Other CruzPro Products

- Depthsounders & Speed/Temperature/Log
- DC Volts/Amps/Amp-Hour Monitor
- AC Volts/Amps//Freq/kW Monitor
- LPG/Petrol Gas Detectors/Alarms
- Bilge Water Alarms & Bilge Pump Controllers
- Windlass Controller/Chain Counter
- Digital Fuel Gauges & Fuel Consumption Calculator
- Digital Gauges for 1 & 3 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
- Remote Digital NMEA 0183 Data Repeater

CruzPro®
F-60

Digital Fuel Gauge/w Alarms

Viewing/Changing Display Damping

To help prevent display fluctuations in a rolling sea the display has been damped. If you wish the display to respond more quickly or more slowly, you can alter the display damping between a value of 1 to 254. The factory default value is 32. The higher the damping, the more slowly the F-60 responds to changes.

To change the display damping, press and hold both the ✚ and the ▲ keys for 10 seconds (until you hear a long beep). Use the ▼ and ▲ keys to set the display damping value. The higher the value, the more heavily the display is damped. Once the desired level is showing on the display, press the ✚ key for 1/2 second to save this value into memory.

Introduction

The F-60 Digital Fuel Gauge provides an accurate display of fuel remaining, trip fuel and total fuel used. Fuel remaining can be displayed up to 6550 liters or gallons or as a percentage (0 to 100%) with user selectable display damping. The F-60 is pre-programmed for use with all known resistive American and European level senders made by VDO, Teleflex, Mercury, GM, Stewart-Warner, Centroid, Faria and others. Low and High fuel alarms can be set over the entire range. When activated, the built-in 85 dB alarm will sound and the display will flash. Five levels of backlighting can be selected and all setup, alarm values, sender type and maximum tank capacity are saved in a nonvolatile memory. The F-60 outputs NMEA 0183 serial data or this terminal may be programmed to activate an external alarm or fuel transfer pump if using a day tank.

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Specifications

Power supply: 9.5 to 33.0 VDC, .035 amps nom.

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

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

Accuracy: Limited only by sender accuracy

Senders: Works with 0-30, 0-70, 0-90, 10-73, 10-180, 33-240, 40-250 ohm level senders by VDO, Teleflex, GM, Stewart-Warner, Mercury, Faria, and others (both American and European styles). Custom versions available for 0-5V and 4-20mA senders.

Alarms: 85 db internal Low and High level alarms, settable from 000.0 to 6553. External alarm output.

Display: 4 digits, Liters, Gallons or %, 000.0 to 6553 gallons or liters. Five levels of backlighting.

Data output: NMEA 0183 4800 baud serial output of Gallons/Liters Remaining. $IIXDR sentence or programmable as an external alarm output or control a transfer pump.

Select NMEA, External Alarm or Transfer Pump Mode

To toggle screw terminal pin (C) between NMEA 0183 data output, External Alarm Output or to automatically activate a fuel transfer pump (based on low and high fuel alarm settings), press and hold down both the ▼ and ▲ keys for 10 seconds (until you hear a long beep). When the alarm output or fuel transfer pump is activated, a +5VDC signal (10 mA Max.) is output on terminal (C).

The display shows "dAtA", "E-AL" or "tFEr" to indicate the currently selected mode. In fuel transfer pump mode, the display will flash when the transfer pump is running. The pump will activate when the fuel level drops below the LOW alarm value and turn off when the fuel level reaches the HIGH alarm setting.

Setting Maximum Tank Capacity

The factory default tank capacity is set for 250.0 (liters or gallons). To change the tank size, press and hold the ✚ key for 10 seconds (until you hear a long beep). Use the ▼ and ▲ keys to change the maximum tank capacity, either in liters or gallons. Once the correct maximum tank capacity is showing on the display, press the ✚ key for 1/2 second to save this value into memory.

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.

Finger tighten only - Do not use tools

2-1/8" (55mm) hole

Mounting Bracket

Bulkhead Gasket
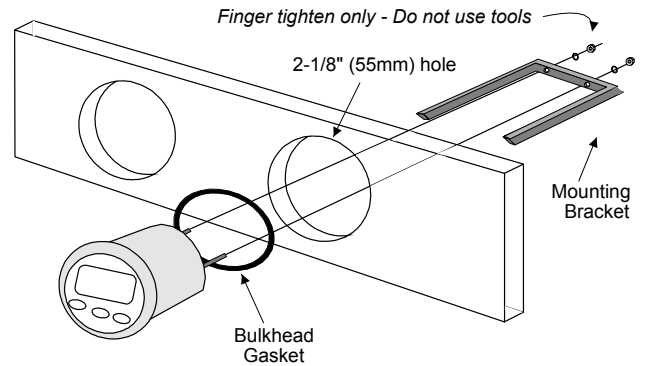
Figure 1

Checking Amount Remaining

Press the ✚ key to display gallons/liters remaining. Press the ▲ key to display amount remaining in percent (0 to 100%).

Checking Amount Used and Total Used

Press the ▼ key to display how many gallons or liters you have used THIS trip. Trip Amount Used automatically resets to zero every time you disconnect power from the instrument. Quick press both the ▼ and ▲ keys simultaneously to display how many number of gallons or liters have been used (how much is required to fill the tank).
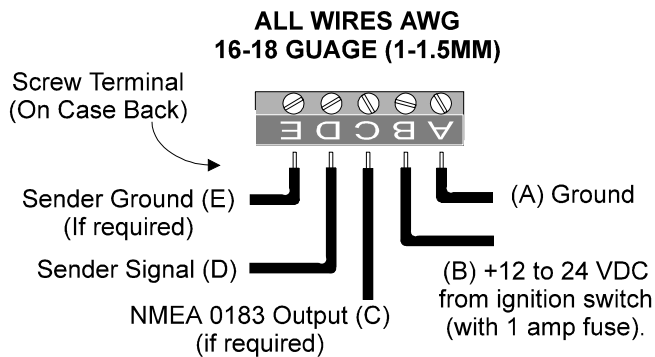
driver to make the connections to the screw terminal on the instrument case back as shown in figure 2.

● Carefully check all your wiring against those shown in figure 2. If everything is wired correctly you can mount the F-60 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.*

Mounting and Wiring

● Drill a 2-1/8" (55mm) mounting hole where you desire to mount the instrument (Figure 1).

● Bring the sender wires, ground, and power lines out of the mounting hole and use a small flat screw-

ALL WIRES AWG
16-18 GUAGE (1-1.5MM)

Screw Terminal (On Case Back)

Sender Ground (E) (If required)

Sender Signal (D)

NMEA 0183 Output (C) (if required)

(A) Ground

(B) +12 to 24 VDC from ignition switch (with 1 amp fuse).

Figure 2

Selecting Sender Type

Press and hold down both the ▼ and "✚" keys for 10 seconds (until you hear a long beep.) Use the ▲ and ▼ keys to select the correct sender from the list below. Press the "✚" key for 1/2 second to save your entry. The factory default sender is U-5 (10 to 180 ohms).

U- 1	0-30 Ohm	U-10	90-0 Ohm
U- 2	0-70 Ohm	U-11	73-10 Ohm
U- 3	0-90 Ohm	U-12	180-10 Ohm
U- 4	10-73 Ohm	U-13	240-33 Ohm
U- 5	10-180 Ohm	U-14	250-40 Ohm
U- 6	33-240 Ohm	U-15	0-5 Volts *
U- 7	40-250 Ohm	U-16	5-0 Volts *
U- 8	30-0 Ohm	U-17	4-20 mA *
U- 9	70-0 Ohm		* = Custom Versions

Operation

Key Functions

The ▼ ✚ ▲ keys are used to select backlight levels, display fuel remaining (in liters, gallons or percent), display total gallons/liters used or amount used this trip, set the low/high level alarms, select sender type and set the tank capacity. After changes are made, the new information is automatically saved to memory.

Backlight Intensity

Press the ✚ key for 1/2 second to adjust the backlight level for nighttime viewing. Each time you press the "✚" key for 1/2 second, the backlight level will change: 1, 2, 3, 4, OFF, 1, 2, ... etc.

Figure 1

Setting Low/High Level Alarms

While viewing Gallons/Liters Remaining, press and hold the ▼ or ▲ key for ten (10) seconds to view/set the Low or High level alarms. You will hear a long beep and the alarm value is displayed. Press the ▲ and ▼ keys to set the desired alarm limit (000.0 to 6553 liters or gallons). Press the "✚" key for 1/2 second to save your entry to the nonvolatile memory.

Alarms ON/Off

Press the ▲ or ▼ key for 1/2 second to "arm" or "disarm" the level alarms. The display will flash "On" or "OFF" briefly to show you the state of the alarms. You should leave the alarms armed at all times and only disarm it to silence the alarm buzzer.