

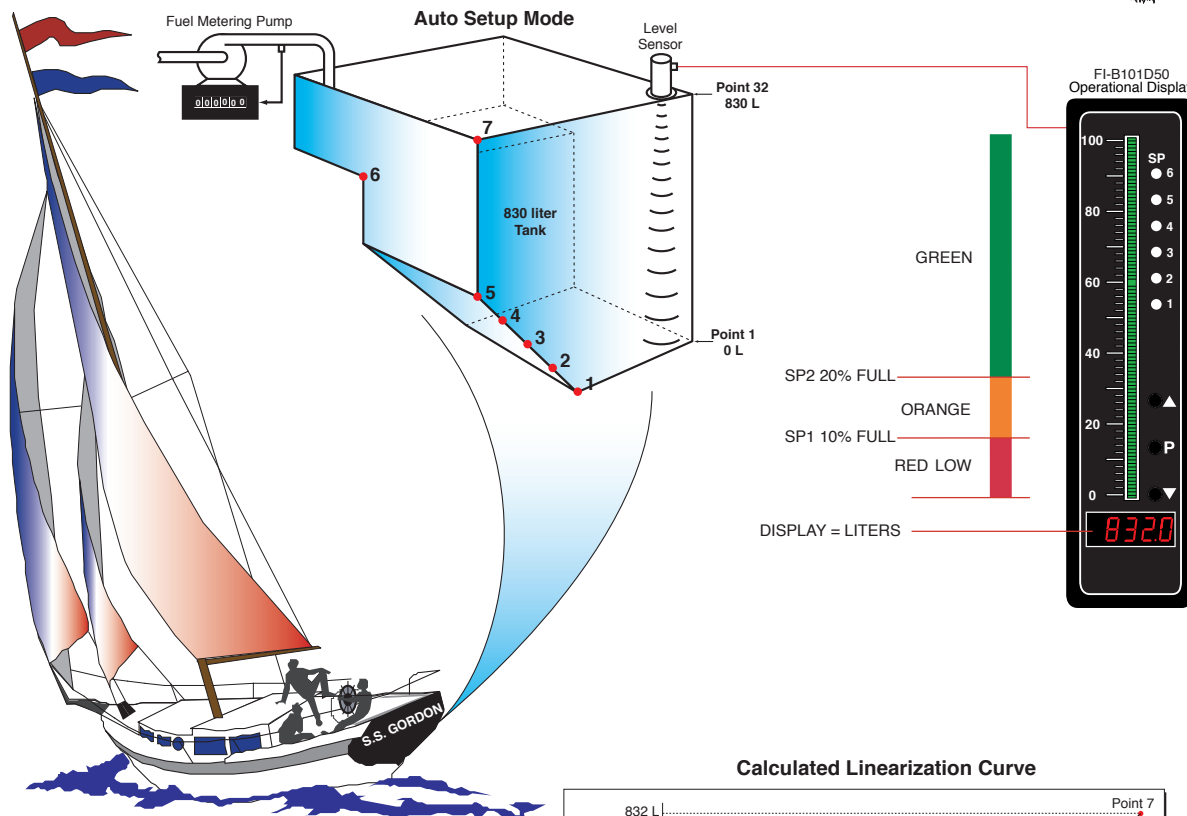
A boat builder requires to display the amount of fuel in an irregular shaped tank using a level sensor. As the output from the level sensor is not linear, a bargraph programmable meter controller is installed to linearize the signal. The digital display shows the amount of fuel in liters, while the bargraph display shows this as a percentage of the tank capacity.

The actual volume of the tank is calculated for the most nonlinear areas of the tank and these are entered into the meter. Setpoints are programmed to indicate on the bargraph when the tank is 20% and then 10% full. The bargraph display is programmed to display green above 20%, orange below 20%, and red below 10% full.

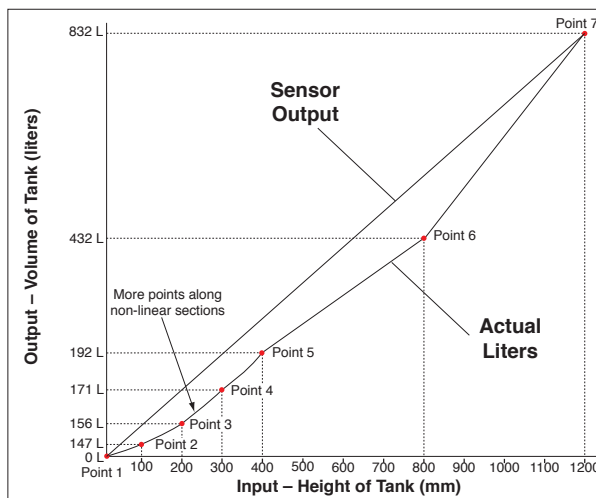
**LINEARIZE YACHT FUEL TANK APPLICATION**



APPLICATION FUNCTIONS



Calculated Linearization Curve



Linearization Table

Points on Curve	Height (mm)	Volume (L)
1	0	0
2	100.0	147.0
3	200.0	156.0
4	300.0	171.0
5	400.0	192.0
6	800.0	432.0
7	1200.0	832.0

APPLICATION VARIATIONS

- Calculate and display liters per hour used from flow sensor input.

Suggested Ordering Code Options for This Application

Basic Order Codes	Comments
<b>FI-B101D50E-PS2-VTR-IP01</b>	Lin Table. Display tank Volume in % or Gallon Rate Hour using Total 1

LINEARIZATION

PROCESS  
4 / 20 mA  
1 / 5 V