

### Warranty

Each unit is carefully tested and adjusted at the factory before shipping and is warranted for one full year against original defects in materials or workmanship. This warranty does not include damage to the product resulting from accident or misuse.

If the product should become defective within the warranty period, we will repair or replace it free of charge, including free return transportation, provided it is delivered prepaid to the dealer from whom it is originally purchased.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state, or country to country.

# CruzPro<sup>®</sup>



## WTP-65



Precision Water  
Temperature Gauge /w NMEA 0183

### NMEA Sentences

The WTP65 outputs NMEA 0183 sentences on the serial data line. In the sentences below, \*cs is the check sum:

**Water Temperature:** \$VWMTW,xx.x,C\*cs  
xx.x is the displayed value of temperature in deg. C.

### Introduction

The WTP65 provides very accurate digital instrumentation for water temperature in tenths of a degree Fahrenheit or Celsius.

The WTP65 displays water temperature from 32.0 deg F (0.0 deg C) to 90.0 deg F. (32.0 deg C). The units of display is easily selected with a removable jumper wire at the back of the instrument. The WTP65 instrument head is factory calibrated but can be user calibrated in the field with small jumpers on the back of the instrument. All set-up and calibration constants are saved to non-volatile memory.

The WTP65 has a built-in red backlight for night-time viewing. The WTP65 outputs NMEA 0183 data and works on both 12 and 24 VDC systems.

## Table of Contents

Introduction . . . . .	3
Specifications . . . . .	4
Installation . . . . .	5
Operation . . . . .	9
Temperature Display . . . . .	9
Selecting Temperature Units (Deg. C/F) . . . . .	9
Calibrating Temperature . . . . .	10
Optimum Water Temperatures for Fish Species . . . . .	11
NMEA 0183 Sentences . . . . .	14
Other CruzPro Products . . . . .	15

©2001 BV Engineering

WTPMAN-B

<http://www.cruzpro.com>

[info@cruzpro.com](mailto:info@cruzpro.com)

## Other CruzPro Products

- Depthsounders/Fishfinder & Speed/Temperature/Log
- DC Volts/Amps/Amp-Hour Monitors
- AC Volts/Amps/Freq/kW Monitor
- LPG/Petrol Gas Detectors/Alarms
- Bilge Water Alarms & Bilge Pump Controllers
- Intelligent Windlass Controller/Chain Counter
- Digital Fuel Gauge & Fuel Consumption Calculator
- Digital Gauge for Three Tanks /w Separate Alarms
- Smart Alternator Regulator
- Marine Security System
- RPM/Engine Hours/Elapsed Time Gauge
- Digital Oil Pressure Gauge/Alarm
- Digital Engine Water Temperature Gauge/Alarm
- One and Three Bank Digital Volts Gauges
- Digital Amps Gauge
- Digital Clock/Watch/Race Timers/Alarms
- 8 and 16 Amp Light Dimmers / Motor Speed Controller
- Solar Panel Charge Controllers 6/8/9 & 20 Amps
- 4 & 8 Channel NMEA Combiners/RS-232 Convertors
- Engine/Exhaust Temp. Monitor & Digital Pyrometer
- Smart 4 Channel NMEA 0183 Remote Data Repeater

## Specifications

**Power supply:** 9.5 to 33.0 VDC, .035 amps nominal

**Size:** 2.5" dia X 4.1" deep (61mm x 104 mm).

**Operating temperature:** 32 to 122 F ( 0 to 50 C)

**Water Temperature Range:** 32 to 90 deg F (0 to 32 deg C) in tenths.

**Temperature Accuracy:** Better than +/- 0.2° F (adjustable)

**Display:** 4 digit LCD, red backlighting.

**NMEA 0183:** \$VWMTW

<i>Species</i>	<i>Low</i>	<i>Optimum</i>	<i>High</i>
Skipjack Tuna	50	58-62	70
Snook	60	70-82	90
Spotted Seatrout	48	68-78	88
Striped Bass	50	55-65	75
Striped Marlin	61	68-76	80
Swordfish	50	60-70	80
Tarpon	70	75-90	100+
Tautog	45	50-60	76
Weakfish	45	56-68	78
White Marlin	65	68-78	80+
White Seabass	58	64-68	74
Winter Flounder	35	48-52	64
Yellowfin Tuna	64	72-82	80
Yellowtail (Pacific)	60	62-66	70

Species	Low	Optimum	High
Dolphin (fish)	70	72-78	82
Fluke			
(Summer Flounder)	56	62-66	72
Haddock	36	42-48	52
Jack Crevalle	65	70-85	90
Kelp Bass	62	64-68	72
King Mackerel	65	68-76	88
Permit	70	75-85	92
Pollock	33	40-50	60
Pompano	65	70-82	85+
Red Drum			
(Channel Bass)	52	70-90	90+
Red Snapper	50	55-65	70+
Sailfish	68	72-82	88

## Installation

Before starting the installation, please read this entire section first. Be sure to install the bulkhead gasket before you install the instrument. **Finger tighten the screws that mount the instrument bracket - do not use tools.**

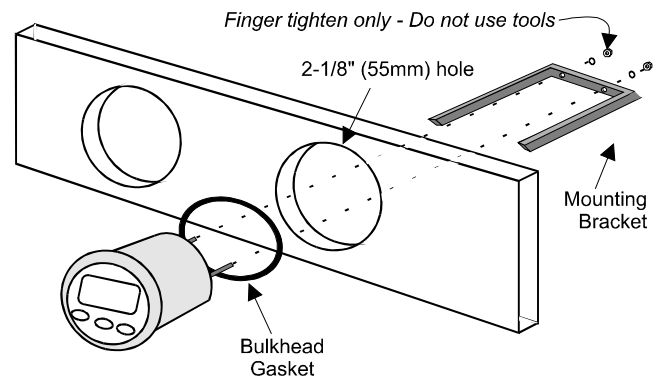


Figure 1

## Temperature calibration

The displayed value may be increased or decreased by momentarily connecting terminal (E) or (F) to ground (Terminal A) respectively.

**Note:** If you have a link inserted between terminals (F) and (A) to display temperature in degrees C you should proceed as follows:

- 1) With the WTP65 running, remove the link
- 2) Make the necessary adjustments as described above.
- 3) Wait at least 5 seconds for the new settings to be saved to non volatile memory.
- 4) Remove the power from the WTP65.
- 5) Replace the link between terminals (A) and (F) to re-select degrees C.

Figure 2 and Figure 3.

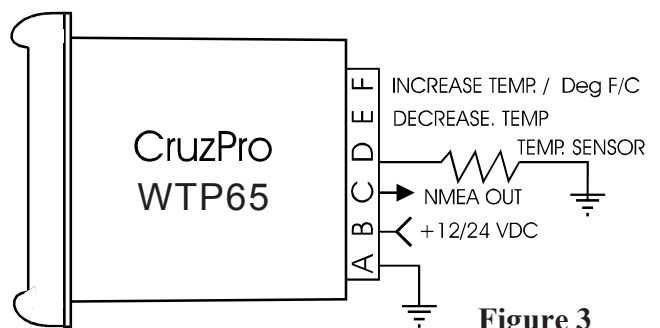


Figure 3

- Carefully check all your wiring and mount the WTP65 in the instrument hole. Be sure the bulkhead gasket is in place and use only finger tension to tighten the bracket hold-down nuts. *Do not overtighten the bracket or you may damage the case - do not use tools to tighten the nuts.*

- Drill **no smaller than** a 2-1/8" (55mm) mounting hole where you desire to mount the instrument.
- Bring the transducer wires, ground, and power lines out of the mounting hole and use a small flat screwdriver to make the connections to the screw terminals on the instrument case back as shown in

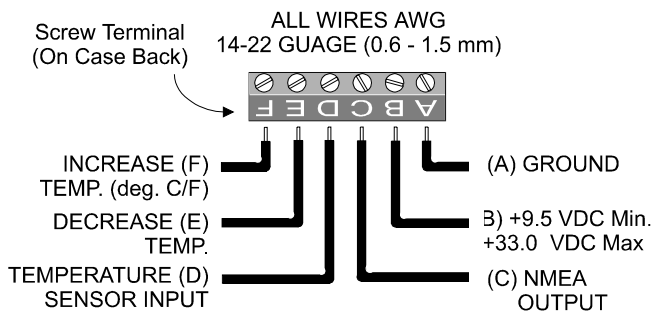


Figure 2

### Transducer Installation

The installation instructions for each type transducer you can fit to the WTP65 is supplied with the transducer. ***To save possible expense in hauling/launching your boat, be sure to test the temperature transducer before installation and before launching your boat the first time. Simply warm the transducer with your hand while observing displayed temperature.***

### Optimum Water Temperatures for Fish Species

Species	Low	Optimum	High
Albacore	59	62-65	66
Amberjack	60	65-75	80+
Atlantic Bonito	60	65-75	80+
Atlantic Cod	31	44-49	59
Atlantic Mackerel	40	45-55	70
Barracuda	55	72-80	86
Bigeye Tuna	52	62-74	80
Blackfin Tuna	65	70-75	82
Black Marlin	68	72-82	87
Bluefin Tuna	50	60-72	82
Bluefish	50	66-72	84
Blue Marlin	70	74-82	88
Bonefish	60	72-84	92+

### Operation

#### Temperature Display

The WTP65 displays temperature in degrees Fahrenheit by default but may be configured for degrees Celsius by connecting terminal (F) to ground (terminal A).

#### Selecting Temperature Units (Deg. C/F)

To make the display read in degrees Celsius, connect terminal (F) to ground (terminal A).

**Warning:** The presence of this link is only checked when the WTP65 is powered up. Inserting the link with the unit already powered up will modify the temperature calibration settings.