED Blinking = Alarm armed and ON. Relay closed. Audible beep if  
Sound parameter is enabled.

### AVERAGING

When averaging is enabled, the front-panel AVG annunciator is illuminated, and average wind speed and direction values are displayed at intervals set by the Period (PEr) parameter. When averaging is disabled, instantaneous wind values are displayed.

### BRIGHTNESS

Adjust display brightness by pressing and holding the left BRIGHT key for 1 second.

### MAXIMUM or WIND DIRECTION DISPLAY

Either MAXIMUM WIND SPEED GUST or numerical WIND DIRECTION appears during operation depending on Right Display Window (dSP) parameter setting. Maximum gust may be reset during normal operation by pressing and holding the RESET key for 1 second.

### REMOTE DISPLAYS

When set for any non-serial input, the Wind Tracker functions as a master display source for other Wind Trackers which have been configured for remote display with InP=SEr. The master Wind Tracker must also be set for binary serial output (Out=bin).

MASTER: Sensor InP = any non-serial device, Out=bin

REMOTE: Sensor InP = SEr

Connect one Wind Tracker master to up to 16 remote displays via the RS-485 terminals as shown in wiring diagrams. Remote Wind Trackers display exactly the same information as the master including alarm states. MAX RESET and all display features are controlled by the master unit only. Brightness can be adjusted independently at each Wind Tracker display.

### VOLTAGE OUTPUTS

Calibrated voltage outputs for wind speed and direction are updated 16 times per second. Wind Speed 0-100 m/s = 0.00 to 5.00 VDC. Wind Direction may be scaled for either 0-360 or 0-540 degrees = 0.00 to 5.00 VDC by setting the Direction (dir) parameter.

### 4-20 mA INPUTS

The Wind Tracker accepts 4-20 mA Line Driver inputs with either 0-50 m/s or 0-100 m/s scaling (Ldi and Ld2 input settings). Connect as shown in wiring diagram. The back-panel switch labeled 4-20 mA must be in the UP position. 24VDC power is recommended for most 4-20 mA installations.

### POWER CONNECTIONS

The Wind Tracker operates from a 12 to 30 VDC power source. Power may be connected via the coaxial jack or terminals. These are internally wired in together so DO NOT CONNECT MORE THAN ONE POWER SOURCE AT THE SAME TIME. See wiring diagrams for examples.

### ERROR MESSAGES

**Ldi Err** 4-20 mA (line driver) signal is missing or outside an acceptable range. Verify connections, signal, and 4-20 mA switch in UP position.

**SEr Err** Unit set to receive RS-485 serial signal (inP=SEr or 09), but no serial data detected. Verify serial source is working. Verify connections.

## WARRANTY

The Wind Tracker is warranted to be free of defects in materials and construction for a period of 12 months from date of purchase. Coverage is limited to repair or replacement of defective unit.

## SPECIFICATIONS

Size: 144 mm (5.65 in) x 144 mm (5.65 in) x 36 mm (1.4 in)  
Panel Cutout: 138 mm (5.43 in) x 138 mm (5.43 in)  
Sensors: Wind Monitor (05), Wind Monitor-AQ (05A), Wind Monitor-SE (09), Ultrasonic Anemometer (09), Wind Monitor-JR (04), Wind Sentry (03)  
Accuracy:  $\pm 0.6\%$  Full Scale  
Serial I/O: Proprietary binary I/O for master-remote display or simple ASCII text output for external device:  
sss ddd<cr><lf>  
sss wind speed (ss.s for m/s)  
ddd wind direction in degrees  
RS-485 half-duplex, 9600 baud,  
8-1-n, no handshaking  
Other inputs 4-20 mA (0-360 deg, Ldi 0-50 m/s, Ld2 0-100 m/s)  
Other outputs: 0-5 VDC = 0-360° or 0-540°  
0-5 VDC = 0-100 m/s  
Alarm Relays: Normally Open contacts for WS and WD  
Contact rating 24 VAC or 30 VDC maximum  
5A resistive, 2A inductive maximum  
Input Power: 12-30 VDC, 3.5 W  
Weight: 1.0 lb (0.45 kg) without AC adapter

## CE COMPLIANCE

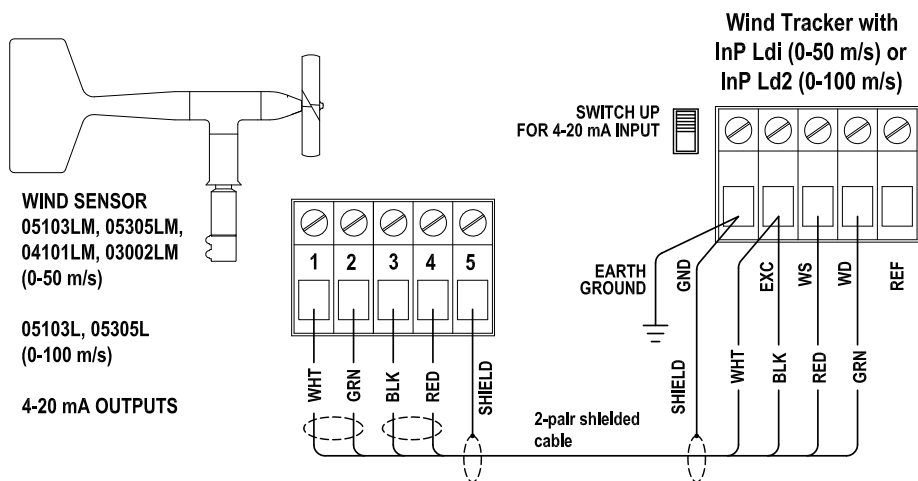
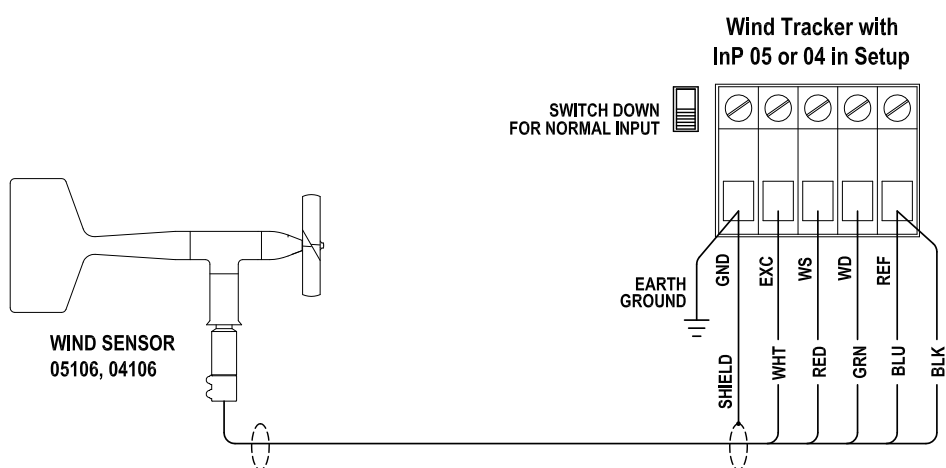
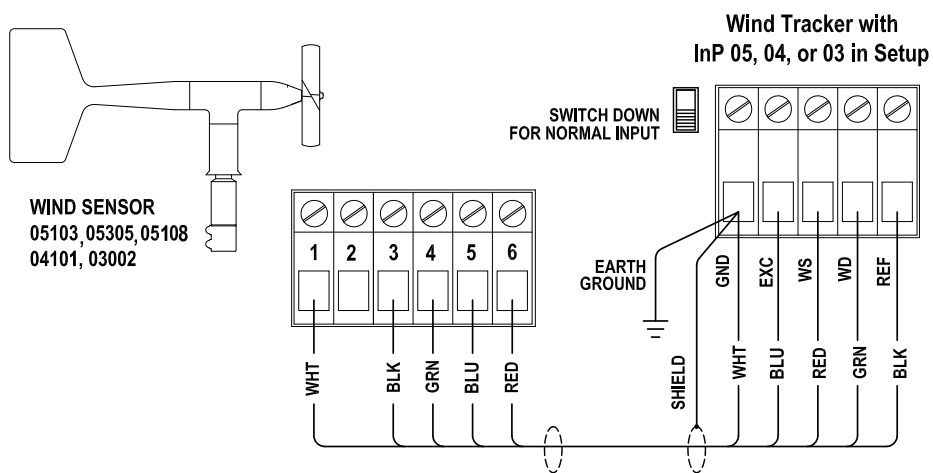
This product complies with European CE EMC Directive. Shielded cable must be used.

### Declaration of Conformity

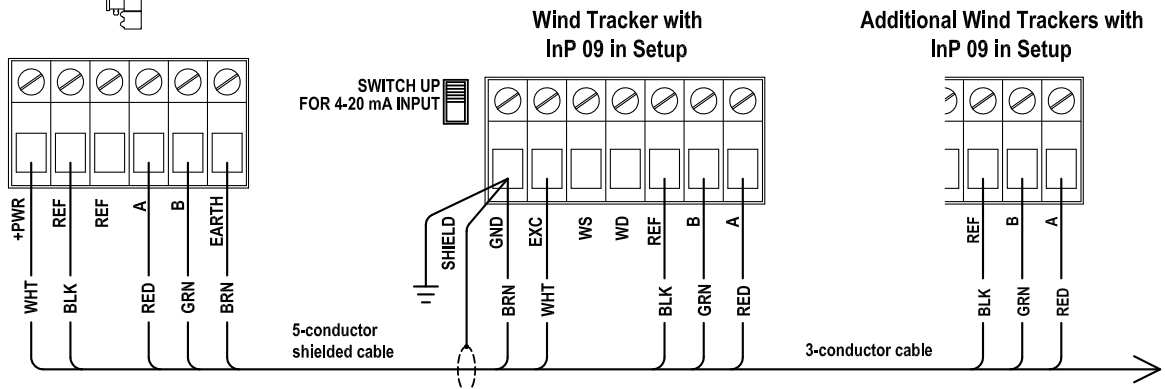
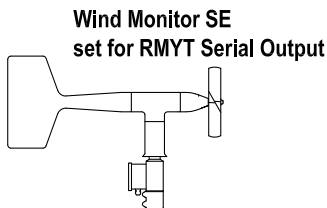
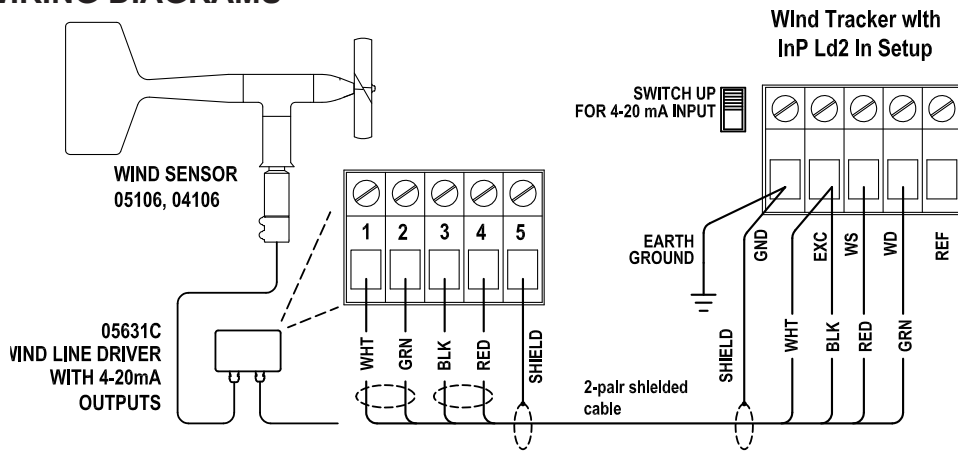
R. M. Young Company  
2801 Aero Park Drive  
Traverse City, MI 49686 USA

Model 06201 WIND TRACKER conforms to the provisions of  
Council Directive 2004/108/EC (December 15, 2004)  
on Electromagnetic Compatibility

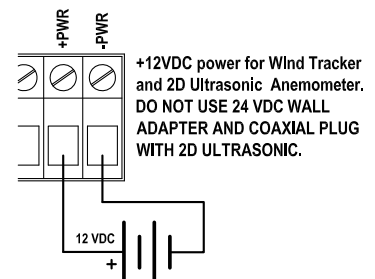
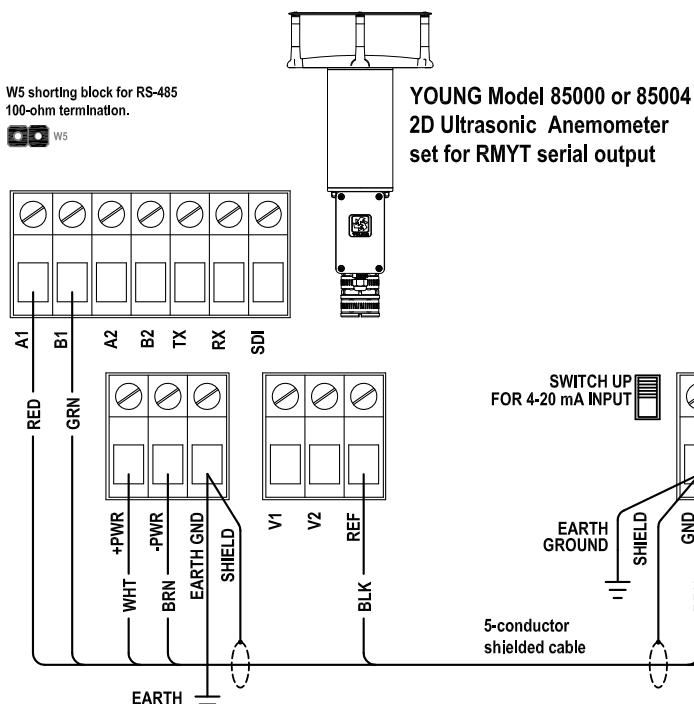
## WIRING DIAGRAMS



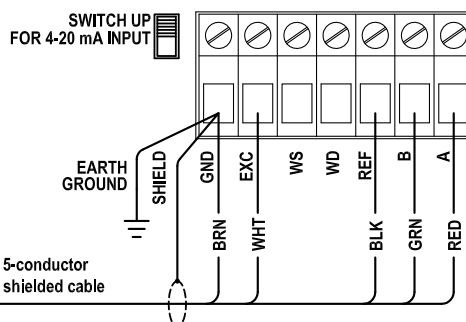
## WIRING DIAGRAMS



W5 shorting block for RS-485  
100-ohm termination.



**Wind Tracker with  
InP 09 in Setup**



WIRING DIAGRAMS

Master-Remote  
Display Example

