

Extracting Log Information (2)

Once the Micro SD card has been inserted into your computer and you open up its contents, you will see the sequentially numbered .csv files similar to the examples shown below:

- LOG00001
- LOG00002
- LOG00003

Each log file will hold over 7000 records before a new log file is started. A new file will be started when the Micro SD card is inserted, or when power is cycled to the controller. Regardless of whether the controller is set to measure Level, Flow or Volume; the Measurement Units (MU), Volume Units (VU) Flow Units (FU) or Totaliser Units (TU) selected by the user, will be logged onto the Micro SD card.

The following logged information is recorded (dependent on type of controller and programming of the controller itself):

- Date and Time of log
 - Level 1 (Transducer 1) MU
 - Level 2 (Transducer 2) MU
 - mA In (mA)
 - mA Out 1 (mA)
 - mA Out 2 (mA)
 - Relays (decimal value of mapped binary)
 - Digital Input (decimal value of mapped binary)
 - Transducer status (1=LOE, 2=XDR faulty, 3=OK)
 - Velocity (MU/s)
 - System totaliser (TU), *System totaliser2 (TU)
 - Resettable totaliser (TU), *Resettable totaliser 2 (TU)
 - Daily totaliser (TU), *Daily totaliser 2 (TU)
 - Volume (VU), *Volume 2 (TU)
 - Pumped volume (VU)
 - Flow (FU), *Flow 2 (FU)
 - Average flow (FU), *Average flow 2 (FU)
- * = For use with Ultra Twin only

Example of mapped binary if a value of 18 is displayed in Relays column:

Relay no.	1	2	3	4	5	6
Bit value	1	2	4	8	16	32
Binary	0	1	0	0	1	0

This indicates that relays 2 and 5 were energised when the log was taken. Bit value: $2 + 16 = 18$

Using Microsoft Excel or a similar PC software, this information can then be formatted into graphs, bar charts etc.

If your PC is set to a language other than English, you may need to take the following steps to view the data logs correctly:

- Open a blank Excel Workbook.
- Select **Data > From text** and select to search All Files, and choose the log file you wish to view.
- Click **Next** on the first window.
- Ensure that Comma is the only box ticked as a delimiter and press **Next**.
- On the next window press **Finish**.
- On the final window press **OK**. You can now view the data that has been logged on the Micro SD card.

Once the log file has been saved onto your local machine, if you wish to begin logging again you can either: **1.** Delete the existing log data on the SD card so Log files start at 00000 again; or **2.** You can keep the files on the card and continue to log data.

To view the most recently saved data on the Micro SD card, please repeat the steps outlined in 'Extracting Log Information'.

Please refer to the Pulsar controller's instruction manual for further information on how to install and setup the controller.

If you require any assistance with this or any other Pulsar product, please contact your local pulsar distributor.

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Ultra SD Data Logger

User Guide

Pulsar product manuals available for download at:
www.pulsar-pm.com/support/downloads/manuals.aspx

M-SDL-0-001-2P

Description

The Ultra SD Data Logger can be ordered to be used in conjunction with Pulsar's wall mount controllers. Please consult Pulsar for the full range of compatible controllers.

The logging board is situated under the terminal cover, next to the transducer terminals, as seen in the picture below. It is advisable to insert the Micro SD card at the time of installation so that the controller is not powered.



The Ultra SD Data Logger comes supplied with an 8GB Micro SD card ready for use. Examples of the logging period that can be recorded are given below (when using the 8GB Micro SD card):

Log interval in seconds (P129)	Logging period (8192 log files)	
	Days	Years
5	3314	9.08
10	6628	18.16
30	19884	54.48
60	39768	108.95
300	198841	544.7
600	397682	1089.54
3600	2386092	6537.24

The files are stored in .csv format, which is suitable for most spreadsheet software.

Logging board indicators

- Blue LED (Data) flashes 3 times every 2 seconds = There is no Micro SD card inserted into the logging board.
- Solid red LED (CD) = Micro SD card is inserted into the logging board.
- Solid red and flashing Blue LED = The frequency of the blue LED corresponds to the time interval set in the controller, to indicate that a log is being stored on the Micro SD card.

For example: If the log interval is set to 300 seconds (5 minutes), then the blue LED will flash once every 5 minutes.

Setting Up The Logger

Setting up the Ultra SD Data Logger is easy, simply insert the Micro SD card into the slot on the logging board (as shown below), and push it in until you hear a 'click'.



This indicates that it is housed correctly into the logging board, and upon powering the controller the 'CD' LED will illuminate solid red confirming the Micro SD card is present.

Enter program mode by entering the passcode '1997' on the controller keypad, and press 'ENTER'. The parameter to set up the logging interval time is direct access only. This parameter (P129) by default is set to '0', so no logs are recorded until you enter an interval time.

Enter the interval value (in seconds) at which you wish to log information to the Micro SD card. Min = 5, Max = 3600 seconds, (0 = Off). Return to run mode and power cycle the unit for logging to begin.

For interval times below 20 seconds, although information is logged, there may be a few seconds discrepancy between the time logged.

You can continue to program your controller for your application and, once completed, return to run mode. You will notice that the 'Data' LED will flash blue each time it logs information.

Ensure that the date (P931) and time (P932) have been set correctly in the unit.

Extracting Log Information (1)

Important Note:

Before removing the terminal cover of the controller to obtain the Micro SD card, please ensure that it is safe to do so. If the controller is powered by AC you may need to switch the unit off.

To remove the Micro SD card, push down on the Micro SD card so that it then ejects, and then remove it from the logging board.

In order to read the logged information contained on the Micro SD card you will need to use one of the following:

1. SD/Micro SD card reader on a Laptop/PC:



2. USB card reader:



3. USB stick, Card reader:



Important Note:

The above items are not supplied by Pulsar.