METER
ENVIRONMENT

SETTING SDI-12 ADDRESSES ON METER DIGITAL SENSORS USING CAMPBELL SCIENTIFIC DATA LOGGERS AND LOGGERNET

ENTERING SDI-12 COMMUNICATION "TRANSPARENT" MODE

CRBasic (CR200, CR1000, CR3000, etc.)

1. Connect to the data logger by clicking the "Connect" button on the LoggerNet toolbar and click on "Connect" on the "Connect Screen."

2. Select "Data Logger" from the top menu and click on "Terminal Emulator."

3. Click the "Open Terminal" button at the bottom of the window.

4. Press the "Enter" key a few times until a "CRXXXX>" prompt appears (i.e., CR1000>).

5. Type "SDI12" next to the prompt.
   a. Note: The data logger will exit this mode relatively quickly, so if things don't respond, repeat Steps 4 and 5 again.
   b. The data logger will respond with "Enter Cx Port 1, 3, 5, or7" or something similar.

6. Enter the control port that the SDI-12 sensor is plugged into.
   a. The data logger will respond with "Entering SDI-12 Terminal".

7. Proceed to "Setting SDI-12 sensor address" section.

EDLOG (CR10X, CR23X, ETC.)

1. Connect to the data logger by clicking the "Connect" button on the LoggerNet toolbar, and click "Connect" on the "Connect Screen."
   a. Note: In our tests, you have to be running a program with the SDI-12 Recorder instruction (P105) in that program to allow it to go into the SDI-12 transparent mode.

2. Select "Tools" from the top menu and click on "Terminal Emulator."

3. Click the "Open Terminal" button at the bottom of the window.
   a. The terminal wind should say "Active," highlighted in green at the top.

4. Enter "pX" at the asterisk prompt where 'p' is the control port number (1-8) attached to the SDI-12 sensor.
   a. If you don't see an asterisk, press 'Enter' and one should appear.
   b. Data logger should respond: "entering SDI-12."
   c. The data logger will exit out of this mode reasonably quickly. Once it exits, you must repeat Step 4.

5. Proceed to "Setting SDI-12 sensor address" section.

SETTING SDI-12 SENSOR ADDRESS

Note: Sensors must be addressed individually so only ONE sensor may be connected to the communication port at any time during addressing.

1. Connect first SDI-12 sensor to the communication port entered in Step 6 above.

2. Query its address by typing: ?!
   a. The sensor will return its address such that, if its address is "0" then the line will read: ?!0.

3. Assign its new address by typing: 0AX! where X is the new address you want to assign the sensor.
   a. For example, if the sensor was assigned address "2" and you wanted to change it to "5," you would type: 2A5!
   b. The computer would return the new address so the line would look like: 2A5!5.
   c. Possible addresses for SDI-12 communication with CR Basic type loggers are 0 through 9, a through z, and A through Z. With Edlog-type loggers, only addresses 0-9 are recognized.

4. Repeat Steps 2 and 3 for all sensors you need to address, choosing different addresses for each sequential sensor.

5. Once all sensors are individually addressed, all communication lines can be connected together at a single node and the data logger will address each sensor individually using the addresses that we assigned and the appropriate SDI-12 program.

COMPLETE INFORMATION ON SDI-12 COMMUNICATION USING METER DIGITAL SENSORS

To see a complete list of SDI-12 functions, find the latest METER sensor integrator guides online, or contact METER support (support.environment@metergroup.com).

Download the researcher's complete guide to soil moisture

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