



PDK9000-D1

# USB Data Logging Add-On Feature

New PDK9000-D1 Data Logger Add-On Feature  
for the PD9000 ConsoliDator+

# Presenter



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Joe brings more than 15 years of process industry experience in the design, support, manufacturing, marketing, and sales of process measurement and control devices. Joe has extensive field and support experience with process displays and controls, and a strong technical background including a bachelor's degree in Electromechanical Engineering and a master's degree in Computer & Electrical Engineering.



## Agenda and Takeaways

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Introduction to the New PDK9000-D1 USB Data Logger Add-On Feature for ConsoliDator+

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Learn How to Install the PDK9000-D1 Add-On Feature

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Review Setup Process and Capabilities

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# New PDK9000-D1 Data Logger Add-On Features for ConsoliDator+



Allows the ConsoliDator+ to data log to an external USB flash drive



Create logs that contain the same type of process data or a mix



Each log can contain up to 12 process variables, inputs, outputs, timers, alarm status, relay status or a combination of parameters



Control the data logger in various ways using a digital input



# How to Install



There are two easy ways to install this and other ConsoliDator+ add-on features.



## Factory Install

- Order PDK9000-D1 along with the ConsoliDator+ controller
- Add-On feature are activated at the factory



## Field Install

- Order PDK9000-D1 and receive a key to be entered into the ConsoliDator+ to unlock the Add-On feature
- Requires ConsoliDator+ firmware version 2.2 or greater

# Data Log Setup

The screenshot shows a 'Data Log Setup' window. At the top, 'Log 1.' is followed by a text field containing 'Tank Farm Log'. Below this is a large 'Add ...' area. To the right of this area are several settings: 'Start / Stop' (checkbox), 'Enable Switch:' (checkbox) with a dropdown menu showing 'None', 'Log Trigger:' (checkbox) with a dropdown menu showing 'None', 'Log Interval:' (checkbox) with a text field showing '00:01:00', and 'Log with Units' (checkbox). At the bottom are five buttons: 'Cancel', a home icon, a highlighted back icon, 'Edit', and 'Save'. Numbered callouts (1-7) point to the log name field, the 'Add ...' area, the 'Start / Stop' checkbox, the 'Enable Switch:' dropdown, the 'Log Trigger:' dropdown, the 'Log Interval:' text field, and the 'Log with Units' checkbox respectively.

Setting	Description
1. Log #	Enter log file name
2. Add	Add items to be logged
3. Start / Stop	Control the log start & stop
4. Enable Switch	Select an additional log control
5. Log Trigger	Trigger log on a specific event
6. Log interval	Log at the specified interval
7. Log with Units	Each log entry will have the corresponding engineering units

## Add Items To Be Logged

Each log can contain up to 12 process variables, inputs, outputs, timers, alarm status, relay status, or a combination of any of the following parameters:




- mA Inputs
- Digital Inputs
- Modbus Inputs
- Channels
- Totals
- Timers
- Alarms
- mA Outputs
- Relay Outputs
- Digital Outputs
- Modbus Outputs

Log 1. Tank Farm Log

Add ...  Start / Stop

- Digital Input
- Modbus Input
- Channel
- Total
- Timer
- Alarm
- mA Output
- Relay Output

1. Tank 1
2. Tank 2
3. Tank 3
4. Tank 4
5. Tank 5
6. Tank 6
7. Tank 7
8. Tank 8

Cancel    Ok

## Set Up Start / Stop

The log Start / Stop is used to give the system or the operator control to start and stop the log process.

The Start / Stop function can be activated with:

- Screen F1-F4 function keys
- Digital inputs
- Modbus inputs
- Modbus outputs
- Channel Control: Schedule, Sampler

The screenshot shows a configuration window for 'Log 1' titled 'Tank Farm Log'. The window contains a list of tanks: '1. Tank 1', '2. Tank 2', '3. Tank 3', '4. Tank 4', and 'Add ...'. To the right of the list are several settings: 'Start / Stop' (checked), 'Enable Switch:' (None), 'Log Trigger:' (None), 'Log Interval:' (00:01:00), and 'Log with Units' (checked). At the bottom of the window are five buttons: 'Cancel', a home icon, a down arrow icon, a square icon, and 'Save'.



## Set Up Log Enable Switch

The log Enable Switch can be any item with a binary value (on / off, 0 / 1, true / false). Log entries will be made only if the Enable Switch is in the on position.

The Enable Switch input can be:

- Digital input
- Modbus input
- Channel
- Alarm
- Relay Output

The screenshot shows a configuration window for a log entry. At the top, a text box contains 'Log 1. Tank Farm Log'. Below this is a list of items: '1. Tank 1', '2. Tank 2', '3. Tank 3', '4. Tank 4', and 'Add ...'. To the right of the list are several options, each with a checkbox and a corresponding text box or dropdown menu:

- Start / Stop
- Enable Switch:  
DI-1. Digital Input 1
- Log Trigger:  
None
- Log Interval:  
00:01:00
- Log with Units

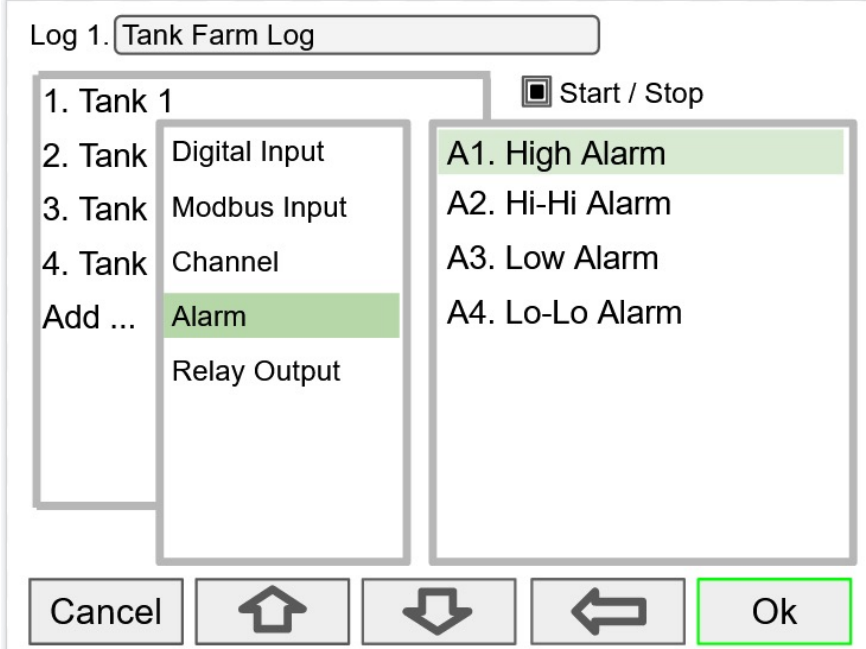
At the bottom of the window are five buttons: 'Cancel', a home icon, a down arrow icon, 'Edit' (highlighted with a green border), and 'Save'.

## Set Up Log Trigger

The Log Trigger can be any event from the list below. Log entries will be made every time the input is activated.

The Log Trigger input can be:

- Digital input
- Modbus input
- Channel
- Alarm
- Relay Output



Log 1. Tank Farm Log

1. Tank 1  Start / Stop

2. Tank Digital Input

3. Tank Modbus Input

4. Tank Channel

Add ... Alarm




Relay Output

A1. High Alarm

A2. Hi-Hi Alarm

A3. Low Alarm

A4. Lo-Lo Alarm

Cancel    Ok

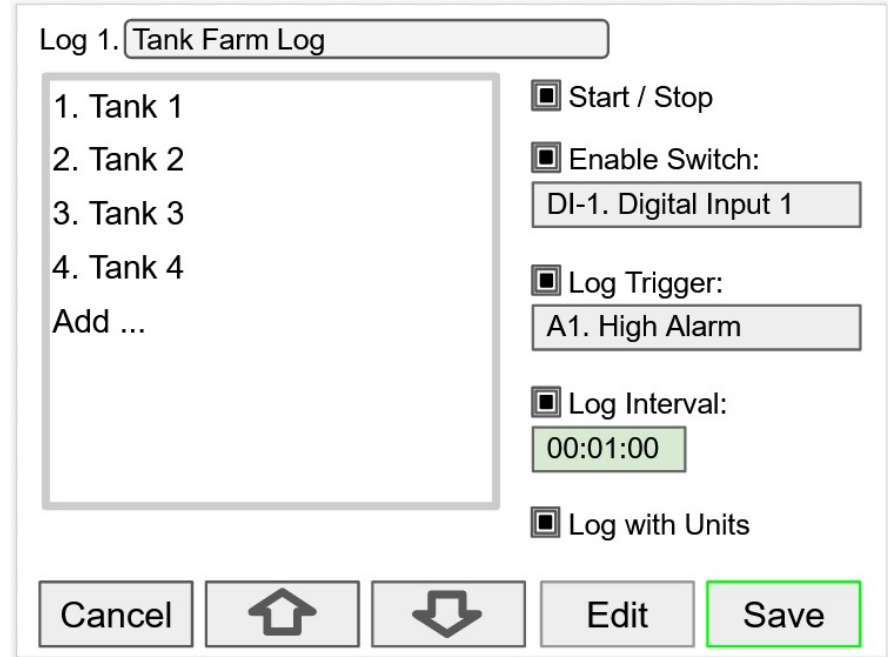
## Set Up Log Interval & Log Units

The Log Interval can be from 1 sec to 99:59:59 hh:mm:ss. Log entries will be made at the selected interval.

In this example the log must be started, and the digital input 1 must be on to log the tanks volume every minute.

To log continuously without the need to start or enable the log, deselect the Start / Stop and the Enable Switch settings.



If engineering units are not needed, deselect the Log with Units setting.



Log 1. Tank Farm Log

- Start / Stop
- Enable Switch:  
DI-1. Digital Input 1
- Log Trigger:  
A1. High Alarm
- Log Interval:  
00:01:00
- Log with Units

1. Tank 1  
2. Tank 2  
3. Tank 3  
4. Tank 4  
Add ...

Cancel   Edit Save

# Sample Data Log File

Device Tag: Multivariable Controller									
Log Name: Tank Farm Log									
Date	Time	T1. Tank 1	T1. Units	T2. Tank 2	T2. Units	T3. Tank 3	T3. Units	T4. Tank 4	T4. Units
4/8/2021	7:41:07	109690	Gallons	99690	Gallons	89690	Gallons	79690	Gallons
4/8/2021	7:41:10	109691	Gallons	99691	Gallons	89691	Gallons	79691	Gallons
4/8/2021	7:41:11	109692	Gallons	99692	Gallons	89692	Gallons	79692	Gallons
4/8/2021	7:41:12	109693	Gallons	99693	Gallons	89693	Gallons	79693	Gallons
4/8/2021	7:41:13	109694	Gallons	99694	Gallons	89694	Gallons	79694	Gallons
4/8/2021	7:41:14	109695	Gallons	99695	Gallons	89695	Gallons	79695	Gallons
4/8/2021	7:41:15	109696	Gallons	99696	Gallons	89696	Gallons	79696	Gallons
4/8/2021	7:41:16	109697	Gallons	99697	Gallons	89697	Gallons	79697	Gallons
4/8/2021	7:41:17	109698	Gallons	99698	Gallons	89698	Gallons	79698	Gallons
4/8/2021	7:41:18	109699	Gallons	99699	Gallons	89699	Gallons	79699	Gallons
4/8/2021	7:41:19	109700	Gallons	99700	Gallons	89700	Gallons	79700	Gallons
4/8/2021	7:41:20	109701	Gallons	99701	Gallons	89701	Gallons	79701	Gallons
4/8/2021	7:41:21	109702	Gallons	99702	Gallons	89702	Gallons	79702	Gallons
4/8/2021	7:41:22	109703	Gallons	99703	Gallons	89703	Gallons	79703	Gallons
4/8/2021	7:41:23	109704	Gallons	99704	Gallons	89704	Gallons	79704	Gallons
4/8/2021	7:41:24	109705	Gallons	99705	Gallons	89705	Gallons	79705	Gallons
4/8/2021	7:41:25	109706	Gallons	99706	Gallons	89706	Gallons	79706	Gallons
4/8/2021	7:41:26	109707	Gallons	99707	Gallons	89707	Gallons	79707	Gallons
4/8/2021	7:41:27	109708	Gallons	99708	Gallons	89708	Gallons	79708	Gallons
4/8/2021	7:41:28	109709	Gallons	99709	Gallons	89709	Gallons	79709	Gallons
4/8/2021	7:41:29	109710	Gallons	99710	Gallons	89710	Gallons	79710	Gallons
4/8/2021	7:41:30	109711	Gallons	99711	Gallons	89711	Gallons	79711	Gallons
4/8/2021	7:41:31	109712	Gallons	99712	Gallons	89712	Gallons	79712	Gallons
4/8/2021	7:41:32	109713	Gallons	99713	Gallons	89713	Gallons	79713	Gallons
4/8/2021	7:41:33	109714	Gallons	99714	Gallons	89714	Gallons	79714	Gallons

- 8 data logs maximum
- 96 variables maximum (8 logs x 12 variables / log)
- csv (comma separated value)
- 100 MB maximum log file size
- A new file is automatically created when the log file exceeds 100 MB.
- Stop when full setting can be selected if the oldest logged data is more important than logging new data.



## Questions?

If you have any questions, then reach out to us.



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