

Demo of FindDataSamplingIndex Function in Macro

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1. Overview and Operation

Overview


To find the index value of Data Sampling file according to its date.

Demo Project - FindDataSamplingIndex



Step 1: Input:

YYYY	MM	DD	Data Sampling No.
2011	1	12	2

Step 2: Trigger Macro



Step 3: Output:

index	success	fail
0		

No.	Time	Date	ch.0
1844	19:11:52	01/12/11	0
1843	19:11:51	01/12/11	0
1842	19:11:50	01/12/11	0
1841	19:11:49	01/12/11	0
1840	19:11:48	01/12/11	0
1839	19:11:47	01/12/11	0
1838	19:11:46	01/12/11	0
1837	19:11:45	01/12/11	0
1836	19:11:44	01/12/11	0
1835	19:11:43	01/12/11	0
1834	19:11:42	01/12/11	0
1833	19:11:41	01/12/11	0
1832	19:11:40	01/12/11	0
1831	19:11:39	01/12/11	0
1830	19:11:38	01/12/11	0
1829	19:11:37	01/12/11	0
1828	18:46:36	01/12/11	0

Editor: Nicolas

Operation


The demonstration shows as follows:

Demo Project - F

Step 1: Input:



yyyy
MM
DD
Data Sampling No.

Step 2: Trigger Macro



Step 3: Output:

index
success
fail

Input source of date and data sampling no.

No.	Time	Date	ch.0
23	09:20:38	01/14/11	0
22	09:20:37	01/14/11	0
21	09:20:36	01/14/11	0
20	09:20:35	01/14/11	0
19	09:20:34	01/14/11	0
18	09:20:33	01/14/11	0
17	09:20:32	01/14/11	0
16	09:20:31	01/14/11	0
15	09:20:30	01/14/11	0
14	09:20:29	01/14/11	0
13	09:20:28	01/14/11	0
12	09:20:27	01/14/11	0
11	09:20:26	01/14/11	0
10	09:20:25	01/14/11	0
9	09:20:24	01/14/11	0
8	09:20:23	01/14/11	0

Editor: Nicolas




Demo Project - FindDataSamplingIndex

Step 1: Input:



yyyy
MM
DD
Data Sampling No.

Step 2: Trigger Macro



Step 3: Output:

index
success
fail

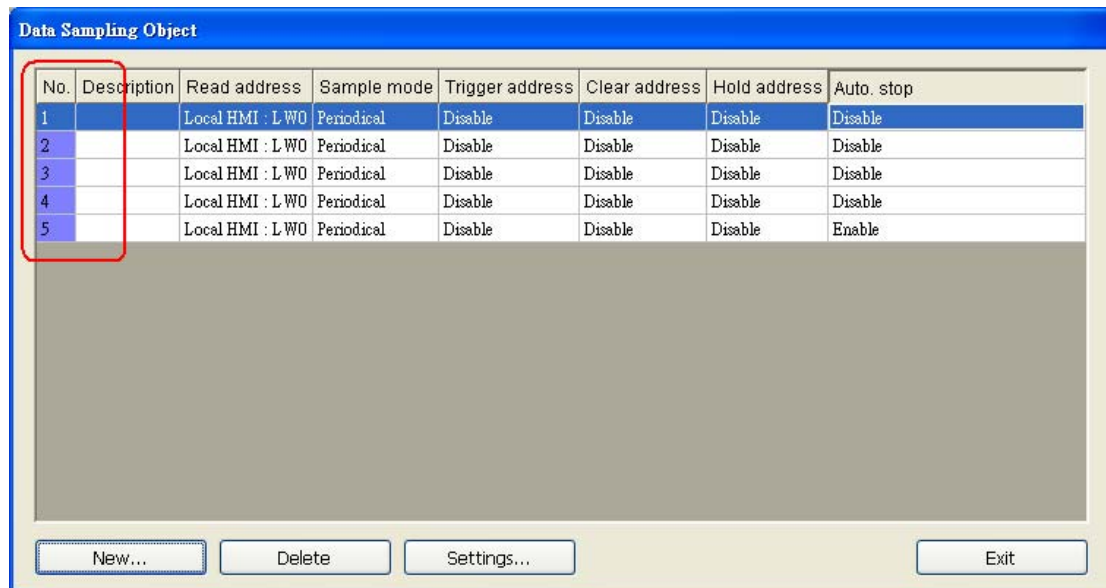
Result output: find a datalog, 20110112.dtl, which index is 2 and data sampling no. is 2.

No.	Time	Date	ch.0
2302	19:43:22	01/12/11	0
2301	19:43:21	01/12/11	0
2300	19:43:20	01/12/11	0
2299	19:43:19	01/12/11	0
2298	19:43:18	01/12/11	0
2297	19:43:17	01/12/11	0
2296	19:43:16	01/12/11	0
2295	19:43:15	01/12/11	0
2294	19:43:14	01/12/11	0
2293	19:43:13	01/12/11	0
2292	19:43:12	01/12/11	0
2291	19:43:11	01/12/11	0
2290	19:43:10	01/12/11	0
2289	19:43:09	01/12/11	0
2288	19:43:08	01/12/11	0
2287	19:43:07	01/12/11	0
2286	19:43:06	01/12/11	0

Editor: Nicolas

2. Setting up the Screen

1. Add multiple data in Data Sampling Object or download multiple history eventlog files to HMI.



2. Edit "FindDataSamplingIndex" Macro Command

```
macro_command main()
```

```
short data_log_number, index, year, month, day //Declare relevant  
parameters.
```

```
short success, fail //Declare variables to store the result.
```

```
// get data
```

```
GetData(data_log_number, "Local HMI", LW, 106, 1)
```

```
GetData(year, "Local HMI", LW, 100, 1)
```

```
GetData(month, "Local HMI", LW, 102, 1)
```

```
GetData(day, "Local HMI", LW, 104, 1)
```

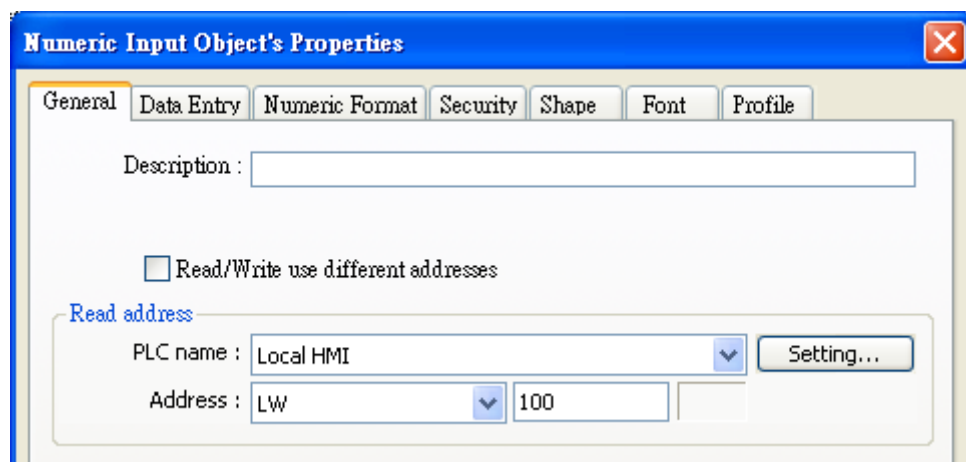
```
success = FindDataSamplingIndex(data_log_number, year, month, day,  
index)
```

```
// set data
```

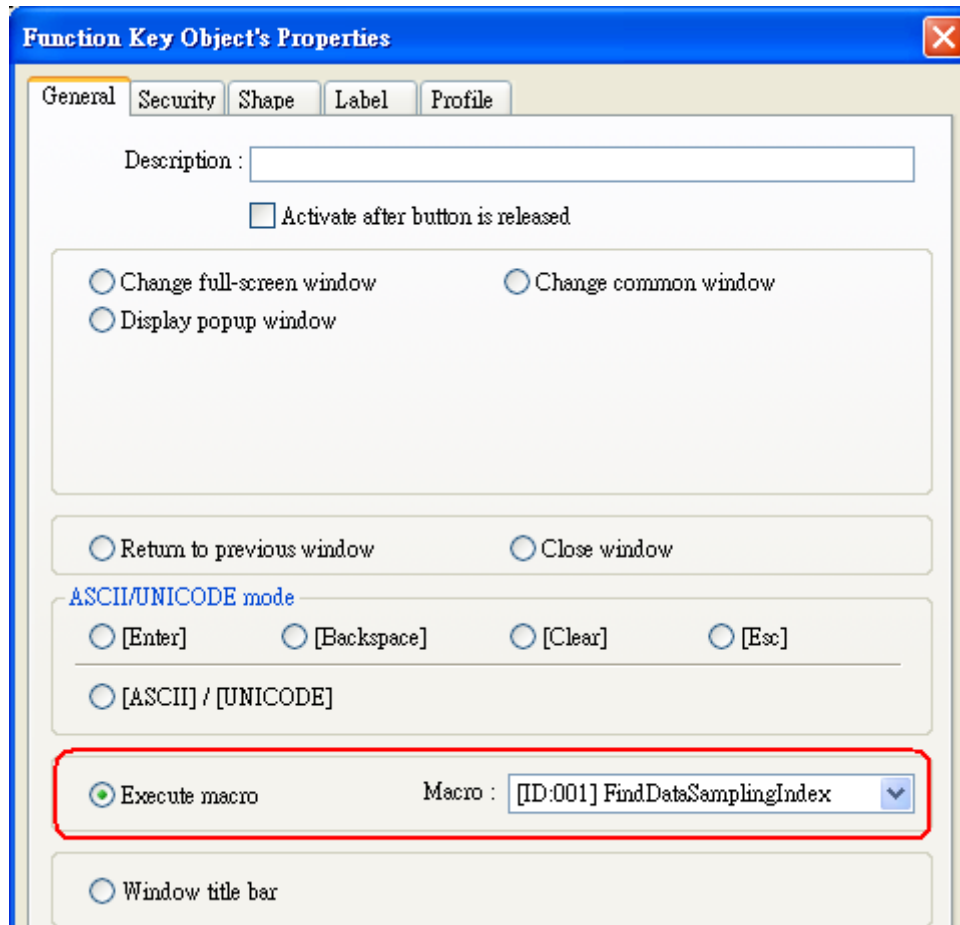
```
SetData(index, "Local HMI", LW, 108, 1)
SetData(success, "Local HMI", LB, 112, 1)
fail = not success
SetData(fail, "Local HMI", LB, 110, 1)

end macro_command
```

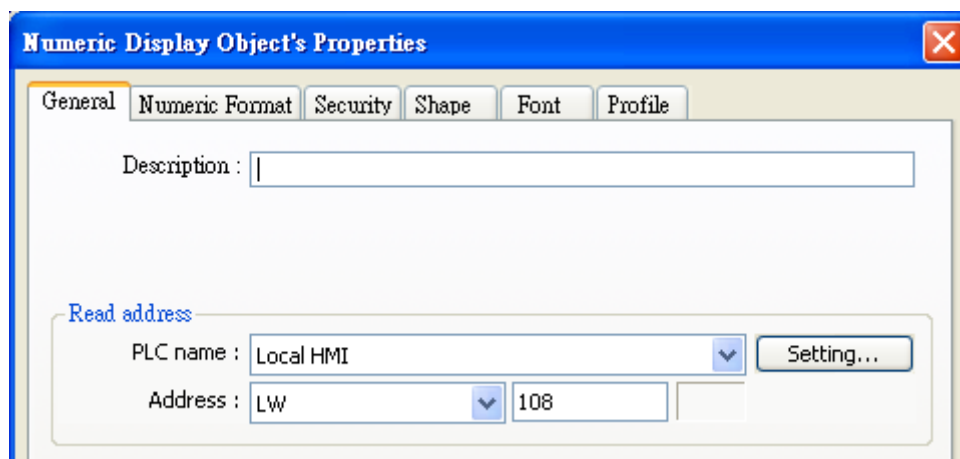
3. According to the addresses used in Macro, create four Numeric Input Objects of LW100, LW102, LW104, and LW106 for inputting the source of history file.



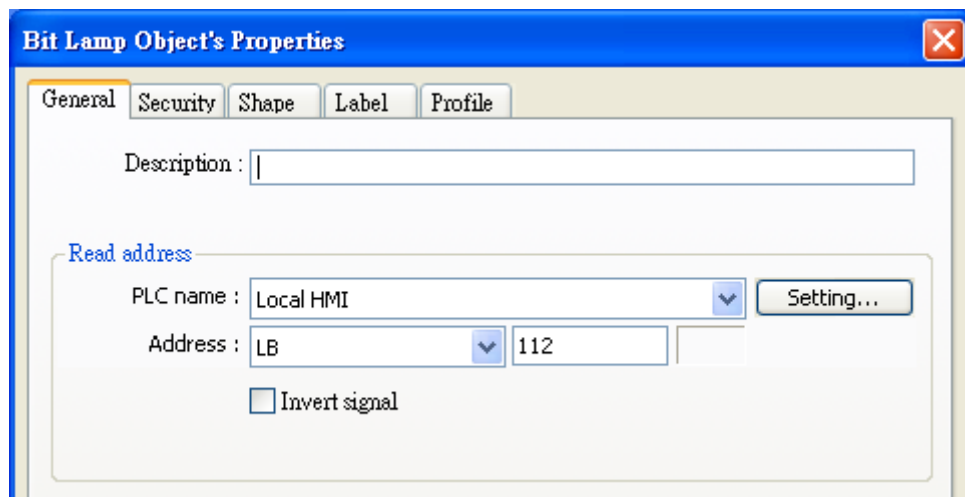
4. Create a Function Key Object for triggering Macro "FindDataSamplingIndex".



5. According to the addresses used in Macro, create a Numeric Display Object of LW108 (index) for displaying the found index value.



6. According to the addresses used in Macro, create two Bit Lamp Objects of LB110 (fail) and LB112 (success) for displaying whether the data sampling file is found or not.



7. According to the addresses used in Macro, create a History Data Display Object of LW108 for displaying datalog history file. A Trend Display Object set to History mode can also be created to display datalog history file.

History Data Display Object's Properties
✕

General
Data Format
Title
Shape
Profile

Data Sampling Object index : 1

Grid

☒ Enable

Color :

Column interval : 0

Profile color

☐ Transparent

Frame :

Background :

Text

Font : Arial

Size : 12

Time

☒ Time
 HH:MM:SS

Color :

Date

☒ Date
 MM/DD/YY

Color :

☒ Sequence no.

Color :

☐ Time ascending
☒ Time descending

History control

PLC name :

Local HMI

Setting...

Address :

LW

108

3. Addresses

The addresses of objects used in this demonstration are listed below. Users can use different addresses or object ID base on actual usage.

Object	Address	Object ID	Description
Window 10			
Numeric display	LW-108	ND_0	Index of datalog history file
Function key		FK_0	Trigger Macro
Numeric input	LW-100	NE_0	Display Year
	LW-102	NE_1	Display Month
	LW-104	NE_2	Display Day
	LW-106	NE_3	Data Sampling No.
Bit lamp	LB-110	BL_0	Fail status
	LB-112	BL_1	Success status
History data display	LW-108	DD_0	Display datalog history file