



DATALOGGERS

DATAHOG 2 & SKYELYNX STANDARD SOFTWARE

Instructions to reconfigure a tensiometer relay channel

TO CONFIGURE:

1. Connect the DataHog 2 datalead to the RS232 port on the logger, and to the appropriate serial communications port on your PC.
2. Start the SkyeLynx Standard software as usual. If the logger is in 'log mode' you should hear the logger 'beep' every 10 seconds and simultaneously display the following message in the main blue window on screen
ANY NUMERIC KEY TO PROCEED (0-9)
3. Click on the FILE menu and choose Wake up Logger. When the screen has finished scrolling you will see the logger Main Menu displayed. (Please remember that whilst the logger is 'awake' and in Main Menu mode, it is not recording any measurements or switching the relays.)
4. To reconfigure a relay channel, choose Option C from the Main Menu (by pressing 'C'). Please check your Hardware Configuration Certificate at the front of your DataHog 2 manual before you begin. This will show all the information you will be asked to enter.
Enter the Relay number you wish to configure, e.g. 1
Enter the Software Channel Number of the channel you wish to associate with this relay, e.g. 00.
Enter the relay threshold in the format requested - see below for calculation examples
The choices you have just entered will be displayed for your confirmation, however the threshold is now expressed in the units of measurement (e.g. hPa etc). Press 'Y' to confirm and return to the Main Menu.
5. It is advisable to check that the changes you have just made are in place before returning the DataHog 2 to logging mode.
From the Main Menu, choose Option 1 to display the current setup.
Choose '4' from the sub-menu to check the relay setup. The relay number will be shown with its associated software channel and its threshold setting.
Choose '6' to return to Main Menu
6. Press ESCAPE to return the DataHog 2 to logging mode. Wait for the message 'ANY NUMERIC KEY TO WAKE UP' to appear before disconnecting the datalead and PC.

FORMAT TO ENTER RELAY THRESHOLD

Tensiometer channels are a differential voltage type, configured by the Ax+B scaling and so the threshold must be entered as a count value with a +/- sign.

- A) The logger's Full Scale count value is +19000.
- B) The tensiometer's Full Scale hPa value will be shown on the logger's hardware Configuration Certificate (*e.g. 5468.2 for the sensor SKT 650 26123*)
- C) So the "number of counts per hPa" is $+19000 / (\text{tensiometer Full Scale})$
(*e.g. $+19000 / 5468.2 = +3.47 \text{ counts/hPa for tensiometer SKT 650 26123}$*)

(Continued)

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- D) The tensiometer's Zero Offset shown the logger's hardware Configuration Certificate is in shown counts (*e.g. 0034 for the sensor SKT 650 26123*) rather than in hPa as needed to calculate the Threshold to enter for switching relays.
The hPa value can be calculated as below, or read from the logger's Main menu, Option 1 Display Current Setup and Option 2 Log Mode & Thresholds. You must change the sign of the value shown in this menu. (*e.g. for the tensiometer SKT 650 26123 the Logging Threshold shows 009.78, so use the value +009.78 hPa for the tensiometer Zero Offset*)
Alternatively, to calculate the tensiometer Zero offset in hPa, divide the Zero Offset in counts by the 'number of counts per hPa'. (*e.g. +0034/+3.47 = +9.80 hPa*)
- E) Now add the tensiometer Zero Offset in hPa to the required switching threshold in hPa.
(*e.g. if you wish to switch irrigation at 30 hPa, add 30 + 9.8 = 39.8 hPa*)
- F) Multiply the "number of counts per hPa" by this new threshold (to obtain the counts value at the threshold) and enter this in the format +xxxxx or -xxxxx
e.g. to switch for tensiometer SKT 650 26123 at a threshold of 30 hPa:
*(30 hPa + 9.8 Zero Offset hPa) * 3.47 = 138.11.*

