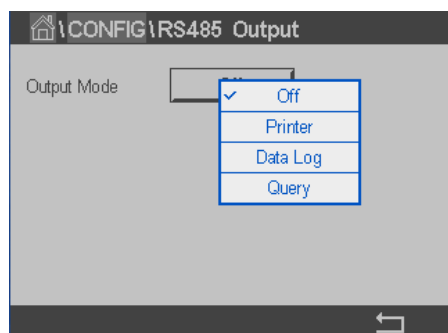


## RS-485 Output for M800 Has Expanded!

In previous communications, we described the operation of the new printer capability through the RS485 communication port introduced on the M800. Now, we are pleased to announce that this functionality has been expanded to include data logging and data querying capabilities. Details for the operation of all the RS485 configurations are provided in this article.

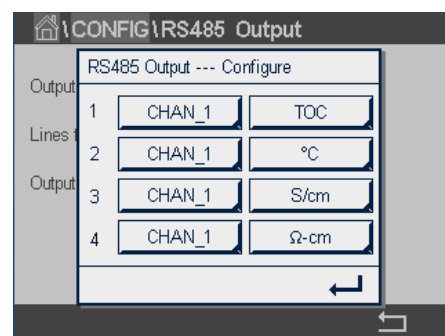
### RS485 Output Configuration

(Path: \*\*/RS485 Output)





The RS485 Output menu option allows configuring the M800 RS485 output for either data output to a PC or PLC for data logging or processing, or for output to a suitable printer if a permanent printed record is desired. The configuration is chosen by pressing the Output Mode button. The mode options available are **Off**, **Printer**, **Data Log** and **Query**.

The RS485 output may be configured to print or provide data output of up to 6 configured measurements for each available sensor input, including pulsed input channels.



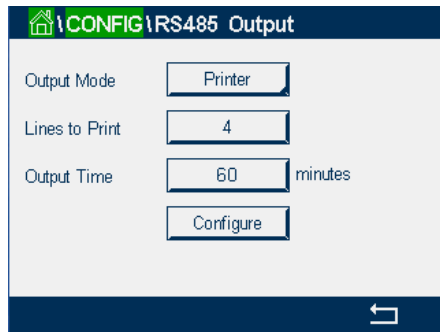
Once the RS485 output function has been selected and configured according to the steps in the sections below, the output data must be selected. Press the **Configure** button shown in the RS485 Output setup screen to specify the data for output to printer or to a connected RS485 device. The number at the left of the window shows the order in which the lines will appear on the printer output from top to bottom, or the order in which the columns will appear from left to right for data log or query mode. From the first dropdown, select the channel with which the desired sensor is connected. This dropdown will list the labels associated with each channel as configured under Channel Setup. Using the second dropdown, select the unit associated with the measurement to be displayed. Note that if more the 4 lines of output have been selected, the < and > icons can be used to navigate through the pages to display all parameters to be configured.

Once the measurement output configuration has been completed, press the  icon and then the  icon. Select **Yes** to save changes and return to the **\*\*** menu.

### Off

Selecting Off deactivates the RS485 Output.

### Printer



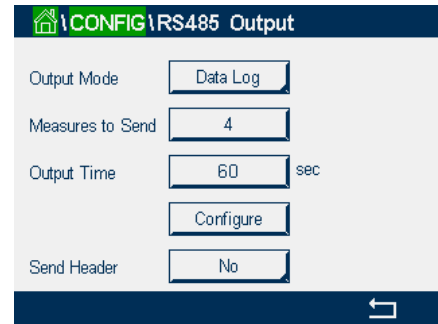
The Printer option allows configuring the M800 RS485 output to send data to a suitable printer. The printer output may be configured to print up to 6 configured measurements on separate lines, for each available sensor input, including pulsed input channels. At each print cycle, the output will include a header line with data and time based on the M800 internal clock, and one line for each configured measurement including channel, measurement descriptor, measurement value and unit of measure.

The output will appear as follows:

```

11/May/2012 15:36
Ch   Label Measurement
1    CHAN_1 302  ppbC
2    CHAN_2 0.54 uS/cm
3    CHAN_3 7.15  pH
    
```

### Data Log



The Data Log option allows the RS485 output to be configured for output to either a PC or PLC for data collection and record keeping at a regular time interval, programmed by the operator. The data output will include header information, sent when the data log is first activated. Each output cycle will include a Date Stamp and Time Stamp, plus Measurement and Unit information for each parameter selected for output as described in the **Configure** section above.

If the header information must be re-sent for any reason, use the **Send Header** button, described below.

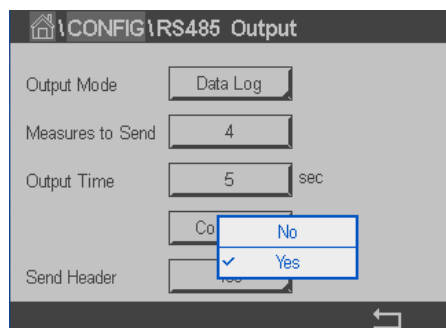
The output is formatted as tab-separated columns including the date and time of the measurement, and then the value and unit-of-measure for each parameter configured for print. A sample of the output after converting the tab-separated data into tabular format is shown below:

Date	Time	Ch1_M1	Ch1_M1Unit	Ch1_M2	Ch1_M2Unit
25-Feb-13	11:41:46	30	ppTOC	25.7	DegC

**Measures to Send** defines the number of measurements that will be sent to the RS485 output for each output cycle. Enter the total number of measurements to be configured for output.

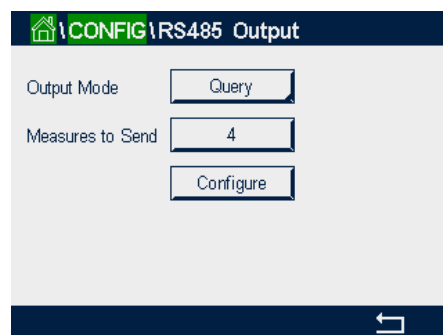
**Output Time** defines the time between each output cycle. The output time may be configured for from 1 to 3600 seconds, or from 1 to 60 minutes (1 hour).

**Send Header** will transmit the column label information (or the Header Row) one time. This function allows re-transmitting the header information. This may be necessary if the data collection system was not active at the time that data logging began.



To re-send the header information, press the button labeled **Send Header**, select **Yes**, press the **↵** key, and then select **Yes** to save changes.

## Query



The Query option allows the RS485 output to be configured for output to either a PC or PLC only when the data is requested. The output data configured at the M800 will be sent when the command "D00Z" is received by the M800 over the RS485 communication line.

The output data is formatted as a tab-separated line including the date and time of the measurement, and then the measurement value and unit-of-measure for each parameter configured for output. A sample of the query output is shown below:

25-Feb-13	11:41:46	30	ppTOC	25.7	DegC
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