
Quick Reference Programming Guide for Model 1810

1. Enter the Programming Mode by shorting terminals 3 & 4 on the back of the instrument. The word “run” will appear on the will appear on the display.
2. Press the “UP” button. “ConFI” (configuration) will appear on the display.
3. Press the “ENTER” button. “UnItS” (units of measure) will appear on the display.
4. Press the “ENTER” button. To scroll the choices for units of measure, press the “UP” button. Choose from: “In-gA” (inches & gallons) or “CE-LI” (centimeters & liters). Make a selection and press the “ENTER” button. “UnITS” will appear on the display again.
5. Press the “UP” button. “Pr Un” (pressure units) will appear on the display. This should be programmed to match the pressure units of the transducer.
6. Press the “ENTER” button. Scroll through the choices: “PSI” (lbs/sq in.), “bAr” (bar) or “PASCA” (kilo pascals). Choose one and press the “ENTER” button to select. “Pr un” will appear on the display again.
7. Press the “UP” button. “FS” (full scale) will appear on the display. This should be programmed to match the full scale pressure rating of the transducer in the same pressure units.

To program a numeric value:

8. Press the “ENTER” button. Five digits will appear on the display with the first digit flashing. The flashing digit can be changed by pressing the “UP” or “DOWN” buttons. Pressing the “ENTER” button will select the next digit to be changed.
9. Enter the desired value’s mantissa (all numbers with NO DECIMAL POINT) by changing one digit at a time. After the last digit is entered, the decimal point will appear on the display. It may not be in the correct position.
10. Move the decimal point to the right or left by pressing the “UP” or “DOWN” buttons. When the decimal point is in the correct position, press the “ENTER” button.
11. The sign (“POS” or “nEg”) will appear on the display. This can be changed by pressing the “UP” or “DOWN” buttons. When the correct sign is chosen, press the “ENTER” button.

The display will return to the previous menu item (i.e. “FS”, “LS”, etc...)

12. Press the “UP” button. “LS” (low scale) will appear on the display. This should be programmed to match the low scale pressure rating (usually zero) of the transducer in the same pressure units.
13. Follow the procedure above for entering a numeric value (steps 8-11) to enter the low scale value. When completed the display will read “LS”.
14. Press the “UP” button. “SPgrA” (specific gravity) will appear on the display. This should be programmed for the specific gravity of the fluid being measured.
(water = 1.0000, diesel fuel = 0.8560)
15. Follow the procedure above for entering a numeric value (steps 8-11) to enter the specific gravity value. When completed the display will read “SPgrA”.
16. Press the “UP” button. “FrE” (frequency) will appear on the display. This should be programmed for the power line frequency (50Hz or 60Hz).
17. Press the “ENTER” button. Scroll through the choices: “50” or “60”. Choose one and press the “ENTER” button to select. “FrE” will appear on the display again.
18. If measuring VOLUME of a tank, press the “UP” button until “StrAP” appears on the display. (Enter tank strapping table data. See the User Manual section 2.1.3.)
19. Press the “CANCEL” button until “COnFI” appears on the display.
20. Press the “UP” button. “LUL1” (Level 1 Sub Menu) will appear on the display.
21. Press the “ENTER” button. “rEF” (reference) will appear on the display.
22. Press the “ENTER” button. Scroll through the choices: “Hgt” (height), “UOL” (volume), or “CUr” (current). This choice will determine if the LEVEL 1 scale will convert the input current signal to a fluid level (height) in inches/centimeters, a tank volume, in any desired units, or simply display the measured current signal value in milliamps.

(Note: To select VOLUME, there must be data programmed in the Strapping Table (step #18). See the User Manual section 2.1.3.)
23. Choose one and press the “ENTER” button to select. “rEF” will appear on the display again.
24. Press the “UP” button. “SF” (scale factor) will appear on the display. This is a programmable multiplication factor. The (height, volume, or current) measured will be multiplied by this value. The default value is +1.0000.
25. If a different scale factor is desired, press the “ENTER” button. Follow the procedure above for entering a numeric value (steps 8-11) to enter the scale factor value. When completed the display will read “SF”.

26. Press the “UP” button. “dECP” (decimal places) will appear on the display. This sets the resolution of the value displayed when LVL1 is selected.
27. Press the “ENTER” button, a number will appear on the display. This represents the number of decimal places shown to the right of the decimal point. This may be changed from 0 to 5 by pressing the “UP” or “DOWN” buttons. (If this is set too high, the display may flash “99999”. If this occurs, reduce the number of decimal places.)
28. Choose the appropriate number of decimal places and press the “ENTER” button to select. “dECP” will appear on the display again.
29. Press the “UP” button. “SEt” (offset) will appear on the display. This programmed value is added to the measured value. Example: monitoring water level of 0 to 10 feet, at 530 feet above sea level. An offset of +530.00 can be programmed, so the display will read from 530 to 540 feet above sea level.
30. Press the “ENTER” button, a number will appear on the display. Follow the procedure above for entering a numeric value (steps 8-11) to enter the offset value. When completed the display will read “SEt”.
31. Press the “UP” button. “FIL” (filter) will appear on the display. This sets the depth of an infinite impulse (mathematical averaging) filter.
32. Press the “ENTER” button, a number will appear on the display. This may be changed from 1 to 10 by pressing the “UP” or “DOWN” buttons. The higher this number, the more measurements are averaged before the display is updated, which makes the display more stable, but also slower to update.
33. Choose the appropriate filter setting and press the “ENTER” button to select. “FIL” will appear on the display again.
34. Press the “UP” button. “tHrES” (threshold) will appear on the display. This sets the threshold for the averaging filter. If the displayed value changes by more than this threshold value in one second, the filter will be temporarily turned off, so the display can be updated more quickly.
35. Press the “ENTER” button, a number will appear on the display. Follow the procedure above for entering a numeric value (steps 8-11) to enter the threshold value. When completed the display will read “tHrES”.
36. Press the “CANCEL” button, “LUL1” will be displayed.

37. Press the “UP” button. “LUL2” (Level 2 Sub Menu) will appear on the display. Level 2 and Level 3 are programmed independently, in the same manner as Level 1. They may be programmed for different references, scale factors, etc... Repeat steps 21 – 36 as needed for Level 2 and Level 3.
38. If the 1810 is equipped with the optional Analog Output (-0, -1, -2, -4), see User Manual section 3.1.1 for programming instructions.
39. If the 1810 is equipped with the optional High/Low Relay Limits (-R), see User Manual section 3.2.1 for programming instructions.
40. If the 1810 is equipped with the optional Serial Port (-S), see User Manual section 3.3 for programming instructions.
41. If the 1810 is equipped with the Parallel BCD option (-PB), see User Manual section 3.4.1 for programming instructions.
42. If the 1810 is equipped with the Multiplexed BCD (-B) option, see User Manual section 3.5.1 for programming instructions.
43. If the 1810 is equipped with the External Relay option (-E), see User Manual section 3.4.1 for programming instructions.
44. When all programming is completed, press the “CANCEL” button until “run” appears on the display.
45. Return to the Operation Mode by pressing the “ENTER” button.
46. Select a Scale to display by pressing the “LVL1” or “LVL2” button, or press both at the same time to select “LVL3”.