

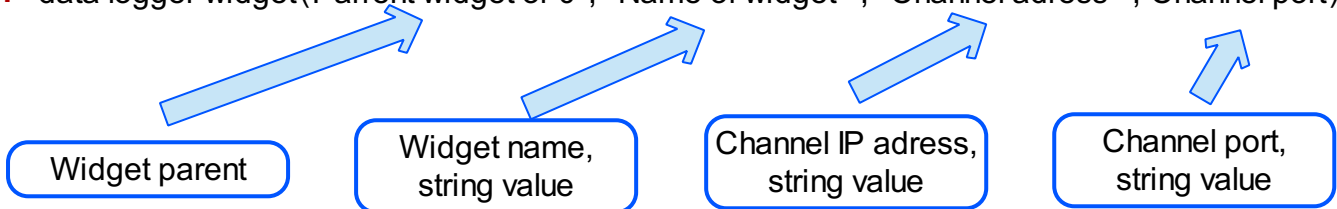
Data logger in MatDeck

MatDeck provides functions/widgets that can be used to automatically monitor and record environmental parameters over time. You can measure, document and analyze these parameters with tools provided in our software. To create a functional system, a system which consists of a instrument that measures environmental parameters, sends them through the channel to the data logger which will accept the data and record them, is extremely easy and quick to configure.

In this document we will talk about the part of that process which refers to acceptance and recording of the measured data, definition of conditions that will be used and ways to store data.

To create a Data logger widget and to start using it, you must first create a variable and define the *data logger widget* function inside of it.

```
a := data logger widget(Parrent widget or 0 , "Name of widget" , "Channel adress" , Channel port)
```



Let us create a vector of values that will present a data source for the logger, and send them through the channel

```
b := curve2d(sin(x) , -2 , 2 , 50)
```

Source of data for logger

```
c := channel create("Logger" , "w")
channel write(c , b)
```

Creation of channel and data sending

```
channels table( ) =
```

ID	Name	IP Address	Port	Origin	Source Name	Direction
0	"Logger"	"127.0.0.1"	1805	"Logger"	"Value"	"Readable"

```
d := data logger widget(0 , "Data logger" , "127.0.0.1" , 1806)
```

Creation of data logger widget element

Now, we have created all the elements for the data logger widget. All we have to do is to embed the widget stored in variable, d. To do so, use the function *embed widget* and place variable d as it's argument.

The widget shown bellow will appear.

The screenshot shows a 'Data Logger' window. At the top, there is a label 'Data Logger'. Below it is the 'Output File' section with an empty text box and a 'Browse' button. Underneath is the 'Logging Type' section with a dropdown menu currently showing 'Period'. To the right of this is the 'Period' section, which includes a numeric input field containing '1' and a unit dropdown menu currently showing 'Seconds'. At the bottom of this section is a 'Start' button.

Choose the destination to save this file with a fcd extension. In this file you will write the data logger measurement data. FCD extension is a type of data file that can be opened with MatDeck

You can choose the period or interval as the logging type. Choose the Period and set the data for this type of logging if you want to repeat the logging periodically. Period intervals that you have at your disposal are: miliseconds, seconds, minutes and hours.

This screenshot shows the 'Logging Type' dropdown menu open. The menu items are 'Miliseconds', 'Miliseconds', 'Seconds', 'Minutes', and 'Hours'. The 'Period' input field next to it is set to '1'. The 'Start' button is visible below the dropdown.

Logging Type - Period

Choose Calendar if you want to log between two moments in time, set the date-time of logging start and date-time of logging end. In fact, with this option you have set a trigger that will start logging at the selected moment in time.

The screenshot shows the 'Logging Type' dropdown set to 'Calendar'. Below it are two date-time input fields: 'From' and 'To', both containing the value '15.05.2018, 23:17'. A 'Start' button is located at the bottom left of the interface.

Logging Type - Calendar

Also, there is a *Manual* Logging type which starts from the moment you press Start button.

Number of logging channels and files is practically unlimited. For every channel you have set to transfer data, set one Data Logging Widget and then use the software without any other restrictions.