



For your reference:

Please note that this product is no longer available and is provided as a reference technical document.

# **FRA5087/5097 LabVIEW Driver**

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## **Instruction Manual**



DA00017116-001

# **FRA5087/5097 LabVIEW Driver**

## **Instruction Manual**

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## — Preface —

Thank you very much for purchasing our FRA5087/5097 frequency response analyzers. FRA5087/5097 LabVIEW Driver is a LabVIEW instrument driver exclusive for FRA5087/5097.

- **Before Reading This Manual**

This manual is provided as a PDF file. To view the file, Acrobat Reader 5 or later from Adobe Systems, Inc. must be installed on your computer.

- **Caution Symbols Used in This Manual**

- 1. OUTLINE**

This chapter provides a brief overview of FRA5087/5097 LabVIEW Driver.

- 2. OPERATION vi**

This chapter describes each operation vi.

## ————— DISCLAIMER —————

FRA5087/5097 LabVIEW Driver (hereinafter referred to as “this software”) has been properly tested and inspected by NF Corporation (hereinafter referred to as “we”) before shipment.

Should you have any problems with this software, contact us or our dealer.

We shall assume no responsibility, whatsoever, for any damages resulting from the use of this software. Even if this software is defective, we shall be under no obligation to provide any modification or support. Use this software at your own risk.

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# 1. OUTLINE

This LabVIEW instrument driver is intended for NF Corporation Frequency Response Analyzer FRA5087/5097.

This driver allows you to build an application without any reference to the details of FRA5087/5097 program messages.

- \* Operation of this driver has been checked in the following environments:
  - OS: Windows2000 and WindowsXP
  - LabVIEW: Ver6.1, Ver7.0, and Ver8.0
  - VISA: Ver3.5 or later

Please note that in some LabVIEW versions, VI may be changed without notice. In this case, please follow the instructions on the screen.

## 2. OPERATION vi

All FRA5097 operation VIs have an error input and error output. Concatenating error clusters so that an error output is connected to the error input of the subsequent VI establishes error I/O suitable for LabVIEW data flow architecture. If necessary, an application can monitor the real-time error status.

This driver ensures its proper operation when SETUP HEADER is OFF and SETUP MNEMONIC is OFF.

FRA5097 is configured according to the above by factory default.

Generally, configuration can be made by setting the terminal isReset of NF\_FRA5097 Initialize.vi to True.

Note that the default is False in order to avoid initialization of FRA.

For the connection procedure, refer to the sample applications.

This section describes I/O terminals other than error I/O and VISA sessions.

### 2.1 VI Tree

#### NF\_FRA5097 VI Tree.vi

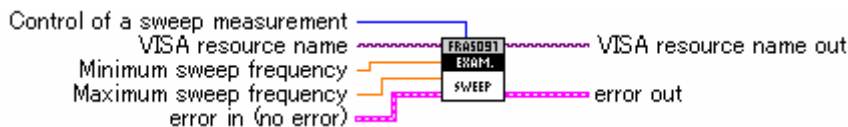
VIs in this driver are shown in a diagram.



### 2.2 Samples

#### NF\_FRA5097\_exam\_settingaSweepFrequencyRangeAndSweepMeasurement.vi

A sample of sweep frequency range setting and sweep measurement  
Setting the sweep frequency range and starting sweep measurement



#### NF\_FRA5097\_exam\_setupAndQuery.vi

A sample of setup and query  
Setting oscillator amplitude and outputting the query result





**NF\_FRA5097\_exam\_transferOfMeasurementDataToController1.vi**

Transferring measurement data to the controller (1)

[Input] isOmitParam

True if the argument is omitted.

Loading the measurement data in the current tag of FRA



**NF\_FRA5097\_exam\_transferOfMeasurementDataToController2.vi**

Transferring measurement data to the controller (2)

[Input] isOmitParam

True if the argument is omitted.

Performing single measurement, waiting for its completion, and then loading the measurement data



**NF\_FRA5097 Comm Interface.vi**

Specifying the FRA local/remote state (for GPIB only)

[Input] Mode

remote/lockedRemote/local



**NF\_FRA5097 DataReaddata.vi**

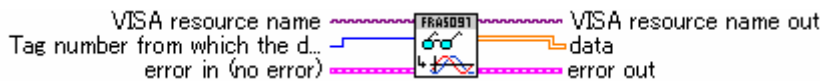
Querying the specified tag

[Input] Tag number from which the data block count is read out

Tag number (from 1 to 6) for data query

[Output] data

Outputting data according to the data transfer format



**NF\_FRA5097 QueryCondition.vi**

Querying each parameter

[Output] CONDITION

Setup values of oscillation waveform, oscillator output amplitude, DC bias, sweep frequency range, resolution of a log sweep, the number of manual integration, measurement mode, degree of harmonic analysis, the number of delay cycles, automatic integration action, the operation mode of a slow sweep, and the operation mode of amplitude compression



**NF\_FRA5097 Reset.vi**

Initializing the FRA settings



**NF\_FRA5097 Revision Query.vi**

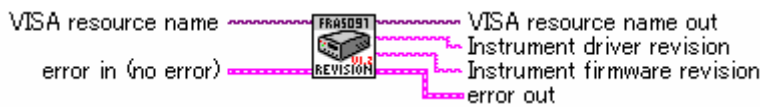
Querying the version of FRA software

[Output] Instrument driver revision

The corresponding version of LabVIEW driver

[Output] Instrument firmware revision

FRA software version



**NF\_FRA5097 SetupCondition.vi**

Setting each parameter

[Input] CONDITION

Setup values of oscillation waveform, oscillator output amplitude, DC bias, sweep frequency range, resolution of a log sweep, the number of manual integration, measurement mode, degree of harmonic analysis, the number of delay cycles, automatic integration action, the operation mode of a slow sweep, and the operation mode of amplitude compression



**NF\_FRA5097 SWEEPMeasure.vi**

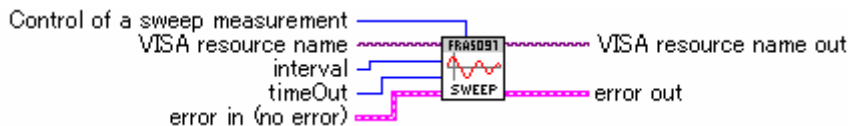
Sweep measurement control

[Input] interval

Interval time of status byte reading (ms)

[Input] timeout

Status byte loading timeout (ms)



**2.3 Initializing VISA**

**NF\_FRA5097 Initialize.vi**

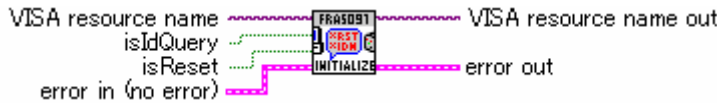
Outputting the model name and initializing the model

[Input] isIdQuery

Is the model name queried? True/False

[Input] isReset

Is reset to be conducted? True/False



## 2.4 Closing VISA

### NF\_FRA5097 Close.vi

Closing the FRA interface



## 2.5 Data Calculation Messages

### NF\_FRA5097\_dvr\_sCALculationArithmetic.vi

Configuring the function of four arithmetic operations

[Input] isOmitParam

True if the argument is omitted.

\*[Input] "Type of target data 1 for arithmetic calculation" cannot be omitted.

\*[Input] "Value of target data 1 for arithmetic calculation" cannot be omitted.

[Input] Type of target data 1 for arithmetic calculation

Type of target data 1 for arithmetic calculation

[Input] Value of target data 1 for arithmetic calculation

Value of target data 1 (0, 1 to 6 if the type of target data for arithmetic calculation is tag data, and from -99.99E+6 to +99.99E+6 if the type of target data for arithmetic calculation is a constant)

[Input] Arithmetic calculation mode

Arithmetic calculation mode

[Input] Type of target data 2 for arithmetic calculation

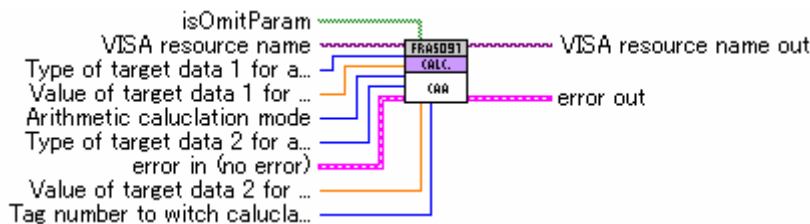
Type of target data 2 for arithmetic calculation

[Input] Value of target data 2 for arithmetic calculation

Value of target data 2 (0, 1 to 6 if the type of target data for arithmetic calculation is tag data, and from -99.99E+6 to +99.99E+6 if the type of target data for arithmetic calculation is a constant)

[Input] Tag number to witch calculation result is stored

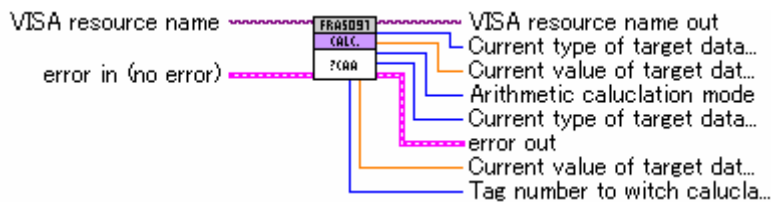
Tag number to which calculation result is stored



### NF\_FRA5097\_dvr\_qCALculationArithmetic.vi

Querying the function of four arithmetic operations

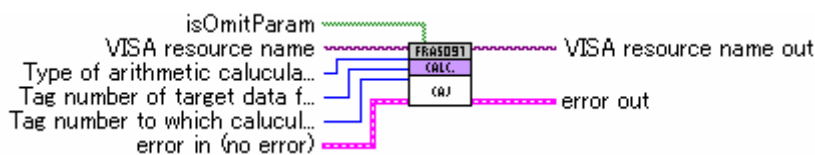
- [Output] Current type of target data 1 for arithmetic calculation  
Current type of target data 1 for arithmetic calculation
- [Output] Current value of target data 1 for arithmetic calculation  
Current value of target data 1 for arithmetic calculation
- [Output] Arithmetic calculation mode  
Arithmetic calculation mode
- [Output] Current type of target data 2 for arithmetic calculation  
Current type of target data 2 for arithmetic calculation
- [Output] Current value of target data 2 for arithmetic calculation  
Current value of target data 2 for arithmetic calculation
- [Output] Tag number to witch calculation result is stored  
Tag number to which calculation result is stored



**NF\_FRA5097\_dvr\_sCALculationJw.vi**

Configuring the settings of differentiation and integration functions

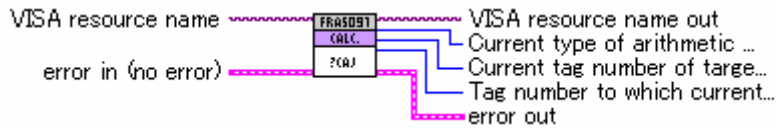
- [Input] isOmitParam  
True if the argument is omitted.
- [Input] Type of arithmetic calculation  
Type of arithmetic calculation
- [Input] Tag number of target data for arithmetic calculation  
Tag number of target data for arithmetic calculation
- [Input] Tag number to which calculation result is stored  
Tag number to which calculation result is stored



**NF\_FRA5097\_dvr\_qCALculationJw.vi**

Querying the differentiation and integration functions

- [Output] Current type of arithmetic calculation  
Current type of arithmetic calculation
- [Output] Current tag number of target data for arithmetic calculation  
Current tag number of target data for arithmetic calculation
- [Output] Tag number to which current calculation result is stored  
Tag number to which current calculation result is stored



**NF\_FRA5097\_dvr\_sCALculationLoop.vi**

Configuring the settings of the open/closed loop calculation function

[Input] isOmitParam

True if the argument is omitted.

[Input] Tag number of target data for arithmetic calculation

Tag number of target data for arithmetic calculation

[Input] Type of feedback element data Tm

Type of feedback element data Tm

[Input] Value of feedback element data Tm

Value of feedback element data Tm

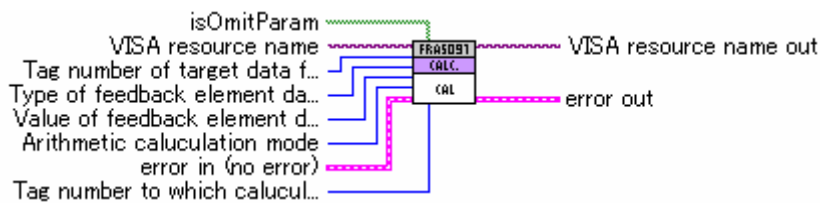
Value of target data 2 (0, 1 to 6 if the type of target data for arithmetic calculation is tag data, and from -99.99E+6 to +99.99E+6 if the type of target data for arithmetic calculation is a constant)

[Input] Arithmetic calculation mode

Arithmetic calculation mode

[Input] Tag number to which calculation result is stored

Tag number to which calculation result is stored



**NF\_FRA5097\_dvr\_qCALculationLoop.vi**

Querying the open/closed loop calculation function

[Output] Current tag number of target data for arithmetic calculation

Current tag number of target data for arithmetic calculation

[Output] Current type of feedback element data Tm

Current type of feedback element data Tm

[Output] Current value of feedback element data Tm

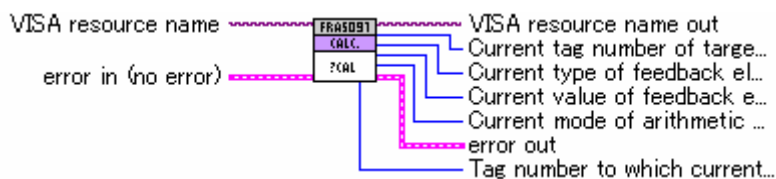
Current value of feedback element data Tm

[Output] Current mode of arithmetic calculation

Current mode of arithmetic calculation

[Output] Tag number to which current calculation result is stored

Tag number to which current calculation result is stored



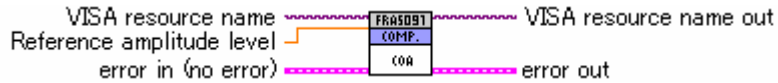
## 2.6 Messages about Amplitude Compression Control Settings

### NF\_FRA5097\_dvr\_sCompressionAmplitude.vi

Setting the reference amplitude level for amplitude compression operation

[Input] Reference amplitude level

Reference amplitude level (from 1E-3 to 250 (from 1mVrms to 250Vrms))



### NF\_FRA5097\_dvr\_qCompressionAmplitude.vi

Querying the reference amplitude level for amplitude compression operation

[Output] Current level of reference amplitude

Current level of reference amplitude

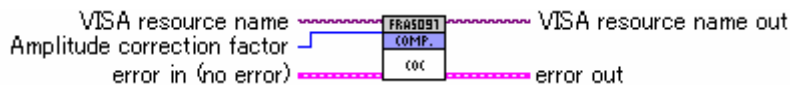


### NF\_FRA5097\_dvr\_sCompressionCorrection.vi

Setting the amplitude correction factor for amplitude compression operation

[Input] Amplitude correction factor

Amplitude correction factor (from 0 to 100 (%))

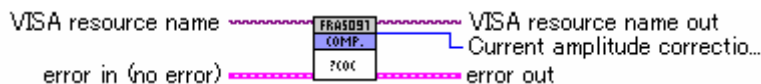


### NF\_FRA5097\_dvr\_qCompressionCorrection.vi

Querying the amplitude correction factor for amplitude compression operation

[Output] Current amplitude correction factor

Current amplitude correction factor



### NF\_FRA5097\_dvr\_sCompressionError.vi

Setting the maximum error rate for amplitude compression operation

[Input] Maximum error rate

Maximum error rate (from 0 to 100 (%))



### NF\_FRA5097\_dvr\_qCompressionError.vi

Setting/Querying the maximum error rate for amplitude compression operation

[Output] Current maximum error rate

Current maximum error rate

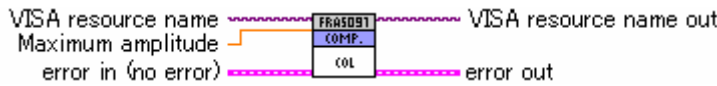


**NF\_FRA5097\_dvr\_sCCompressionLimit.vi**

Setting the output amplitude limit for amplitude compression operation

[Output] Maximum amplitude

Maximum amplitude value (output open conversion) (from 1E-3 to 10.0 (Vpeak))

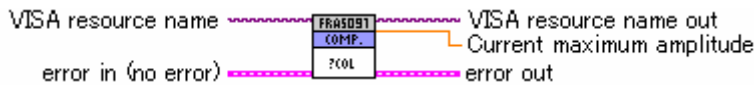


**NF\_FRA5097\_dvr\_qCCompressionLimit.vi**

Querying the output amplitude limit for amplitude compression operation

[Output] Current maximum amplitude

Current maximum amplitude (output open conversion)



**NF\_FRA5097\_dvr\_sCCompressionmode.vi**

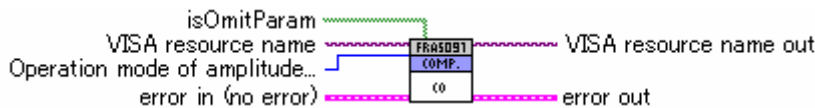
Setting the operation mode of amplitude compression

[Input] isOmitParam

True if the argument is omitted.

[Input] Operation mode of amplitude compression

Operation mode of amplitude compression

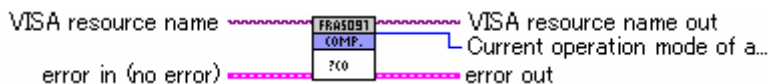


**NF\_FRA5097\_dvr\_qCCompressionmode.vi**

Querying the amplitude compression mode

[Output] Current operation mode of amplitude compression

Current operation mode of amplitude compression

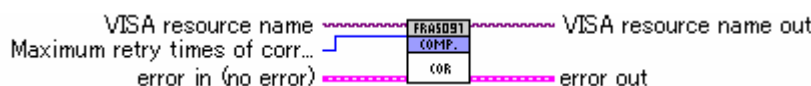


**NF\_FRA5097\_dvr\_sCCompressionRetry.vi**

Setting the maximum number of correction retries for amplitude compression operation

[Input] Maximum retry times of correction

Maximum correction retries (from 1 to 9999 (times))

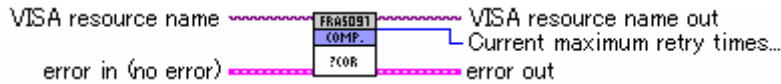


**NF\_FRA5097\_dvr\_qCCompressionRetry.vi**

Querying the maximum number of correction retries for amplitude compression operation

[Output] Current maximum retry times of correction

Current maximum number of correction retries



**2.7 Messages about Data Control Settings**

**NF\_FRA5097\_dvr\_sDataCurent.vi**

Setting the current tag number

[Input] Tag number to be defined as the current tag number

Tag number to be defined as the current tag number

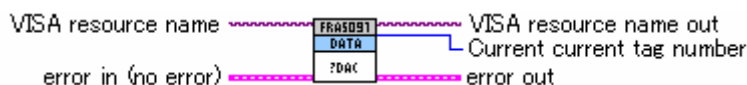


**NF\_FRA5097\_dvr\_qDataCurent.vi**

Querying the current tag number

[Output] Current current tag number

Current current tag number



**NF\_FRA5097\_dvr\_sDataDisply.vi**

Setting the tag number to be displayed

[Input] isOmitParam

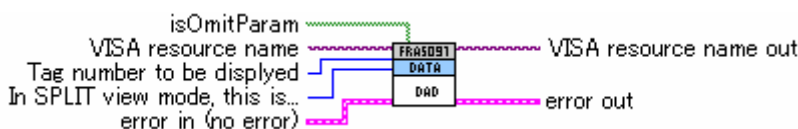
True if the argument is omitted.

[Input] Tag number to be displyed

In SPLIT view mode, the tag number to be displayed is the tag number to be displayed in the upper graph.

[Input] In SPLIT view mode, this is the tag number that is displyed in the lower graph

The tag number that is displayed in the lower graph in SPLIT view mode. This is enabled in SPLIT view mode. If 0 is specified, the lower graph does not change.





**NF\_FRA5097\_dvr\_qDataDisply.vi**

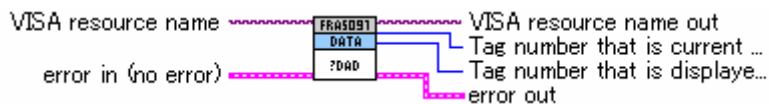
Querying the tag number to be displayed

[Output] Tag number that is current being displayed

The tag number that is currently displayed (In SPLIT view mode, this is the tag number in the upper graph.)

[Output] Tag number that is displayed in the lower graph (in SPLIT view mode)

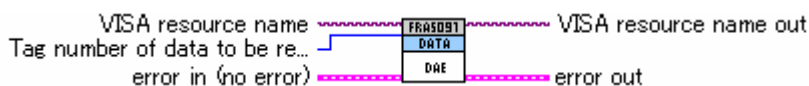
The tag number that is displayed in the lower graph

**NF\_FRA5097\_dvr\_sDataEqualize.vi**

Registering with equalize memory

[Input] Tag number of data to be registered with equalize memory

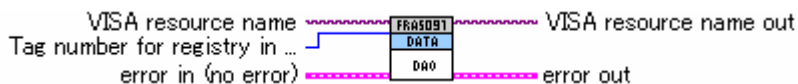
Tag number of data to be registered with equalize memory

**NF\_FRA5097\_dvr\_sDataOpen.vi**

Registering with open correction memory

[Input] Tag number for registry in open equalize memory

The tag number of data to be registered with open correction memory

**NF\_FRA5097\_dvr\_qDataReadCondition.vi**

Querying the measurement conditions of the specified tag data

[Input] isOmitParam

True if the argument is omitted.

[Input] Tag number to which measurement condition will be transferred

The tag number which measurement condition will be transferred

[Output] Data type

Data type

[Output] Data count

Data count

[Output] Date and time when a measurement was carried out

Date and time when a measurement was carried out

[Output] Title of data

Title of data

[Output] Oscillator amplitude

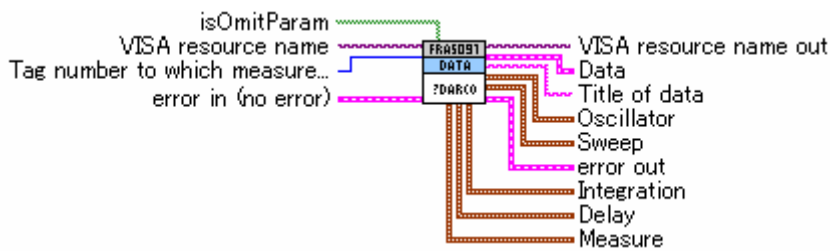
Oscillator amplitude (Vpeak)

[Output] Oscillator, DC bias

Oscillator, DC bias (V)

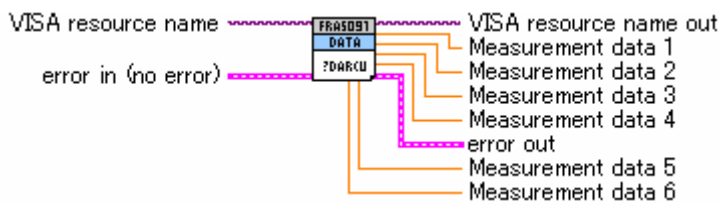
[Output] Oscillator waveform

- Oscillator waveform
- [Output] Maximum sweep frequency
  - Maximum sweep frequency (Hz)
- [Output] Minimum sweep frequency
  - Minimum sweep frequency (Hz)
- [Output] Sweep type
  - Sweep type
- [Output] Sweep resolution
  - Sweep resolution
- [Output] Integration type
  - Integration type
- [Output] Integration level
  - Integration level
- [Output] Delay type
  - Delay type
- [Output] Delay level
  - Delay level
- [Output] Degree of harmonic analysis
  - Degree of harmonic analysis
- [Output] Measurement mode
  - Measurement mode
- [Output] Automatic integration function
  - Automatic integration function
- [Output] Low-speed & high-density sweep function
  - Low-speed, high-density sweep function
- [Output] Amplitude compression function
  - Amplitude compression function



**NF\_FRA5097\_dvr\_qDataReadCUrrent.vi**

Querying the data (one block) that was last measured  
 The output will be in the format you set in the Data Template.



**NF\_FRA5097\_dvr\_sDataWritedata.vi**

Writing data

[Input] isOmitParam

True if the argument is omitted.

\*[Input] “Block number of data from which writing is started” cannot be omitted.

\*[Input] “Block count of data to be written” cannot be omitted.

[Input] Tag number to witch data is written

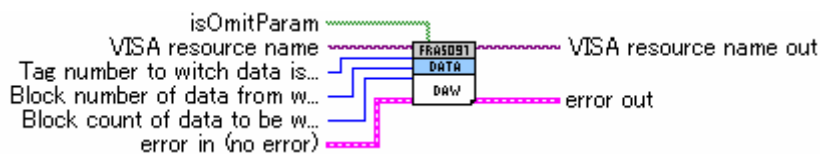
The tag number to which data is written

[Input] Block number of data from which writing is started

The block number of data from which writing is started

[Input] Block count of data to be written

The block count of data to be written



**NF\_FRA5097\_dvr\_qDataReaddata.vi**

Querying the data of the specified tag within the specified range

[Input] isOmitParam

True if the argument is omitted.

[Input] Tag number to be inquired for data

The tag number used to query data

[Input] Block number of data from which reading is started

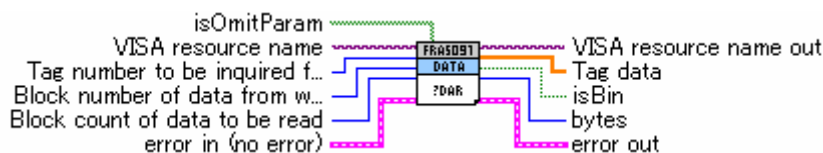
The block number from which reading is started (from 0 to the number of blocks to be read minus 1)

[Input] Block count of data to be read

The block count of data to be read (from 1 to the block count of data to be read)

[Output] Tag data

Specified data



**NF\_FRA5097\_dvr\_qDataReadSize.vi**

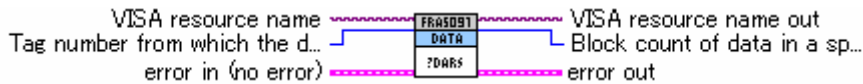
Querying the tag data block count

[Input] Tag number from which the data block count is read out

The tag number from which the data block count is read out

[Output] Block count of data in a specified tag

The block count of data in a specified tag



**NF\_FRA5097\_dvr\_sDataWriteTitle.vi**

Writing a data title string for a tag

[Input] `isOmitParam`

True if the argument is omitted.

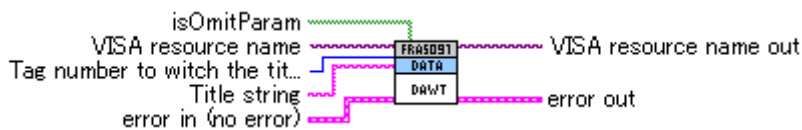
\*[Input] "Tag number to witch the title string is written" cannot be omitted.

[Input] Tag number to witch the title string is written

The tag number to which the title is written

[Input] Title string

Title strings (up to 63 characters)



**NF\_FRA5097\_dvr\_qDataReadTitle.vi**

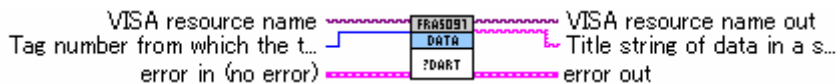
Querying the tag title strings

[Input] Tag number from which the title string is read out

The tag number from which the title strings are read out

[Output] Title string of data in a specified tag

The title strings of data in a specified tag

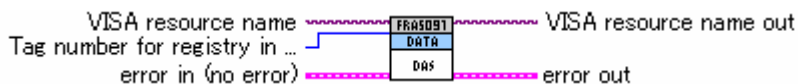


**NF\_FRA5097\_dvr\_sDataShort.vi**

Registering with short correction memory

[Input] Tag number for registry in short equalizer memory

The tag number of data to be registered with short correction memory



**NF\_FRA5097\_dvr\_sDataTemplate.vi**

Setting the data transfer format

[Input] `isOmitParam`

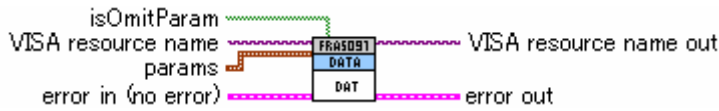
True if the argument is omitted.

[Input] Data format

Data format

[Input] Configuration and sequence of transfer data in a single block 1-6

Configuration and sequence of transfer data in a single block (with up to six arguments)



**NF\_FRA5097\_dvr\_qDataTemplate.vi**

Querying the data transfer format

[Output] Current data format

Current data format

[Output] Configuration and sequence of transfer data in a single block 1

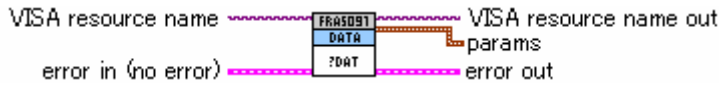
[Output] Configuration and sequence of transfer data in a single block 2

[Output] Configuration and sequence of transfer data in a single block 3

[Output] Configuration and sequence of transfer data in a single block 4

[Output] Configuration and sequence of transfer data in a single block 5

[Output] Configuration and sequence of transfer data in a single block 6



**2.8 Messages about Display Control Settings**

**NF\_FRA5097\_dvr\_sDisplayANalysis.vi**

Setting the display mode of (active) tag data being displayed

[Input] Analysis mode

Analysis mode

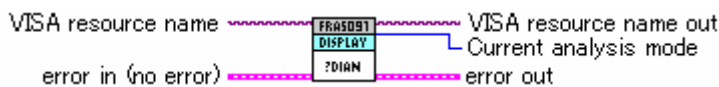


**NF\_FRA5097\_dvr\_qDisplayANalysis.vi**

Querying the analysis mode of tag data being displayed

[Output] Current analysis mode

Current analysis mode

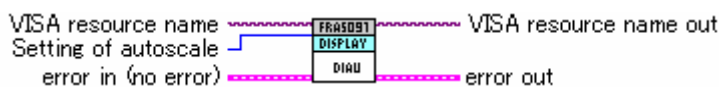


**NF\_FRA5097\_dvr\_sDisplayAUto.vi**

Setting autoscale to ON/OFF

[Input] Setting of autoscale

Setting of autoscale



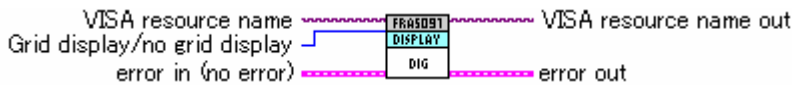
**NF\_FRA5097\_dvr\_qDisplayAUto.vi**

Querying the ON/OFF state of autoscale  
 [Output] Current setup conditions of autoscale  
 Current setup conditions of autoscale



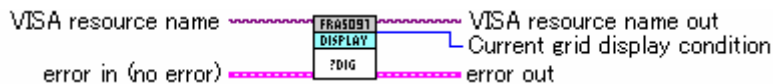
**NF\_FRA5097\_dvr\_sDisplayGridmode.vi**

Setting the grid to be displayed or hidden  
 [Input] Grid display/no grid display  
 Setting of grid display/no grid display



**NF\_FRA5097\_dvr\_qDisplayGridmode.vi**

Querying the grid display/no display state  
 [Output] Current grid display condition  
 Current grid display condition



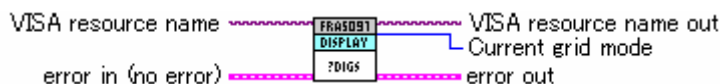
**NF\_FRA5097\_dvr\_sDisplayGridStyle.vi**

Setting the grid mode  
 [Input] Grid mode  
 Grid mode



**NF\_FRA5097\_dvr\_qDisplayGridStyle.vi**

Querying the grid mode  
 [Output] Current grid mode  
 Current grid mode



**NF\_FRA5097\_dvr\_sDIsplayGridType.vi**

Setting the grid type

[Input] Grid type

Grid type

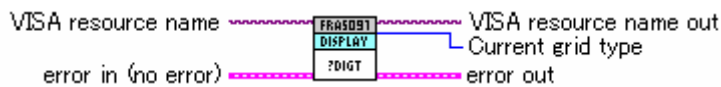


**NF\_FRA5097\_dvr\_qDIsplayGridType.vi**

Querying the grid type

[Output] Current grid type

Current grid type

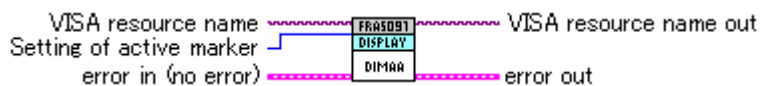


**NF\_FRA5097\_dvr\_sDIsplayMArkerActive.vi**

Setting an active marker

[Input] Setting of active marker

Setting of an active marker

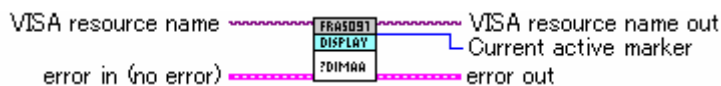


**NF\_FRA5097\_dvr\_qDIsplayMArkerActive.vi**

Querying an active marker

[Output] Current active marker

Current active marker

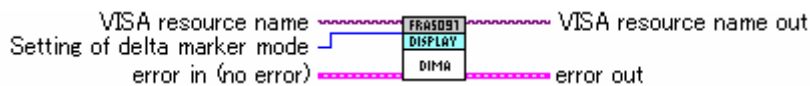


**NF\_FRA5097\_dvr\_sDIsplayMArkermode.vi**

Setting a delta marker

[Input] Setting of delta marker mode

Setting of delta marker mode

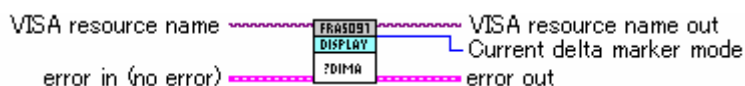


**NF\_FRA5097\_dvr\_qDIsplayMArkermode.vi**

Querying a delta marker

[Output] Current delta marker mode

Current delta marker mode



**NF\_FRA5097\_dvr\_sDisplaymode.vi**

Setting the graph display mode

[Input] isOmitParam

True if the argument is omitted.

[Input] X axis of graph

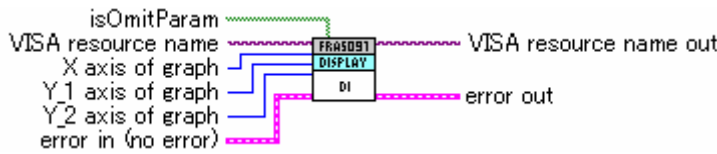
The X axis of the graph

[Input] Y\_1 axis of graph

The Y\_1 axis of the graph

[Input] Y\_2 axis of graph

The Y\_2 axis of the graph



**NF\_FRA5097\_dvr\_qDisplaymode.vi**

Querying the graph display mode

[Output] X axis of current graph

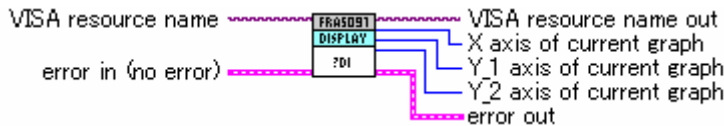
The X axis of the current graph

[Output] Y\_1 axis of current graph

The Y\_1 axis of the current graph

[Output] Y\_2 axis of current graph

The Y\_2 axis of the current graph



**NF\_FRA5097\_dvr\_sDisplayPhase.vi**

Setting the phase display range

[Input] Central value in the phase display range

Central value in the phase display range (-180 (from -360 to 0 deg), 0 (from -180 to 180 deg), 180 (from 0 to 360 deg))



**NF\_FRA5097\_dvr\_qDisplayPhase.vi**

Querying the phase display range

[Output] Central value in the current phase display range

The central value in the current phase display range





**NF\_FRA5097\_dvr\_sDIsplayScaleXaxis.vi**

Setting the X-axis display range

[Input] isOmitParam

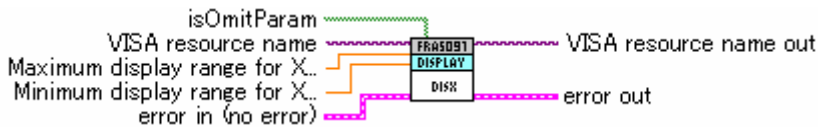
True if the argument is omitted.

[Input] Maximum display range for X axis of graph

Maximum value of the X-axis display range

[Input] Minimum display range for X axis of graph

Minimum value of the X-axis display range



**NF\_FRA5097\_dvr\_qDIsplayScaleXaxis.vi**

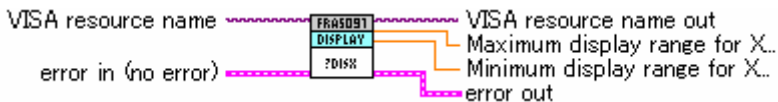
Querying the X-axis display range

[Output] Maximum display range for X axis of current graph

Current maximum value of the X-axis display range

[Output] Minimum display range for X axis of current graph

Current minimum value of the X-axis display range



**NF\_FRA5097\_dvr\_sDIsplayScaleY1axis.vi**

Setting the Y<sub>1</sub>-axis display range

[Input] isOmitParam

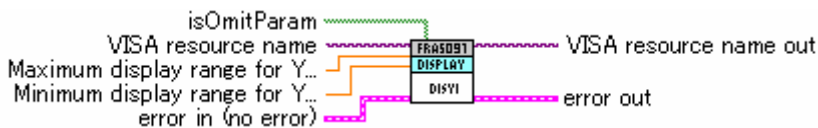
True if the argument is omitted.

[Input] Maximum display range for Y<sub>1</sub> axis of graph

Maximum value of the Y<sub>1</sub>-axis display range

[Input] Minimum display range for Y<sub>1</sub> axis of graph

Minimum value of the Y<sub>1</sub>-axis display range



**NF\_FRA5097\_dvr\_qDIsplayScaleY1axis.vi**

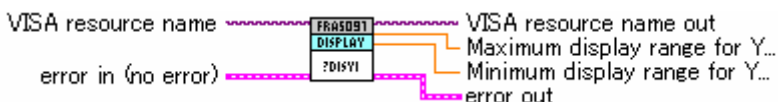
Querying the Y<sub>1</sub>-axis display range

[Output] Maximum display range for Y<sub>1</sub> axis of current graph

Current maximum value of the Y<sub>1</sub>-axis display range

[Output] Minimum display range for Y<sub>1</sub> axis of current graph

Current minimum value of the Y<sub>1</sub>-axis display range



**NF\_FRA5097\_dvr\_sDisplayScaleY2axis.vi**

Setting the Y<sub>2</sub>-axis display range

[Input] isOmitParam

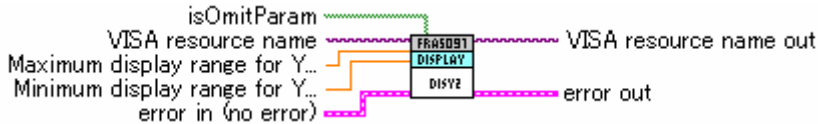
True if the argument is omitted.

[Input] Maximum display range for Y<sub>2</sub> axis of graph

Maximum value of the Y<sub>2</sub>-axis display range

[Input] Minimum display range for Y<sub>2</sub> axis of graph

Minimum value of the Y<sub>2</sub>-axis display range



**NF\_FRA5097\_dvr\_qDisplayScaleY2axis.vi**

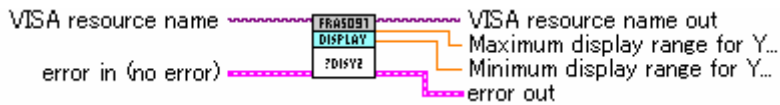
Querying the Y<sub>2</sub>-axis display range

[Output] Maximum display range for Y<sub>2</sub> axis of current graph

Current maximum value of the Y<sub>2</sub>-axis display range

[Output] Minimum display range for Y<sub>2</sub> axis of current graph

Current minimum value of the Y<sub>2</sub>-axis display range

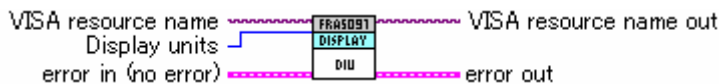


**NF\_FRA5097\_dvr\_sDisplayUnits.vi**

Setting display units

[Input] Display units

Display units



**NF\_FRA5097\_dvr\_qDisplayUnits.vi**

Querying display units

[Output] Present graph display window mode

Current display units

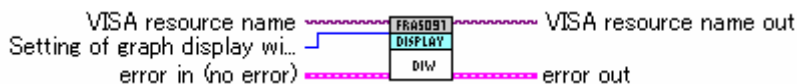


**NF\_FRA5097\_dvr\_sDisplayWindow.vi**

Setting the graph display window mode

[Input] Setting of graph display window mode

Setting of the graph display window mode

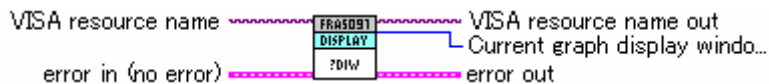


**NF\_FRA5097\_dvr\_qDisplayWindow.vi**

Querying the graph display window mode

[Output] Current graph display window mode

Current graph display window mode



**2.9 Messages about File Control Settings**

**NF\_FRA5097\_dvr\_sFileDeleteDisk.vi**

Deleting files

[Input] Name of a file to be deleted

The name of a file to be deleted (the name of a file stored in the USB memory)

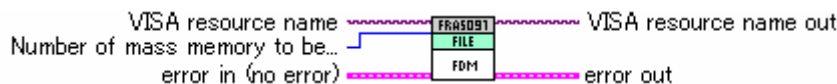


**NF\_FRA5097\_dvr\_sFileDeleteMass.vi**

Deleting mass memory

[Input] Number of mass memory to be deleted

The number of mass memory to be deleted (from 1 to the number stored in the mass memory)

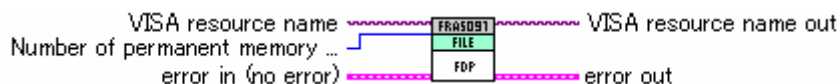


**NF\_FRA5097\_dvr\_sFileDeletePermanent.vi**

Deleting permanent memory

[Input] Number of permanent memory to be deleted

The number of permanent memory to be deleted (from 1 to the number stored in the permanent memory)



**NF\_FRA5097\_dvr\_qFileDirDisk.vi**

Outputting a list of files that are stored in the USB memory

[Output] File name

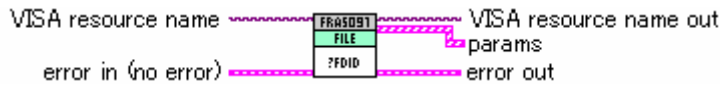
File names

[Output] Date on which a file was created

Dates on which the files were created

[Output] Time at which a file was created

Time at which the files were created



**NF\_FRA5097\_dvr\_qFileDirMass.vi**

Outputting a list of file numbers that are registered with mass memory

[Output] Registration number of mass memory

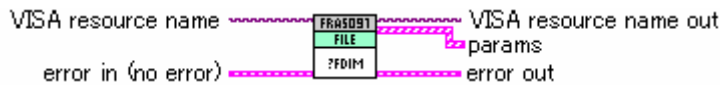
Mass memory registration numbers

[Output] Date on which a file was created

Date on which the files were created

[Output] Time at which a file was created

Time at which the files were created



**NF\_FRA5097\_dvr\_qFileDirPermanent.vi**

Outputting a list of file numbers that are registered with permanent memory

[Output] Registration number of permanent memory

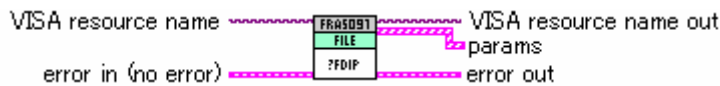
Permanent memory registration numbers

[Output] Date on which a file was created

Date on which the files were created

[Output] Time at which a file was created

Time at which the files were created



**NF\_FRA5097\_dvr\_sFileLoadDiskdata.vi**

Loading data files from the USB memory

[Input] isOmitParam

True if the argument is omitted.

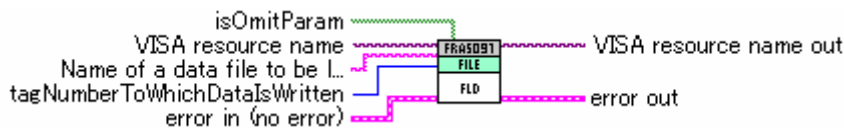
\*[Input] "Name of a data file to be loaded" cannot be omitted.

[Input] Name of a data file to be loaded

The name of a data file to be loaded (including the extension ".dat")

[Input] tagNumberToWhichDataIsWritten

The number of the tag to which data is written

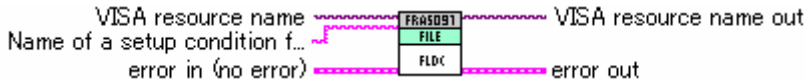


**NF\_FRA5097\_dvr\_sFileLoadDiskCondition.vi**

Loading a setup condition file from the USB memory

[Input] Name of a setup condition file to be loaded

The name of the setup condition file to be loaded (including the extension ".con")



**NF\_FRA5097\_dvr\_sFileLoadMass.vi**

Loading mass data and assigning it to a tag

[Input] isOmitParam

True if the argument is omitted.

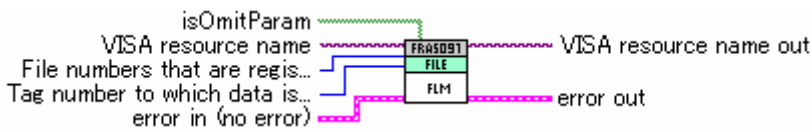
\*[Input] “File numbers that are registered with mass memory” cannot be omitted

[Input] File numbers that are registered with mass memory

The file numbers that are registered with mass memory (the file numbers stored in the mass memory)

[Input] Tag number to which data is written

The number of a tag to which data is written



**NF\_FRA5097\_dvr\_sFileLoadPermanent.vi**

Loading permanent data and assigning it to a tag

[Input] isOmitParam

True if the argument is omitted.

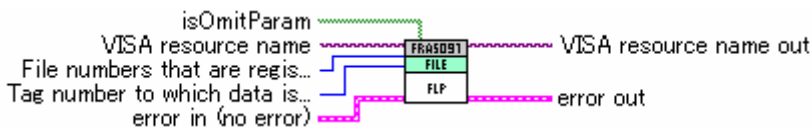
\*[Input] “File numbers that are registered with permanent memory” cannot be omitted

[Input] File numbers that are registered with permanent memory

The file numbers that are registered with permanent memory (the file numbers stored in the permanent memory)

[Input] Tag number to which data is written

The number of a tag to which data is written



**NF\_FRA5097\_dvr\_sFileRenameDisk.vi**

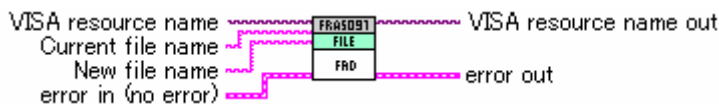
Renaming a file in a USB memory

[Input] Current file name

Current filename (a filename stored in the disk (including its extension))

[Input] New file name

New filename (a filename not stored in the disk (including its extension))



**NF\_FRA5097\_dvr\_sFileSaveDiskdata.vi**

Saving tag data to a USB memory

[Input] isOmitParam

True if the argument is omitted.

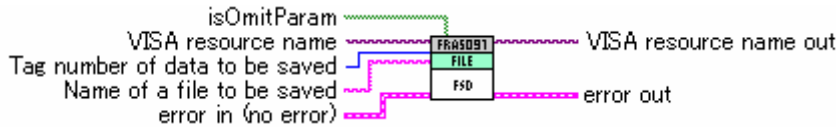
\*[Input] "Name of a file to be saved" cannot be omitted

[Input] Tag number of data to be saved

The tag number to be saved

[Input] Name of a file to be saved

The name of the file to be saved including its extension ".dat"

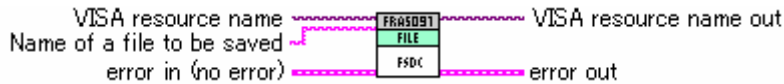


**NF\_FRA5097\_dvr\_sFileSaveDiskCondition.vi**

Saving setup conditions to a USB memory

[Input] Name of a file to be saved

The name of the file to be saved including its extension ".con"



**NF\_FRA5097\_dvr\_sFileSaveMass.vi**

Storing tag data to a mass memory

[Input] isOmitParam

True if the argument is omitted.

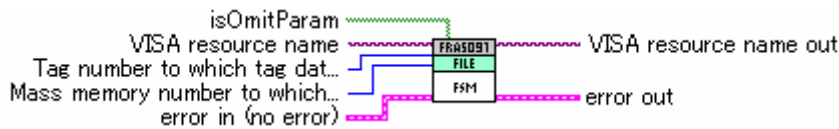
[Input] Tag number to which tag data is stored

The number of a tag whose data will be stored to a mass memory

[Input] Mass memory number to which data is stored

The number of mass memory to which data will be stored (from 1 to 99)

If omitted, the number is automatically generated.



**NF\_FRA5097\_dvr\_sFileSavePermanent.vi**

Storing tag data to a permanent memory

[Input] isOmitParam

True if the argument is omitted.

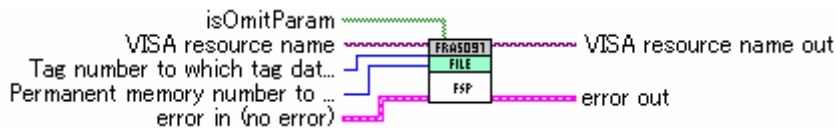
[Input] Tag number to which tag data is stored

The number of a tag whose data will be stored to a permanent memory

[Input] Permanent memory number to which tag data is stored

The number of a permanent memory to which data will be stored (from 1 to 99)

If omitted, the number is automatically generated.



## 2.10 Messages about Input Control Settings

### NF\_FRA5097\_dvr\_sINputAction.vi

Setting an action for overload input detected

[Input] isOmitParam

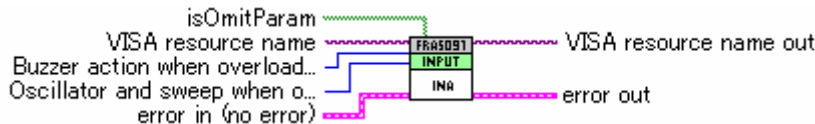
True if the argument is omitted.

[Input] Buzzer action when overload input is detected

Buzzer action when overload input is detected

[Input] Oscillator and sweep when overload input is detected

Behavior of the oscillator and sweep when overload input is detected



### NF\_FRA5097\_dvr\_qINputAction.vi

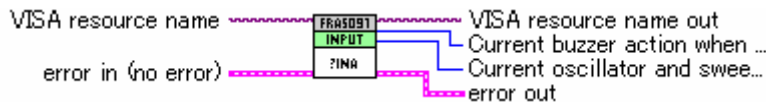
Querying the action to be taken when overload input is detected

[Output] Current buzzer action when overload input is detected

Current buzzer action when overload input is detected

[Output] Current oscillator and sweep when overload input is detected

Current behavior of the oscillator and sweep when overload input is detected



### NF\_FRA5097\_dvr\_sINputCAIculate.vi

Setting input weighting

[Input] isOmitParam

True if the argument is omitted.

[Input] Number to be applied to CH1 input

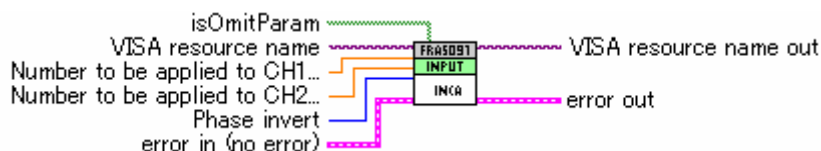
The value to be applied to CH1 (from 0.0 to 1.0E+6)

[Input] Number to be applied to CH2 input

The value to be applied to CH2 (from 0.0 to 1.0E+6)

[Input] Phase invert

Invert the phase

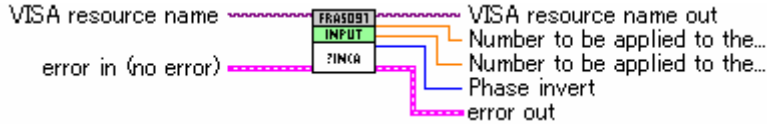


### NF\_FRA5097\_dvr\_qINputCAIculate.vi

Querying input weighting

[Output] Number to be applied to the current CH1 input

The value to be applied to the current CH1 input  
 [Output] Number to be applied to the current CH2 input  
 The number to be applied to the current CH2 input  
 [Output] Phase invert  
 Invert the phase



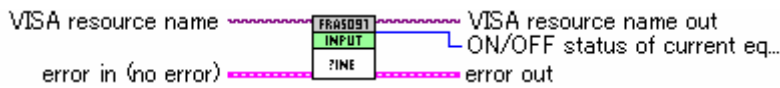
**NF\_FRA5097\_dvr\_sINputEqualize.vi**

Setting input equalization  
 [Input] ON/OFF status of equalization  
 ON/OFF status of equalization



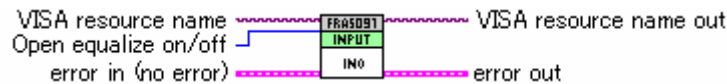
**NF\_FRA5097\_dvr\_qINputEqualize.vi**

Querying the equalization  
 [Output] ON/OFF status of current equalization  
 Current ON/OFF status of equalization



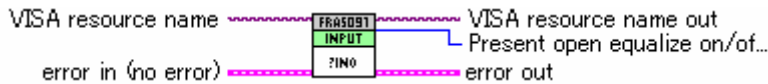
**NF\_FRA5097\_dvr\_sINputOpen.vi**

Setting the open correction function  
 [Input] Open equalize on/off  
 ON/OFF state of the open correction function



**NF\_FRA5097\_dvr\_qINputOpen.vi**

Querying the open correction function  
 [Output] Present open equalize on/off state  
 Current ON/OFF state of the open correction function

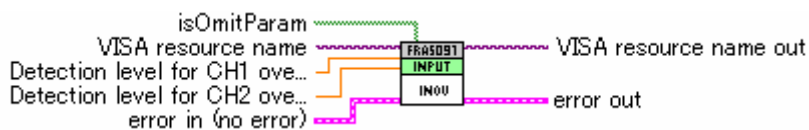


**NF\_FRA5097\_dvr\_sINputOVER.vi**

Setting the detection level for overload  
 [Input] isOmitParam  
 True if the argument is omitted.  
 [Input] Detection level for CH1 overload

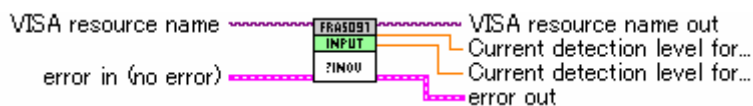


The detection level for CH1 overload (from 0 to 250 (Vrms))  
 [Input] Detection level for CH2 overload  
 The detection level for CH2 overload (from 0 to 250 (Vrms))



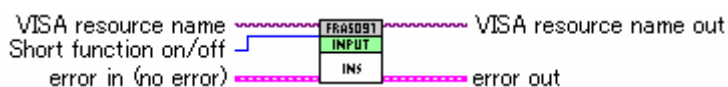
### NF\_FRA5097\_dvr\_qInputOver.vi

Querying the detection level for overload  
 [Output] Current detection level for CH1 overload  
 Current detection level for CH1 overload  
 [Output] Current detection level for CH2 overload  
 Current detection level for CH2 overload



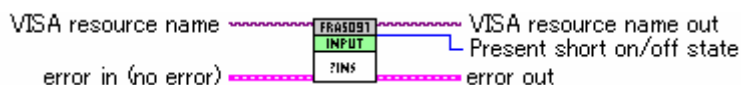
### NF\_FRA5097\_dvr\_sInputShort.vi

Setting the short correction function  
 [Input] Short function on/off  
 ON/OFF state of the short correction function



### NF\_FRA5097\_dvr\_qInputShort.vi

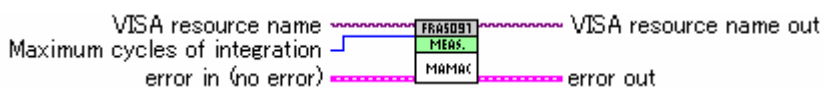
Querying the short correction function  
 [Output] Present short on/off state  
 Current ON/OFF state of the short correction function



## 2.11 Messages about Measurement Control Settings

### NF\_FRA5097\_dvr\_sMeasureAutoMaxCycle.vi

Setting the maximum number of automatic integration  
 [Input] Maximum cycles of integration  
 Maximum number of integration (from 2 to 9999 (cycles))

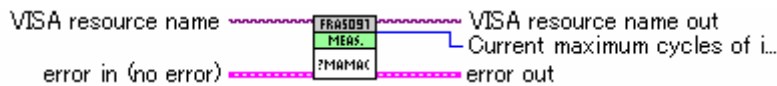


### NF\_FRA5097\_dvr\_qMeasureAutoMaxCycle.vi

Querying the maximum number of automatic integration

[Output] Current maximum cycles of integration

Current maximum number of integration

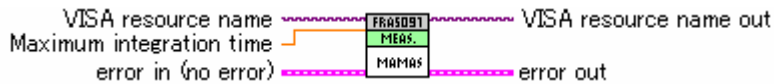


### NF\_FRA5097\_dvr\_sMeasureAutoMAxSec.vi

Setting the maximum time of automatic integration

[Input] Maximum integration time

Maximum integration time (from 0 to 9999 (sec))

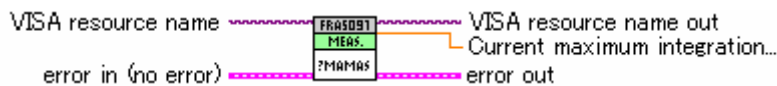


### NF\_FRA5097\_dvr\_qMeasureAutoMAxSec.vi

Querying the maximum time of automatic integration

[Output] Current maximum integration time

Current maximum integration time

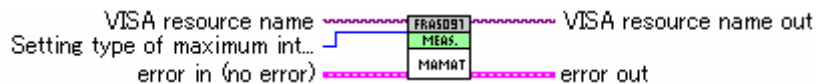


### NF\_FRA5097\_dvr\_sMeasureAutoMAxType.vi

Setting the method of setting maximum automatic integration

[Input] Setting type of maximum integration

The method of setting maximum integration



### NF\_FRA5097\_dvr\_qMeasureAutoMAxType.vi

Querying the method of setting maximum automatic integration

[Output] Current setting type of maximum integration

Current method of setting maximum integration

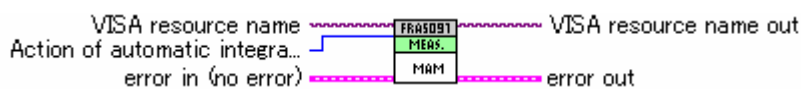


### NF\_FRA5097\_dvr\_sMeasureAutoMode.vi

Setting the automatic integration action

[Input] Action of automatic integration

Automatic integration action



### NF\_FRA5097\_dvr\_qMeasureAutoMode.vi

Querying the automatic integration action

[Output] Action of current automatic integration

Current automatic integration action



**NF\_FRA5097\_dvr\_sMeasureCoherence.vi**

Setting the coherence calculation mode

[Input] Coherence calculation mode

Coherence calculation mode



**NF\_FRA5097\_dvr\_qMeasureCoherence.vi**

Querying the coherence calculation mode

[Output] Current coherence calculation mode

Current coherence calculation mode

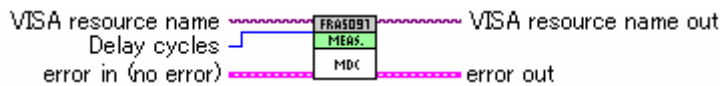


**NF\_FRA5097\_dvr\_sMeasureDelayCycle.vi**

Setting the measurement start delay cycle

[Input] Delay cycles

Delay cycle (from 0 to 9999 (cycles))

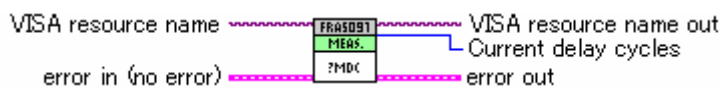


**NF\_FRA5097\_dvr\_qMeasureDelayCycle.vi**

Querying the measurement start delay cycle

[Output] Current delay cycles

Current delay cycle

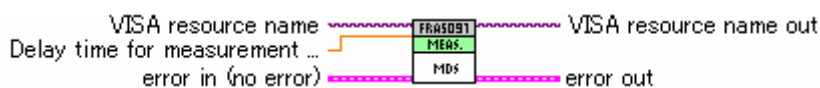


**NF\_FRA5097\_dvr\_sMeasureDelaySec.vi**

Setting the delay time for measurement start

[Input] Delay time for measurement start

Delay time for measurement start (from 0 to 9999.0 (sec))

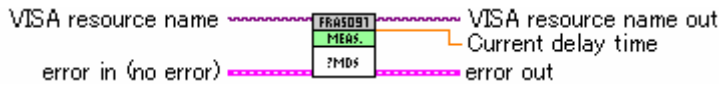


**NF\_FRA5097\_dvr\_qMeasureDelaySec.vi**

Querying the delay time for measurement start

[Output] Current delay time

Current delay time

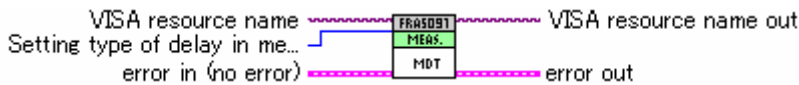


**NF\_FRA5097\_dvr\_sMeasureDelayType.vi**

Setting the method of setting delay in measurement start

[Input] Setting type of delay in measurement start

The method of setting delay in measurement start

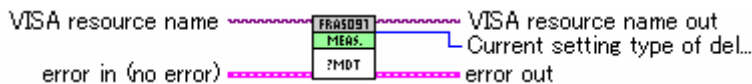


**NF\_FRA5097\_dvr\_qMeasureDelayType.vi**

Querying the method of setting delay in measurement start

[Output] Current setting type of delay in measurement start

Current method of setting delay in measurement start

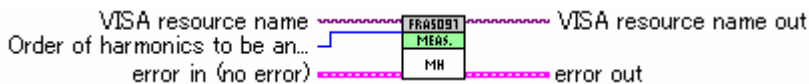


**NF\_FRA5097\_dvr\_sMeasureHarmonic.vi**

Setting the order for harmonics analysis

[Input] Order of harmonics to be analyzed

The order of harmonics to be analyzed

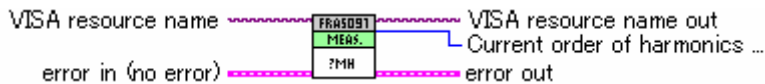


**NF\_FRA5097\_dvr\_qMeasureHarmonic.vi**

Querying the order for harmonics analysis

[Output] Current order of harmonics to be analyzed

Current order of harmonics to be analyzed



**NF\_FRA5097\_dvr\_sMeasureIntegrationCycle.vi**

Setting the number of manual integration

[Input] isOmitParam

True if the argument is omitted.

[Input] Cycles of integration

The number of integration (from 1 to 9999 (cycles))



**NF\_FRA5097\_dvr\_qMeasureIntegrationCycle.vi**

Querying the number of manual integration

[Output] Current cycles of integration

Current number of manual integration

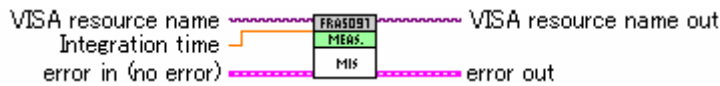


**NF\_FRA5097\_dvr\_sMeasureIntegrationSec.vi**

Setting manual integration time

[Input] Integration time

Integration time (from 0 to 9999.0 (sec))

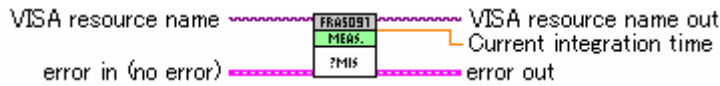


**NF\_FRA5097\_dvr\_qMeasureIntegrationSec.vi**

Querying manual integration time

[Output] Current integration time

Current manual integration time

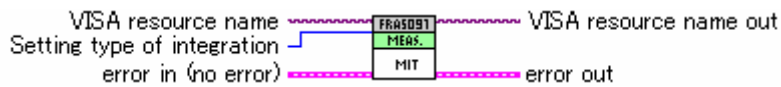


**NF\_FRA5097\_dvr\_sMeasureIntegrationType.vi**

Setting the method of setting integration

[Input] Setting type of integration

The method of setting integration

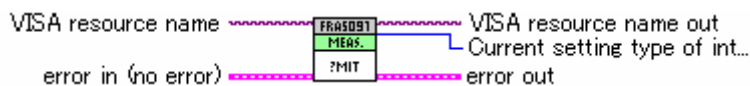


**NF\_FRA5097\_dvr\_qMeasureIntegrationType.vi**

Querying the method of setting integration

[Output] Current setting type of integration

Current method of setting integration

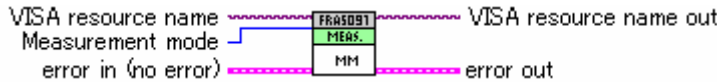


**NF\_FRA5097\_dvr\_sMeasureMode.vi**

Setting the measurement mode

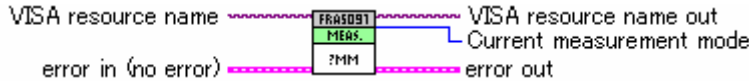
[Input] Measurement mode

Measurement mode



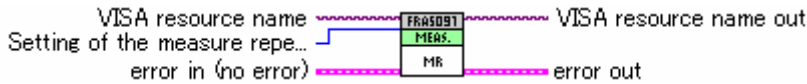
**NF\_FRA5097\_dvr\_qMeasureMode.vi**

Querying the measurement mode  
 [Output] Current measurement mode  
 Current measurement mode



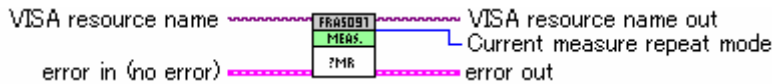
**NF\_FRA5097\_dvr\_sMeasureRepeat.vi**

Setting the continuous measurement (Repeat) mode  
 [Input] Setting of the measure repeat mode  
 Setting of the continuous measurement mode



**NF\_FRA5097\_dvr\_qMeasureRepeat.vi**

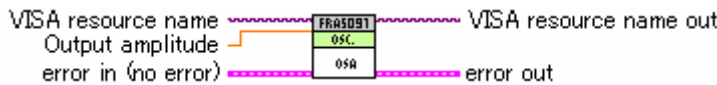
Querying the continuous measurement (Repeat) mode  
 [Output] Current measure repeat mode  
 Current continuous measurement mode



**2.12 Messages about Oscillator Control Settings**

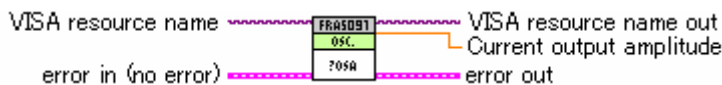
**NF\_FRA5097\_dvr\_sOscillatorAmplitude.vi**

Setting oscillator output amplitude  
 [Input] Output amplitude  
 Output amplitude (when output open (from 0 to 10 (V<sub>peak</sub>)))



**NF\_FRA5097\_dvr\_qOscillatorAmplitude.vi**

Querying oscillator output amplitude  
 [Output] Current output amplitude  
 Current output amplitude (when output open)

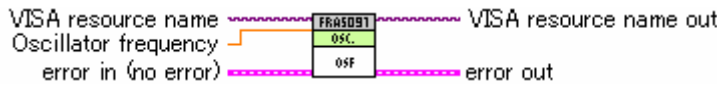


**NF\_FRA5097\_dvr\_sOscillatorFrequency.vi**

Setting oscillator frequency

[Input] Oscillator frequency

Oscillator frequency (from 0.1E-3 to 15E+6 (Hz))  
 From 0.1E-3 to 10E+6 (Hz) for FRA5087

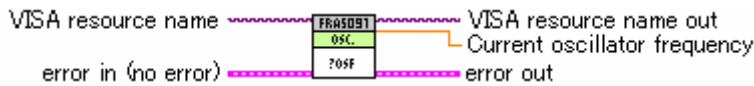


**NF\_FRA5097\_dvr\_qOscillatorFrequency.vi**

Querying oscillator frequency

[Output] Current oscillator frequency

Current oscillator frequency



**NF\_FRA5097\_dvr\_sOscillatormode.vi**

Setting the voltage change mode

[Input] isOmitParam

True if the argument is omitted.

[Input] Oscillator ON/OFF

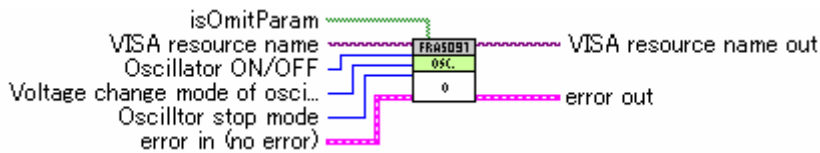
Oscillator ON/OFF

[Input] Voltage change mode of oscillator

Voltage change mode of oscillator (SLOW ON/OFF setting)

[Input] Oscillator stop mode

Oscillator stop mode



**NF\_FRA5097\_dvr\_qOscillatormode.vi**

Querying the voltage change mode

[Output] Current ON/OFF status of oscillator

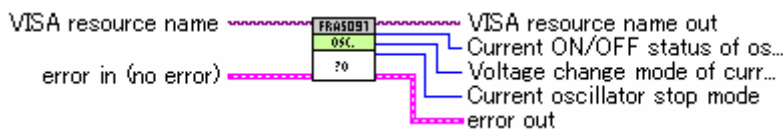
Current ON/OFF status of the oscillator

[Output] Voltage change mode of current oscillator

Current voltage change mode of the oscillator

[Output] Current oscillator stop mode

Current oscillator stop mode

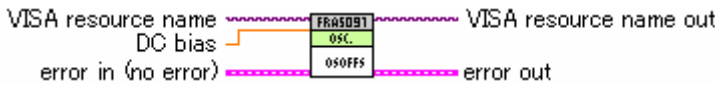


**NF\_FRA5097\_dvr\_sOscillatorOFFSet.vi**

Setting DC bias

[Input] DC bias

DC bias (when output open (from -10 to 10 (V)))

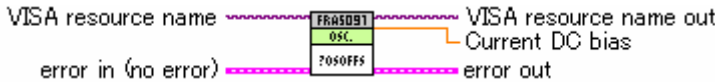


**NF\_FRA5097\_dvr\_qOscillatorOFFSet.vi**

Querying DC bias

[Output] Current DC bias

Current DC bias (when output open)

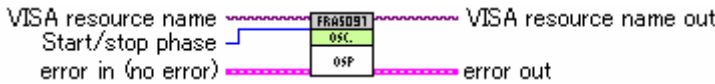


**NF\_FRA5097\_dvr\_sOscillatorPhase.vi**

Setting the oscillator-start/stop phase

[Input] Start/stop phase

Start/stop phase (from 0 to 359 (deg))

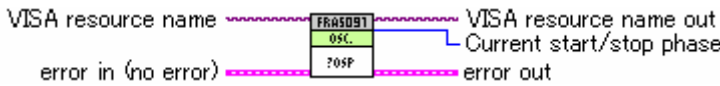


**NF\_FRA5097\_dvr\_qOscillatorPhase.vi**

Querying the oscillator-start/stop phase

[Output] Current start/stop phase

Current start/stop phase

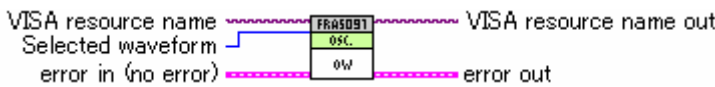


**NF\_FRA5097\_dvr\_sOscillatorWaveform.vi**

Setting oscillation waveform

[Input] Selected waveform

Waveform selection

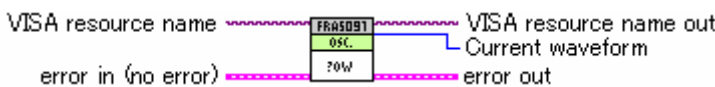


**NF\_FRA5097\_dvr\_qOscillatorWaveform.vi**

Querying oscillation waveform

[Output] Current waveform

Current waveform



**2.13 Miscellaneous Setting Messages**

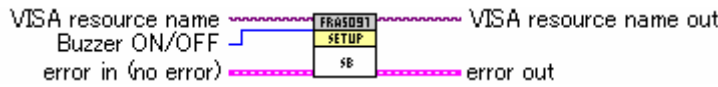
**NF\_FRA5097\_dvr\_sSetupBuzzer.vi**



Setting the buzzer ON/OFF

[Input] Buzzer ON/OFF

Buzzer ON/OFF

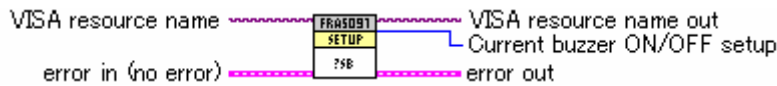


**NF\_FRA5097\_dvr\_qSetupBuzzer.vi**

Querying the buzzer ON/OFF

[Output] Current buzzer ON/OFF setup

Current buzzer ON/OFF state



**NF\_FRA5097\_dvr\_sSetupCalibration.vi**

Executing calibration



**NF\_FRA5097\_dvr\_sSetupDate.vi**

Setting the date

[Input] isOmitParam

True if the argument is omitted.

[Input] Year

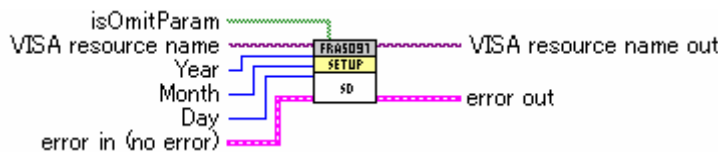
Year (from 1970 to 2069)

[Input] Month

Month (from 1 to 12)

[Input] Day

Day (from 1 to 31)



**NF\_FRA5097\_dvr\_qSetupDate.vi**

Querying the date

[Output] Year

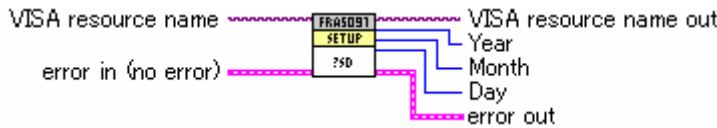
Year

[Output] Month

Month

[Output] Day

Day

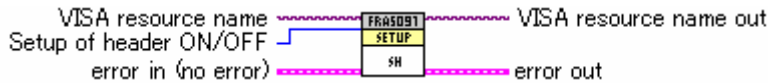


**NF\_FRA5097\_dvr\_sSetupHeader.vi**

Setting the header ON/OFF

[Input] Setup of header ON/OFF

The header ON/OFF setting

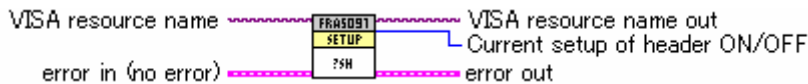


**NF\_FRA5097\_dvr\_qSetupHeader.vi**

Querying the header ON/OFF

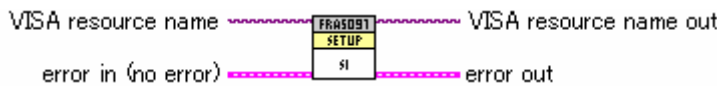
[Output] Current setup of header ON/OFF

Current state of the header ON/OFF



**NF\_FRA5097\_dvr\_sSetupInitialize.vi**

Setting initialization

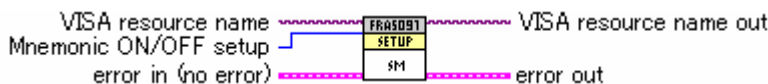


**NF\_FRA5097\_dvr\_sSetupMnemonic.vi**

Setting the numeric/mnemonic form of response strings

[Input] Mnemonic ON/OFF setup

Mnemonic ON/OFF setup

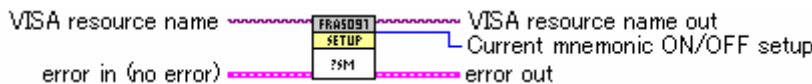


**NF\_FRA5097\_dvr\_qSetupMnemonic.vi**

Querying the numeric/mnemonic form of response strings

[Output] Current mnemonic ON/OFF setup

Current state of mnemonic ON/OFF setup



**NF\_FRA5097\_dvr\_sSetupTime.vi**

Setting time

[Input] isOmitParam

True if the argument is omitted.

[Input] Time

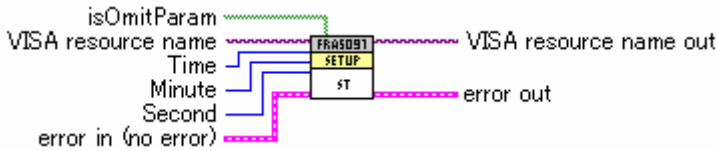
Hour (from 0 to 23 (24-hour system))

[Input] Minute

Minute (from 0 to 59)

[Input] Second

Second (from 0 to 59)



**NF\_FRA5097\_dvr\_qSetupTime.vi**

Querying time

[Output] Time

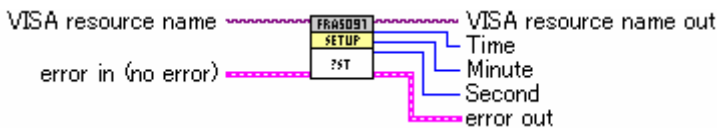
Hour

[Output] Minute

Minute

[Output] Second

Second



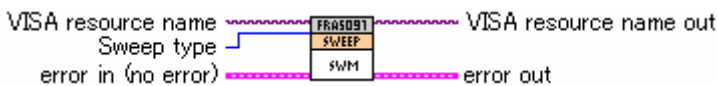
**2.14 Messages about Sweep Control Settings**

**NF\_FRA5097\_dvr\_sSweepManual.vi**

Setting manual/automatic sweep

[Input] Sweep type

Sweep type

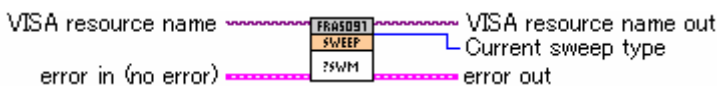


**NF\_FRA5097\_dvr\_qSweepManual.vi**

Querying manual/automatic sweep

[Output] Current sweep type

Current sweep type

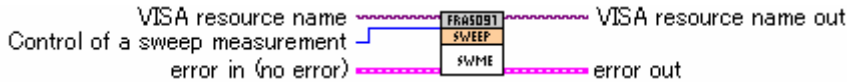


**NF\_FRA5097\_dvr\_sSweepMEasure.vi**

Setting sweep measurement control

[Input] Control of a sweep measurement

Sweep measurement control

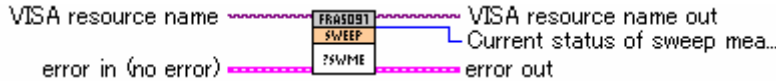


**NF\_FRA5097\_dvr\_qSWEEPMEasure.vi**

Querying sweep measurement control

[Output] Current status of sweep measurement

Current sweep status



**NF\_FRA5097\_dvr\_sSWEEPrange.vi**

Setting the sweep frequency range

[Input] isOmitParam

True if the argument is omitted.

[Input] Minimum sweep frequency

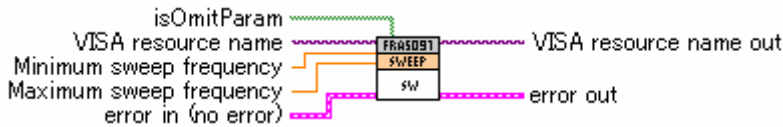
Minimum sweep frequency (from 0.1E-3 to 15E+6 (Hz))

From 0.1E-3 to 10E+6 (Hz) for FRA5087

[Input] Maximum sweep frequency

Maximum sweep frequency (from 0.1E-3 to 15E+6 (Hz))

From 0.1E-3 to 10E+6 (Hz) for FRA5087



**NF\_FRA5097\_dvr\_qSWEEPrange.vi**

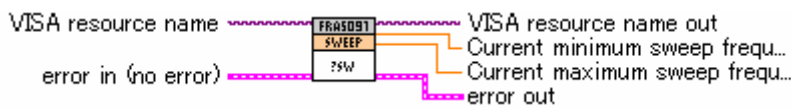
Querying the sweep frequency range

[Output] Current minimum sweep frequency

Minimum sweep frequency (Hz)

[Output] Current maximum sweep frequency

Maximum sweep frequency (Hz)

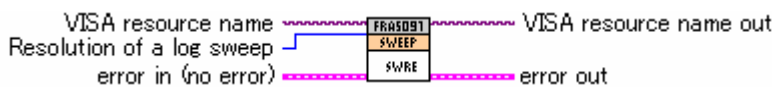


**NF\_FRA5097\_dvr\_sSWEEPREsolutionlogswEEP.vi**

Setting resolution of a log sweep (steps/sweep)

[Input] Resolution of a log sweep

Resolution of a log sweep (from 3 to 20000 (steps/sweep))

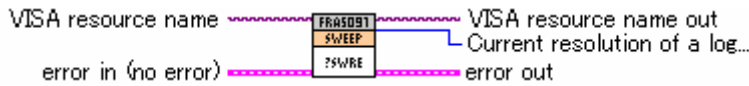


**NF\_FRA5097\_dvr\_qSWEEPREsolutionlogswEEP.vi**

Querying resolution of a log sweep (steps/sweep)

[Output] Current resolution of a log sweep

Current resolution of a log sweep

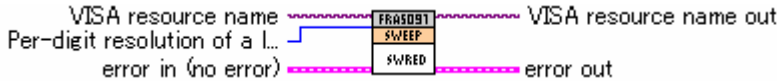


**NF\_FRA5097\_dvr\_sSWEEPREsolutionlogDecade.vi**

Setting the per-digit resolution of a log sweep (steps/decade)

[Input] Per-digit resolution of a log Sweep

Per-digit resolution of a log sweep (from 1 to 20000 (steps/decade))

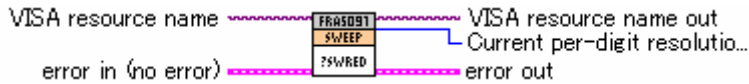


**NF\_FRA5097\_dvr\_qSWEEPREsolutionlogDecade.vi**

Querying the per-digit resolution of a log sweep (steps/decade)

[Output] Current per-digit resolution of a log sweep

Current per-digit resolution of a log sweep



**NF\_FRA5097\_dvr\_sSWEEPREsolutionLinsweep.vi**

Setting the resolution of a linear sweep (steps/sweep)

[Input] Resolution of a linear sweep

Resolution of a linear sweep (from 3 to 20000 (steps/sweep))

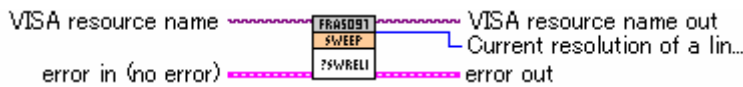


**NF\_FRA5097\_dvr\_qSWEEPREsolutionLinsweep.vi**

Querying the resolution of a linear sweep (steps/sweep)

[Output] Current resolution of a linear sweep

Current resolution of a linear sweep



**NF\_FRA5097\_dvr\_sSWEEPREsolutionLinHz.vi**

Setting the resolution (frequency) of a linear sweep

[Input] Resolution of a linear sweep

Resolution of a linear sweep (from 0.1E-3 to 15E+6 (Hz))

From 0.1E-3 to 10E+6 for FRA5087

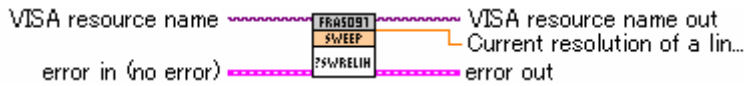


**NF\_FRA5097\_dvr\_qSWEEPREsolutionLinHz.vi**

Querying the resolution (frequency) of a linear sweep

[Output] Current resolution of a linear sweep

Current resolution of a linear sweep

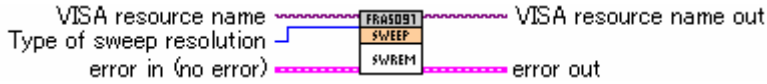


**NF\_FRA5097\_dvr\_sSweepREsolutionMode.vi**

Setting the type of sweep resolution

[Input] Type of sweep resolution

Type of sweep resolution

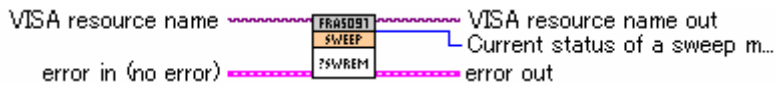


**NF\_FRA5097\_dvr\_qSweepREsolutionMode.vi**

Querying the type of sweep resolution

[Output] Current status of a sweep measurement

Current status of sweep resolution



**NF\_FRA5097\_dvr\_sSweepSlowmode.vi**

Setting the operation mode of a low-speed, high-density sweep

[Input] Operation mode of a low-speed, high density sweep

Operation mode of a low-speed, high-density sweep (SlowSweep)

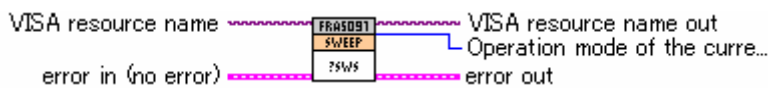


**NF\_FRA5097\_dvr\_qSweepSlowmode.vi**

Querying the operation mode of a low-speed, high-density sweep

[Output] Operation mode of the current low-speed, high density sweep

Current operation mode of a low-speed, high-density sweep



**NF\_FRA5097\_dvr\_sSweepSlowTarget.vi**

Setting a reference channel of a low-speed, high-density sweep

[Input] Reference channel of a low-speed, high density sweep

Reference channel of a low-speed, high-density sweep

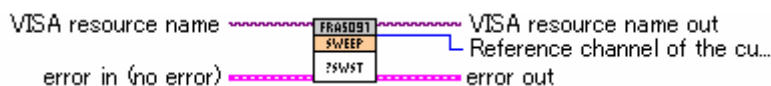


**NF\_FRA5097\_dvr\_qSweepSlowTarget.vi**

Querying a reference channel of a low-speed, high-density sweep

[Output] Reference channel of the current low-speed, high density sweep

Current reference channel of a low-speed, high-density sweep

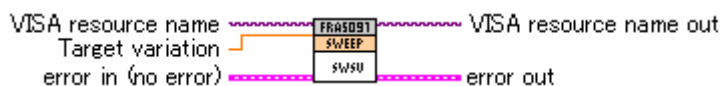


### NF\_FRA5097\_dvr\_sSweepSlowVariationLogr.vi

Setting target variation (measured voltage in dB) of a low-speed, high-density sweep

[Input] Target variation

Target variation (from 0 to 1000 (dB))

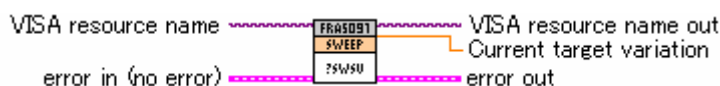


### NF\_FRA5097\_dvr\_qSweepSlowVariationLogr.vi

Querying target variation (measured voltage in dB) of a low-speed, high-density sweep

[Output] Current target variation

Current target variation (measured voltage in dB)

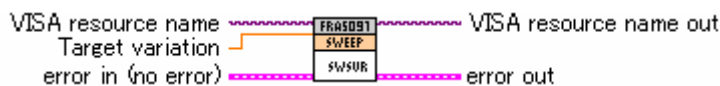


### NF\_FRA5097\_dvr\_sSweepSlowVariationR.vi

Setting target variation (measured voltage in Vrms) of a low-speed, high-density sweep

[Input] Target variation

Target variation (from 0 to 1.0E+9 (Vrms))

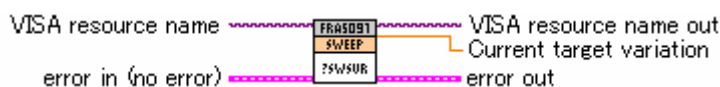


### NF\_FRA5097\_dvr\_qSweepSlowVariationR.vi

Querying target variation (measured voltage in Vrms) of a low-speed, high-density sweep

[Output] Current target variation

Current target variation (measured voltage in Vrms)

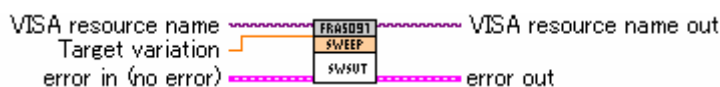


### NF\_FRA5097\_dvr\_sSweepSlowVariationTheta.vi

Setting the target variation (phase in deg) of a low-speed, high-density sweep

[Input] Target variation

Target variation (from 0 to 180 (deg))

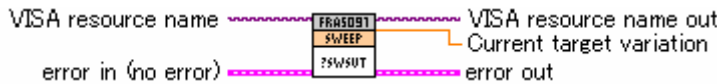


### NF\_FRA5097\_dvr\_qSweepSlowVariationTheta.vi

Querying the target variation (phase in deg) of a low-speed, high-density sweep

[Output] Current target variation

Current target variation (phase in deg)

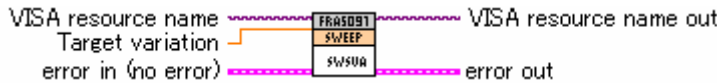


**NF\_FRA5097\_dvr\_sSWEEPSlowVariationA.vi**

Setting the target variation (the real part of voltage in Vrms) of a low-speed, high-density sweep

[Input] Target variation

Target variation (from 0.00E+00 to 1.00E+9 (Vrms))

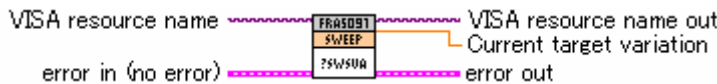


**NF\_FRA5097\_dvr\_qSWEEPSlowVariationA.vi**

Querying the target variation (the real part of voltage in Vrms) of a low-speed, high-density sweep

[Output] Current target variation

Current target variation (the real part of voltage in Vrms)

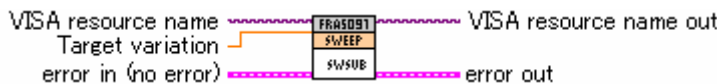


**NF\_FRA5097\_dvr\_sSWEEPSlowVariationB.vi**

Setting the target variation (the imaginary part of voltage in Vrms) of a low-speed, high-density sweep

[Input] Target variation

Target variation (from 0.00E+00 to 1.00E+9 (Vrms))

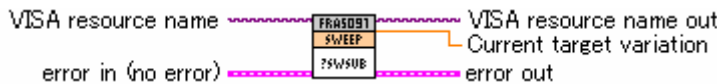


**NF\_FRA5097\_dvr\_qSWEEPSlowVariationB.vi**

Querying the target variation (the imaginary part of voltage in Vrms) of a low-speed, high-density sweep

[Output] Current target variation

Current target variation (the imaginary part of voltage in Vrms)



**NF\_FRA5097\_dvr\_sSWEEPSlowVariationMode.vi**

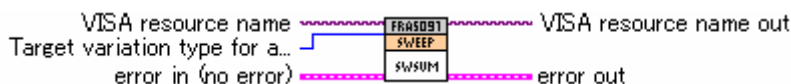
Setting the type of target variation of a low-speed, high-density sweep

[Input] isOmitParam

True if the argument is omitted.

[Input] Target variation type for a low-Speed & high-density sweep

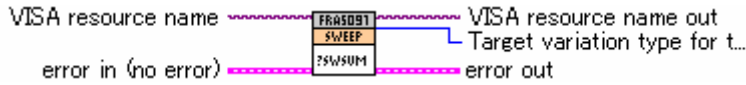
Type of target variation of a low-speed, high-density sweep (SlowSweep)





**NF\_FRA5097\_dvr\_qSWEEPSlowVariationMode.vi**

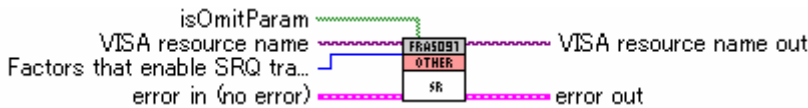
Querying the type of target variation of a low-speed, high-density sweep  
 [Output] Target variation type for the current low-Speed & high-density sweep  
 Current type of target variation of a low-speed, high-density sweep



**2.15 Other Setting Messages**

**NF\_FRA5097\_dvr\_sSRQenable.vi**

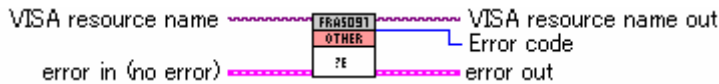
Setting SRQ transmission permission  
 [Input] isOmitParam  
 True if the argument is omitted.  
 [Input] Factors that enable SRQ transmission  
 Factors that enable SRQ transmission (from 0 to 47)



**2.16 Other Query Messages**

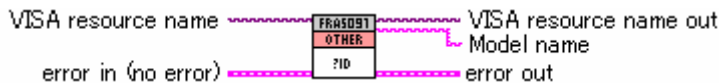
**NF\_FRA5097\_dvr\_qError.vi**

Querying an error code  
 [Output] Error code  
 An error code



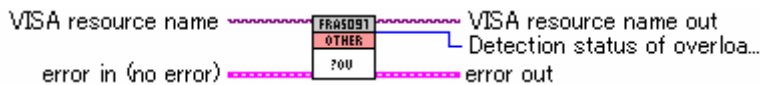
**NF\_FRA5097\_dvr\_qIDentifier.vi**

Querying a model name  
 [Output] Model name  
 A model name



**NF\_FRA5097\_dvr\_qOVerload.vi**

Querying the detection status of overload input  
 [Output] Detection status of overload input  
 Detection status of overload input

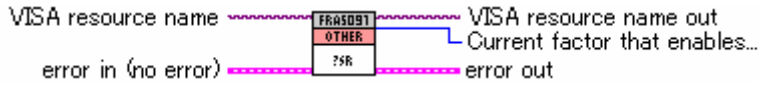


**NF\_FRA5097\_dvr\_qSRqenable.vi**

Querying SRQ transmission permission

[Output] Current factor that enables SRQ transmission

Current factor that enables SRQ transmission

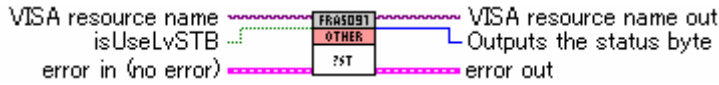


**NF\_FRA5097\_dvr\_qStatus.vi**

Outputting a status byte

[Output] Outputs the status byte

A status byte

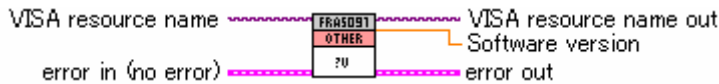


**NF\_FRA5097\_dvr\_qVersion.vi**

Outputting software version

[Output] Software version

Software version

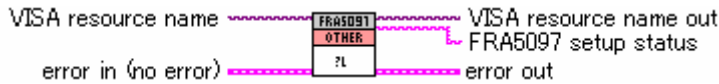


**NF\_FRA5097\_dvr\_qLearn.vi**

Outputting all the FRA setup items

[Output] FRA5097 setup status

FRA setup status



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## FRA5087/5097 LabVIEW Driver Instruction Manual

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