

Other CruzPro Products

- Depthsounders & Speed/Temperature/Logs
- DC Volts/Amps/Amp-Hour Monitor
- AC Volts/Amps/Freq/kW Monitor
- LPG/Petrol Gas Detectors/Alarms
- Bilge Water Alarms & Bilge Pump Controllers
- Remote Digital NMEA 0183 Data Repeater
- Digital Fuel Gauge & Fuel Consumption Calculator
- Digital Gauge for Three Tanks /w Separate Alarms
- Smart and Manual Alternator Regulators
- Marine Security System
- RPM/Engine Hours/Elapsed Time Gauge
- Digital Oil Pressure Gauge/Alarm
- Digital 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
- NMEA 0183 Remote Data Repeater/w 4 Input Channels

CruzPro®
CH60

CE



Intelligent
Windlass Controller

not clear the display but use the ▲ and ▼ keys to make the previously displayed number read the correct value in Feet, Metres, or Fathoms. Press the + key for 1/2 second to save the new calibration value into the memory.

Introduction

The CH60 Windlass Controller/Chain Counter tells you how much chain you have let out. It slows your windlass when the anchor approaches the bow roller and can automatically back-jog the chain a few links to remove tension off the capstan and gearbox. You can display deployed rode or windlass battery voltage. An auto up/down feature can be programmed to automatically deploy or retrieve a fixed amount of chain. A simple calibration procedure will have you up and running quickly.

Warning: *The CH60 controls your windlass and even momentary operation below 6.5 or above 30.0 VDC can cause damage and/or erratic behavior. Be sure your batteries are properly charged and that all connections and wires are of good quality. Do not leave power connected to the CH60 when not being used or when unattended.*

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Viewing/Setting Jog-Back Time

The CH60 can automatically reverse the windlass for a moment when you remove your finger (and the anchor is nearly in). Hold both the ▲ and ▼ keys while applying power to the CH60. Use the ▲ and ▼ keys to select the desired jog-back time (J000 to J255). 000 corresponds to 0.00 seconds, 255 corresponds to 2.55 seconds. Press the + key for 1/2 second to save the new value. *Note: Determine the best jog-back time through trial and error.*

Calibrating the Voltmeter

Hold down the ▼ key and apply power to the CH60. Use the ▲ and ▼ keys to make the displayed number read the correct value. Press the + key for 1/2 second to save the new calibration value.

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Specifications

Power: 6.5 to 30.0 VDC. *Operation outside this range may cause damage and/or erratic behavior.*

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

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

Display: 4 digit LCD, 5 levels of backlighting.

Voltage Accuracy: +/- 0.1 VDC, 9.5 to 30.0 VDC

Units: Can be calibrated for Feet, Meters or Fathoms

Solenoid Drive Capability: Up to 3 amps.

Jog Back Time: Can automatically reverse windlass for 0.00 to 2.55 seconds in 0.01 second intervals.

Memory: Saves Deployed Rode, Calibration, etc.

Data Output: NMEA 0183 4800 baud serial data of deployed rode, windlass battery voltage, etc.

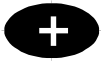
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programmed amount is deployed, if any key is pressed or if a jam occurs. To retrieve rode automatically, press the ▲ key for more than 3 seconds and while holding, press the ▼ key. Automatic retrieval will stop when the anchor gets closer than 5 feet, if any key is pressed or if a jam occurs.

Calibrating The Rode Counter (Ft/M/Fa)

With the anchor in the fully UP position, press the + key for 10 seconds to zero the display. Use the ▼ key to deploy a pre-measured and marked amount of CHAIN. The larger the amount of chain deployed, the more accurate the calibration will be. A number will show on the display. Do not clear the display. While this number is being displayed, turn OFF the power to the CH60. Reapply power while holding down the + key (hold for at least three seconds). Do

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Press and hold 10 seconds, zeros rode display

Auto UP/DOWN Operation of the CH60

WARNING! By enabling this feature, you agree to supervise and assume all responsibility for its operation. If you manually deploy or retrieve rode while power is removed from the CH60 this feature will NOT work properly and could cause damage.

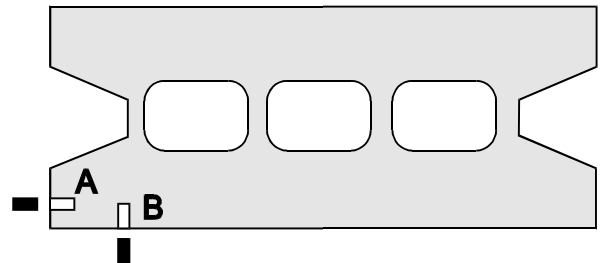
Hold down the ▲ key and apply power to the CH60. Use the ▲ and ▼ keys to enter the amount of rode you wish to deploy automatically. Press the + key for 1/2 second to save this value. If you later re-calibrate the CH60, this feature will automatically be reset to zero and disabled, so calibrate first.

To automatically deploy this amount of rode, press the ▼ for more than 3 seconds and while holding, press the ▲ key. The windlass stops when the

Installing the Magnet

Before starting the installation, please read the entire installation procedure for the magnet, sensors and instrument head.

Epoxy the magnet in one of the thicker "knuckles" of the chain wheel as shown in Figure 1. The "polarity" (North or South pole) is not important. Cover the magnet with a thin coat of epoxy as a moisture seal.



Drill 13/64" (5.5mm) diameter hole, 1/4" (7mm) deep in location A or B depending upon sensor placement

Figure 1 - Chainwheel Magnet Placement

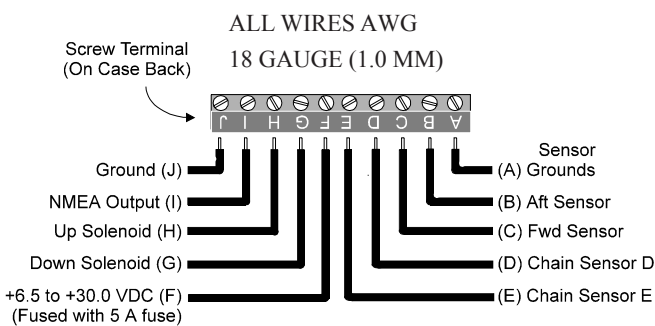


Figure 5 - Wiring Diagram

Wire screw terminal E to ground to stop decimal point from blinking.

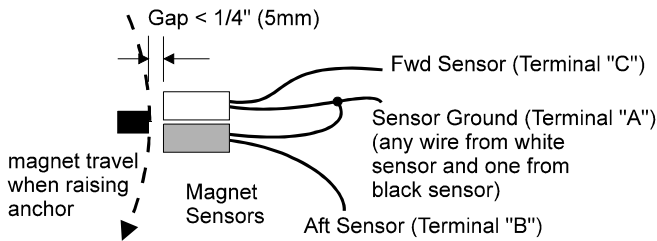
fabricate a bracket to position the sensors properly.

Many windlass manufacturers predrill the chain wheel and deck plate and may have prefabricated brackets and/or sensor holders available for some or all of their windlasses. Check with your windlass manufacturer for availability, location and mounting suggestions.

The sensor over which the magnet first passes when the anchor is being raised is called the "Forward" sensor, the other is referred to as the "Aft" sensor. It is not required, but recommended, that you make the white colored sensor the "Forward" sensor.

The magnet must pass over one sensor then the other and must pass within 1/4 inch (5mm) of the sensors for reliable operation as shown in Figure 2.

Figure 2



Installing the Magnet Sensors

Place the sensors right next to each other (they should be touching) in a safe location so the magnet passes over one then the other sensor. If you are unable to locate the sensor in the windlass housing you may need to

Operation

Key Functions

The keys are used to control the windlass, select what to display, backlight levels, and calibrate the instrument. After changes are made, the new information is saved to memory.

- Raise anchor with automatic slow-down at the end
- and Raise anchor at full speed
- Lower anchor
- Press and hold 1/2 second, adjusts backlight intensity
- Quick press, switches display between Rode and Battery Voltage mode

Installing the Instrument Head

- Drill a 2-1/8" (54 mm) mounting hole where you desire to mount the instrument (Figure 3).
- Bring the solenoid control lines, power, ground and sensor wires out of the mounting hole and use a

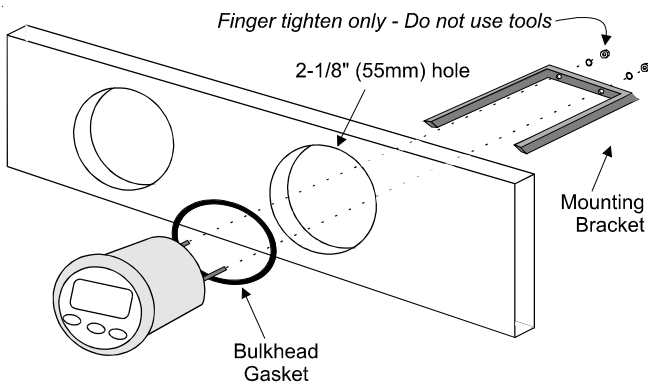


Figure 3

small flat screwdriver to make the connections to the screw terminal on the instrument case back as shown in Figures 4 and 5.

Figure 4

