METEOROLOGICAL INSTRUMENTS

INSTRUCTIONS

TEMP TRACKER
MODEL 46203

CE

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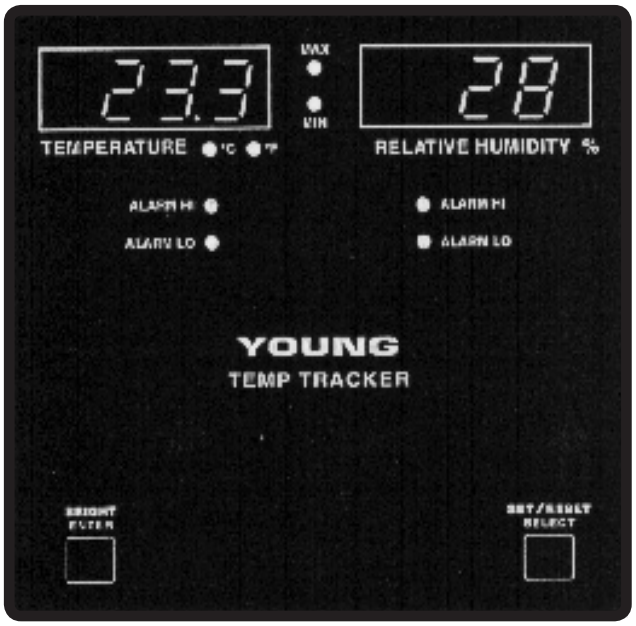
P/N: 46203-90
REV: E092910

MODEL 46203
TEMP TRACKER



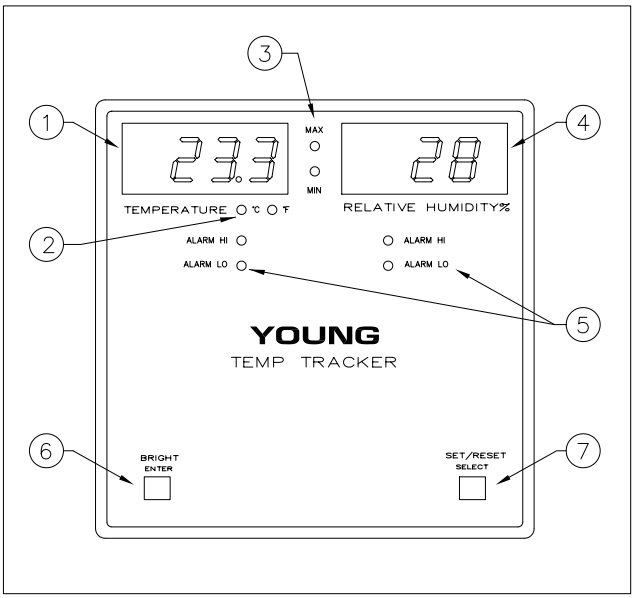
INTRODUCTION

The YOUNG Model 46203 Temp Tracker is a compact temperature and humidity display with advanced alarm features. Its features include:

- 4 Digit Temperature display
- 3 Digit Relative Humidity or Dew Point display
- Selectable Celsius or Fahrenheit units
- Minimum and Maximum display
- Hi and Lo Alarms
- RS-485 Serial connections for up to 16 displays
- Display Brightness control
- Calibrated Voltage Outputs

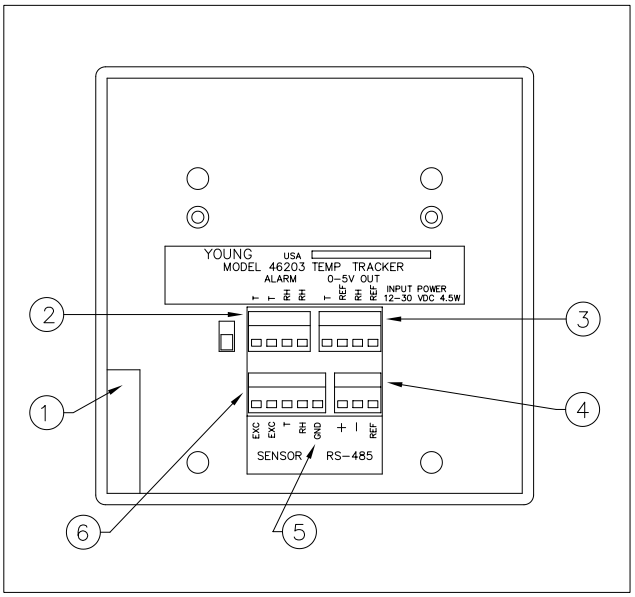
PRECAUTIONS

- 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, 4.5 W
- Disconnect power when connecting or servicing sensors and external devices.
- MAX 24 VAC/30 VDC on alarm relay contacts



FRONT PANEL

1. Temperature display
2. Temperature units
3. Min / Max indicators
4. RH or Dew Point display
5. Alarm status indicators
6. Brightness control (enter key in SETUP)
7. Min / Max view & reset (select key in SETUP)



BACK PANEL

1. Power input (12-30 VDC)
2. Alarm relay connections (Normally Open)
3. 0 - 5 VDC calibrated outputs
4. RS-485 serial terminals
5. Earth ground connection
6. Sensor terminals

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MOUNTING AND STARTUP

1. Select location for display. A location that is out of direct sunlight provides best visibility.

   Note: The Temp Tracker may be mounted from a bulkhead or installed in a flush panel by removing the mounting bracket. Panel cutout dimensions are given in the specifications. An optional rack mounting panel is available from your YOUNG supplier.

2. Connect cables to terminals. Refer to wiring diagram.

3. Connect GND terminal to suitable earth ground.

4. Insert power supply plug into power jack, plug AC adapter into wall outlet.

5. The Temp Tracker will display a software version number for several seconds. It will then begin to display temperature & humidity information. The following information is displayed:
   - Temperature
   - Relative Humidity % (or Dew Point °)
   - Alarm status

6. Observe the display for a few minutes to verify that it is operating properly. To change settings see the following section.

CHANGING SETTINGS

The Temp Tracker has a setup mode that allows you to easily change input type, temperature units, alarm settings, and other functions.

Press and hold **ENTER** and **SELECT** keys (about 5 seconds). The display will briefly flash “SEt uP”, then begin the setup sequence. Change settings with the **SELECT** key. Press the **ENTER** key to save settings and move to the next step. Abbreviations in the left and right display windows identify each function and the available selections.

Display		Setup Function
LEFT	**RIGHT**	
		Input Type
InP	Prb	T/RH probe input.
	SEr	RS-485 serial input (from main display).
		If SEr is selected, setup sequence ends here.
		Temperature Units
unit	dEG	Fahrenheit or Celsius indicator flashes. Select one.
		Relative Humidity/Dew Point
diSP	rh	Display RH %.
	dPt	Display Dew Point Temperature.
		Minimum/Maximum
AUtO	no	Press SET key for MIN / MAX values.
	YES	Automatically scroll CURRENT/MIN/ MAX values.
		Temperature Alarm
ALr	no	Temperature alarm not used.
	YES	Temperature alarm activated.
		If YES is selected
SEt	000	T alarm HI setpoint.
SEt	000	T alarm LO setpoint.
		Relative Humidity or Dew Point Alarm
ALr	no	RH (or DP) alarm not used.
	YES	RH (or DP) alarm activated.
		If YES is selected
SEt	000	RH (or DP) alarm HI setpoint.
SEt	000	RH (or DP) alarm LO setpoint.
		If either alarm selected
		Alarm delay time
dLY	000	Set alarm delay time in seconds (0-999).
		Sound
Snd	YES	Audible beeper sounds with alarm.
	no	No sound with alarm.
		Test Functions
tESt	no	Skip test functions.
		If no is selected, the unit returns to normal operation.
	YES	For troubleshooting only. YES initiates the following tests:
tESt	Snd	Press SELECT to sound beeper.
tESt	dSP	Press SELECT to illuminate all display segments.
tESt	ALr	Press SELECT to close alarm relays.
CAL	0.00	Press SELECT to alternate between 0.00 VDC and 5.00 VDC at Vout terminals. Use to calibrate external devices (recorders, etc...)

ADDITIONAL INFORMATION

ALARMS

Alarm functions for temperature, humidity (or Dew Point) are accessed in the SETUP sequence. Either or both alarms may be selected. Each alarm has a LO and a HI setpoint. When the indicated value goes below the LO or above the HI setpoint, the alarm indicator blinks, and the associated relay contact closes. When a delay time is set, the indicator reports an alarm condition only after it has existed for one complete delay period. Alarm activity ceases when conditions are outside the alarm range for one complete delay period. For a "latching" alarm effect, use the Temp Tracker relay contacts to activate an external latching-type relay.

BRIGHTNESS

Adjust display brightness by holding the BRIGHT key.

DEW POINT

Dew Point is displayed in the right display window by selecting this feature during SETUP. Dew Point values are calculated from temperature and relative humidity measurements. Dew Point is shown in the same units as those selected for temperature (°C, °F). The "DEW POINT" label included may be placed over "RELATIVE HUMIDITY %" on the front panel.

MINIMUM / MAXIMUM

The Temp Tracker stores minimum and maximum values for both displays. To view minimum and maximum values, depress the **SET / RESET** key momentarily. Each time the key is depressed, the display switches modes; first to **MIN** then **MAX** then back to **Current** values. To reset all values, press and hold the **SET / RESET** key until the unit beeps.

The Temp Tracker may be set to automatically cycle through **MIN**, **MAX** and **Current** values. This feature is selected during SETUP.

Minimum and maximum values reset if power is interrupted.

REMOTE DISPLAYS

The Temp Tracker may be used as a remote or slave display by selecting InP SEr during SETUP. Remote displays are connected to the Main display using the RS-485 terminals. Connect like terminals as shown in the wiring diagram. Remote displays show exactly the same information as the Main display. MIN / MAX and SETUP functions are controlled at the Main unit only. Brightness is adjusted at each display independently.

VOLTAGE OUTPUTS

The Temp Tracker offers calibrated voltage outputs for both channels. This feature allows the use of recorders and other devices. Full scale voltage for each channel is 5.00 VDC.

ERROR MESSAGES

The Temp Tracker will detect and indicate certain errors. Once corrected, the error indication disappears.

Display		Error
LEFT	**RIGHT**	
- - -	- - -	4-20 mA signal from sensor is not present or is outside acceptable range.
SEr	Err	Unit is set up to receive serial input signal, but no data is being received. Verify that main unit is operating. Check cable connections.

WARRANTY

The Temp Tracker is warranted to be free of defects in materials and workmanship for a period of 12 months from the date of purchase. This warranty is limited to repair or replacement of defective unit.

SPECIFICATIONS

- Size: 144 x 144 x 36 mm (5.65 x 5.65 x 1.4 in)
- Panel Cutout: 138 x 138 mm (5.43 x 5.43 in)
- Sensor Type: YOUNG Model 41382LC2 RH / T
YOUNG Model 41342LC T only
- Input Signal: T 4-20mA = -50 to +50°C
RH 4-20mA = 0 to 100%
- Serial I/O: RS-485, binary data block, 16 blocks per second
- Accuracy: Temperature ±0.1 °C (0.2°F)
Relative Humidity ±0.1 %
Dew Point ±0.5 °C (0.9 °F)
(These accuracies are for the Temp Tracker only and are independent of sensor accuracy.)
- Voltage Output: 0.00 to 5.00 VDC
Scale: Temperature and Dew Point: -50 to 50 °C, -50 to 150 °F
Relative Humidity: 0 to 100%
- Alarm relays: Normally open, non-latching, 5A resistive, 2A inductive @ 24 VAC or 30 VDC
- Power requirement: 12 to 30 VDC, 4.5 watts
- Weight: 0.75 lbs (0.34 kg)
- Accessories: Model 06280 Rack Mounting Panel

CE COMPLIANCE

This product has been tested and shown to comply with European CE requirements for the EMC Directive (see Declaration of Conformity below). Shielded cable must be used.

Declaration of Conformity

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

Model 46203 TEMP TRACKER

The undersigned hereby declares on behalf of R. M. Young Company that the above-referenced product, to which this declaration relates, is in conformity with the provisions of:

Council Directive 2004/108/EC (December 15, 2004) on Electromagnetic Compatibility

David Poinsett
R&D Manager

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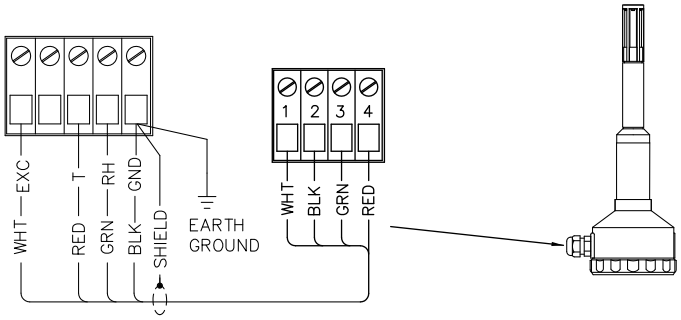
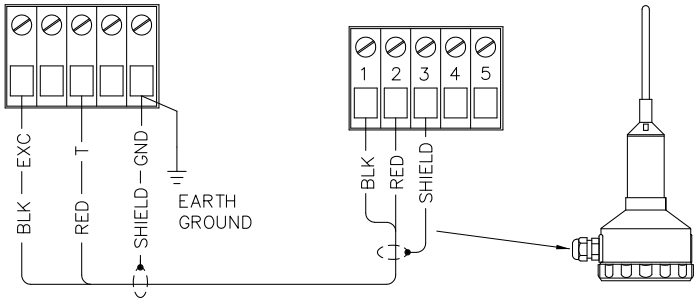
YOUNG

MODEL 46203 TEMP TRACKER – WIRING DIAGRAMS

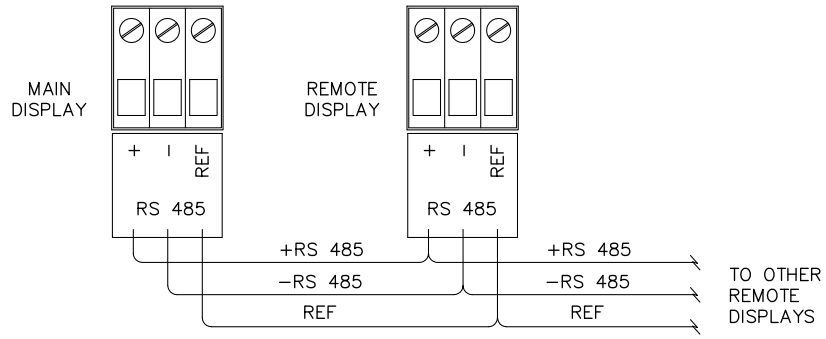
RELATIVE HUMIDITY/
TEMPERATURE PROBE
MODEL 41382LC2
(4–20mA SIGNAL)



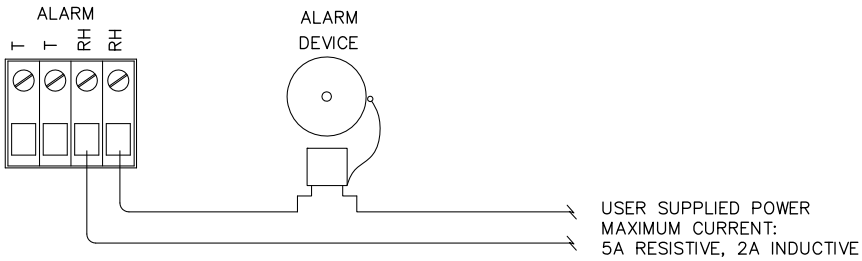
TEMPERATURE PROBE
MODEL 41342LC
(4–20mA SIGNAL)



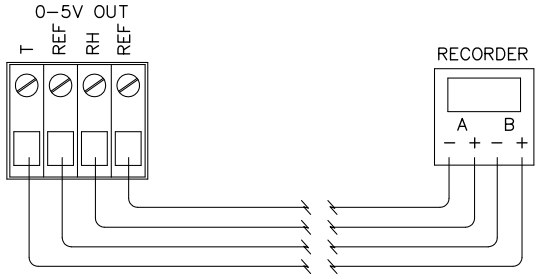
REMOTE
DISPLAYS
(SERIAL, RS–485)



ALARM/RELAY
NON–LATCHING
(NORMALLY OPEN CONTACTS)



VOLTAGE
OUTPUTS



MODEL 46203 TEMP TRACKER	DWG B	PRD 02/96
WIRING DIAGRAM	DWN JMT	DWN 08/04
	CHK	W46203
R.M. YOUNG CO. TRAVERSE CITY, MI 49686 U.S.A. 231–946–3980		

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