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® F30

CE

Universal Digital Fuel Gauge/w Alarms

Table of Contents

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Introduction

The F30 Universal Digital Fuel Gauge provides accurate display of fuel remaining, trip fuel and total fuel used. Fuel can be displayed up to 6550 liters or gallons or as a percentage (0 to 100%). The F30 is pre-programmed for use with all known American and European resistive output fuel 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 of the instrument/sender. When activated, the built-in 85 dB alarm will sound and the display will flash. Five levels of backlighting can be selected and all set-up, alarm values, sender type and maximum tank capacity are saved in a non-volatile memory. The F30 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.

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). Also works with 0-5V and 4-20mA senders.

Alarms: 85 db internal Low and High Fuel alarms, settable from 000.0 to 6553.

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 Fuel Remaining. $IIXDR sentence.

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.
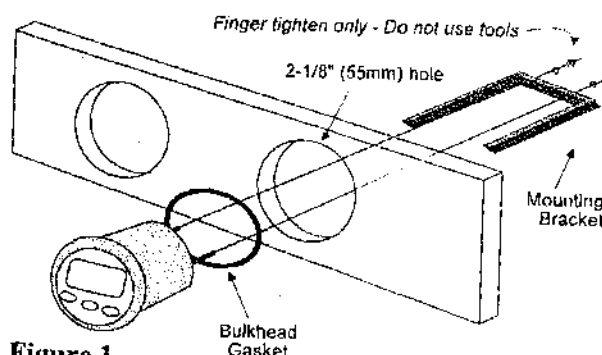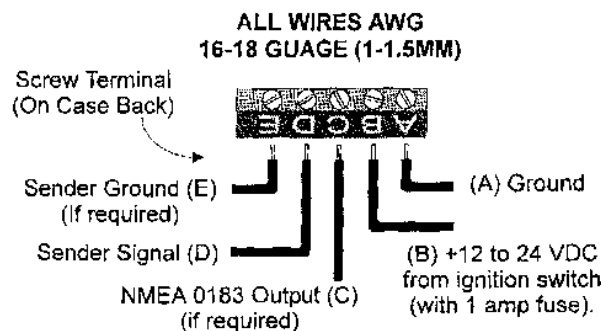

Finger tighten only - Do not use tools

2-1/8" (55mm) hole

Mounting Bracket

Bulkhead Gasket

Figure 1

- 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).

Page 6   **Figure 2**

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 F30 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.*

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Operation

Key Functions

The ▼ + ▲ keys are used to select backlight levels, display fuel remaining (in liters, gallons or percent), display fuel used or trip fuel, set the low/high fuel 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 night-time viewing. Each time you press the "+" key for 1/2 second, the backlight level will change: 1, 2, 3, 4, OFF, 1, 2, ... etc.

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Setting Low/High Fuel Alarms

While viewing Fuel Remaining, press and hold the ▼ or ▲ key for ten (10) seconds to view/set the Low or High fuel alarm setting. You will hear a long beep and the alarm value is displayed. Press the ▲ and ▼ keys to set the desired fuel alarm limit (000.0 to 6553 liters or gallons). Press the "+" key for 1/2 second to save your entry to the non-volatile memory.

Alarms ON/Off

Press the ▲ or ▼ key for 1/2 second to "arm" or "disarm" the fuel 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.

Figure 1   **Page 9**

Checking Fuel Remaining

Press the **+** key to display fuel remaining. You will see liters or gallons remaining.

Press the ▲ key to display fuel remaining in percent (0 to 100%).

Checking Trip Fuel and Total Fuel Used

Press the ▼ key to display how much fuel you have used in liters or gallons THIS trip. Trip Fuel Used automatically resets to zero every time you disconnect power from the instrument. Press the ▼ and ▲ keys simultaneously to display how much total fuel has been used (how much is required to fill the tank).

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. Once the correct sender has been chosen, press the "+" key for 1/2 second to save your entry.

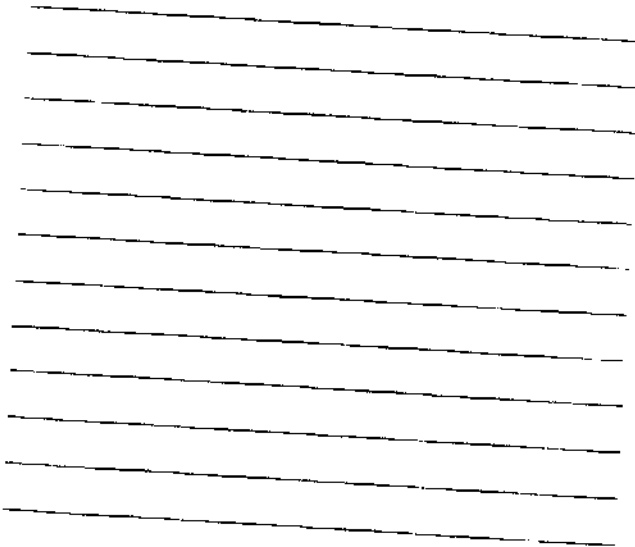| U- 1	0-30 Ohm	U-10	90-0 Ohm
U- 2	0-70 Ohm	U-11	73-10 Ohm
U- 3	0-90 Ohm	U-12	180-10 Ohm
U- 4	10-73 Ohm	U-13	240-33 Ohm
U- 5	10-180 Ohm	U-14	250-40 Ohm
U- 6	33-240 Ohm	U-15	0-5 Volts
U- 7	40-250 Ohm	U-16	5-0 Volts
U- 8	30-0 Ohm	U-17	4-20 mA
U- 9	70-0 Ohm		

Setting Fuel Tank Capacity

Press and hold down the **+** key for 10 seconds (until you hear a long beep.) Use the ▼ and ▲ keys to set the maximum fuel tank capacity, either in litres or gallons. Once the maximum level is showing on the display, press the **+** key for 1/2 second to save this value into memory.

Select NMEA, External Alarm or Fuel Transfer 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 (10mA 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.

Notes

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