

WATER & SOIL

HydroSense Setup

If you need to reprogram or enter new data into the HydroSense meter, please follow these instructions as appropriate:

To enter the meter's ID identifier number.

This ID number appears each time you switch the meter on. If data offload via RS232 is used to download the stored memory onto a PC, this ID number is also sent at the end of the data.

Press 6 - Set parameters, press 6 - Difr'l OS/ID, and press 2 - Edit ID number.

The currently set value (if any) is shown. Enter the ID number required, for example the unit's serial number, using the keypad, and press ENTER. Press ENTER again to store the new ID number.

To set the date and time.

Press 8 - Set Clock. Enter the time and press ENTER. Enter the date and press ENTER. Your entries will be displayed, press ESCAPE to exit.

To enter calibration factors.

The sensor you wish to use with the HydroSense should have a 0-50 mV differential voltage output. You also need details of its sensitivity in millivolts per unit, and zero offset figure in millivolts, if appropriate.

To calculate the Full Scale (FS) figure to enter into the HydroSense meter; $FS = 1000 / (\text{mV per unit} * 19.238)$

The Zero Offset (OS) figure to enter into the HydroSense meter is the sensor's zero offset in millivolts.

You can now enter these figures into the meter using the keyboard, or via the PC and the meter's RS232 socket.

a) via the meter keyboard

Press 6 - Set Parameters, press 3 - Edit Factors.

For each sensor in turn, enter its number (No), for example, 00 for the first sensor, 01 for the second sensor etc. Press NEXT to pass to the next entry. Enter the Length of the tensiometer (in cms). Then enter the FS and OS figures calculated above, remembering to enter the + or - sign for the offset as appropriate. Press ENTER to make these factors the 'current' ones - which means that these factors will now be used to display / record values from the sensor currently plugged into the meter.

Repeat for each sensor. To check the entries, press 6 - Set Parameters and press 1 - Browse Factors. Press NEXT to scroll through the entries you have made.

b) via the PC.

Firstly run the Skye Lynx Standard communication (choose settings for DataHog1). This software is available for free download for the Skye Instruments website www.skyeinstruments.com if it was not supplied with your meter.

Connect the HydroSense meter to the PC using the datalead.

On the meter, press 6 - Set Parameters and press 9 - Fctrs - RS232edt. Press ENTER to proceed. A message will appear on the PC screen asking you to enter the factor number (No), use the PC

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keyboard. Enter Length in cms, full scale value FS and zero offset OS as above. Press Enter to confirm, and continue or escape to quit as necessary.
Press ESCAPE on the meter to quit.

To enter labels.

The labels are simply available to identify the sensor being measured, if more than one sensor is being used with the HydroSense. The label is offloaded with the sensor readings, whether by the meter display, or via the RS232 socket to a PC.

a) via the meter keyboard (only numbers can be entered)

Press 6 - Set Parameters, press 4 - Edit Labels.

For each sensor in turn, enter its number (No), for example, 00 for the first sensor, 01 for the second sensor etc. Press NEXT to pass to the next entry. Then enter the required set of numbers for the label. Press ENTER to make these factors the 'current' ones - which means that this label will now be used to display / record values from the sensor currently plugged into the meter.

Repeat for each sensor. To check the entries, press 6 - Set Parameters and press 2 - Browse Labels. Press NEXT to scroll through the entries you have made.

b) via the PC (numbers and letters can be entered)

Firstly run the Skye Lynx Standard communications software. Connect the HydroSense meter to the PC using the datalead.

On the meter, press 6 - Set Parameters and press 0 - Lbls - RS232edt. Press ENTER to proceed.

A message will appear on the PC screen asking you to enter the label number (No), use the PC keyboard. The currently set label will be displayed, press Enter to edit, and then type in your new label. Press Enter to confirm, and continue or escape to quit as necessary.

Press ESCAPE on the meter to quit.

To enter sensor units.

This operation must be done via the PC, as letters cannot be entered using the meter's keypad.

Firstly run the Skye Lynx Standard communication. Connect the SpectroSense meter to the PC using the datalead.

On the meter, press 6 - Set parameters, press 5 - Set IP's/Units and press 2 - Dif. Amp Units. Press ENTER.

The currently held units are displayed on the PC screen, press Enter on the PC keyboard to change.

Type in the new units (maximum 3 letters), press Enter to confirm.

Press ESCAPE on the meter to quit.

Your meter is now ready to use.

To display sensor readings Press 1 - Read / Record. Press NEXT to display the numbers of the factors and labels currently being used by the meter. To change the factors and labels, simply type in the number you require, using NEXT to continue, and finally press ENTER to make the new values current.

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