



DATALOGGERS

DATAHOG2 & SKYELYNX STANDARD SOFTWARE **Instructions to reconfigure a wind speed relay channel**

DataHog2 relay outputs are individually programmable to give a switch closure output above or below user set thresholds of sensor measurements. Each relay can only be associated with one sensor (e.g. a relay cannot switch on the average of several sensors), however any one sensor may be assigned to several relays if a threshold 'window' is desired.

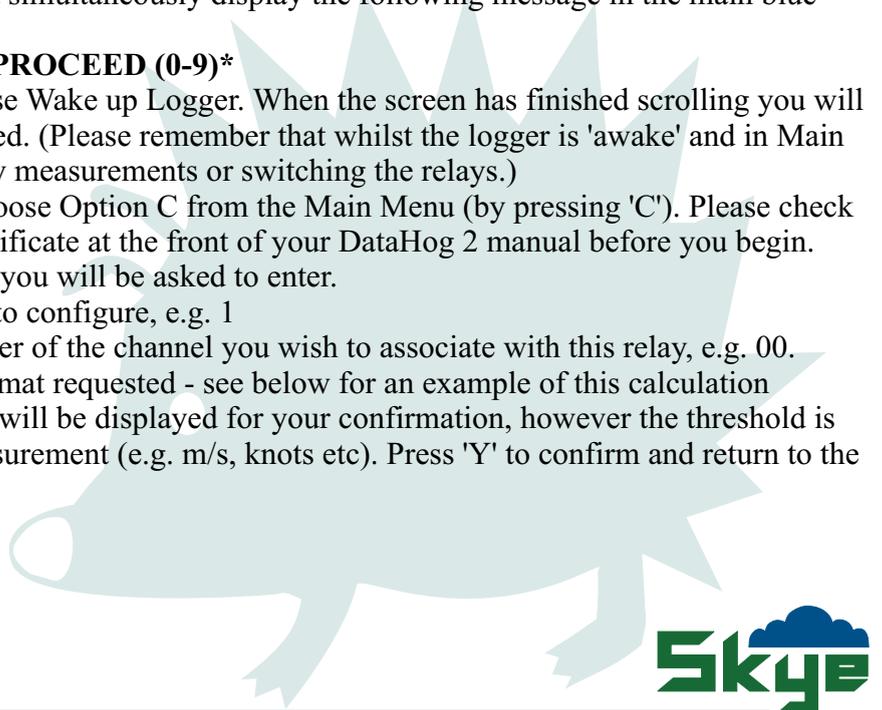
These are changeover relays, single pole with all three contacts, off, common and on (contacts 1, 2 and 3) available to the user. They are gold plated for low level relay switching, and so are for light duty, low inrush switching only. They are not suitable for direct mains connection, inductive loads or loads over 0.5 amps. Slave relays must be used if these ratings are to be exceeded. The DataHog relays have a very low contact resistance and are suitable for dry switching circuits. These relays are uncommitted, i.e. volt free switches.

The logger will compare the relay's assigned channel measurement with the configured threshold level at each Sample Interval (not the Storage or Log Interval), and then switch the relay as required. If the DataHog is in Main Menu mode (i.e. not logging) then the relays will remain in their last set position until logging is resumed and the next Sample Interval occurs.

Relay output sockets have 3 pins, so that they cannot be confused with other loggers sockets. ACC/8B is the part number for the matching 3 pin plug. Please see Chapter 4.11 of the DataHog manual for wiring details. (Pin 1 and 2 are joined when the threshold is above the set threshold and Pin 2 and 3 are joined when the threshold is below the set threshold).

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 an example of this calculation
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. m/s, knots etc). Press 'Y' to confirm and return to the Main Menu.



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Instructions to reconfigure a wind speed relay channel (cont)

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

1. $Ax+B$ scaled channels - the threshold must be entered as a count value with a +/- sign.
The logger's Full Scale count value is +19000.
The sensor's Full Scale empirical unit value will be shown on the logger's hardware Configuration Certificate (*e.g. anemometer A100R 8067 with H2C cups, 48.3 rpm/m/s, Full Scale Value for 30 second sample time is 786.75*)
So the number of counts per sensor unit is $+19000 / (\text{sensor Full Scale})$
(*e.g. $+19000 / 786.75 = +24.15$ for the anemometer A100R 8067*)
Multiply the number of counts per sensor unit by the threshold in sensor units required (to obtain the counts value at the threshold) and enter this in the format +xxxxxx or -xxxxxx
(*e.g. to switch anemometer A100R 8067 at a threshold of 100 m/s, $+24.15 * 100 \text{ m/s} = 2415$, enter as +02415*)

NOTE if the logger's Sample Time (not Storage or Log Time) is changed, then the Full Scale Value must be recalculated and also the Relay Threshold Value. See Technical Notes 1.0 at the back of the DataHog2 manual for details.