

Power Supply Modules LabVIEW Instrument Driver

Rev. 0 - 2 March 2015

Purpose of this User Manual

This User's Manual contains the full description of the **Power Supply Modules LabVIEW Instrument Driver**

Change Document Record

Date	Revision	Changes
2 March 2015	0	First issue of the document

Symbols, abbreviated terms and notation

Not available

Reference Document

[RD1] N1470 - Programmable HV Power Supply user manual

CAEN S.p.A.
Via Vetraia, 11 55049 Viareggio (LU) - ITALY
Tel. +39.0584.388.398 Fax +39.0584.388.959
info@caen.it
www.caen.it

© CAEN SpA – 2013

Disclaimer

No part of this manual may be reproduced in any form or by any means, electronic, mechanical, recording, or otherwise, without the prior written permission of CAEN SpA.

The information contained herein has been carefully checked and is believed to be accurate; however, no responsibility is assumed for inaccuracies. CAEN SpA reserves the right to modify its products specifications without giving any notice; for up to date information please visit www.caen.it.

Index

1	Overview	4
	System requirements and installation setup	4
2	Function Classification	5
	Data types.....	6
3	Function Description	7
	Iniatilize and Close VI's.....	7
	Initialize.vi	7
	OpenBoard.vi	8
	Close.vi	9
	Configuration VI's.....	11
	Configure IMON RANGE.vi	11
	Configure INTERLOCK Mode.vi	12
	Configure ISET.vi	13
	Configure MAXV.vi	14
	Configure POWER DOWN.vi	15
	Configure RAMP DOWN.vi	16
	Configure RAMP UP.vi	17
	Configure TRIP.vi	18
	Configure VSET.vi	19
	Action and Status VI's	21
	Board Alarm Status.vi	21
	Channel Power Enable.vi	22
	Channel Status.vi	23
	Clear alarm signal.vi	25
	Control Mode.vi	26
	INTERLOCK Status.vi	27
	Local Bus Termination.vi	28
	Data VI's	29
	Read out IMON.vi	29
	Read out INTERLOCK Mode.vi	30
	Read out ISET.vi	31
	Read out MAXVSET.vi	32
	Read out POLARITY.vi	34
	Read out POWER DOWN.vi	35
	Read out RAMP DOWN.vi	36
	Read out RAMP UP.vi	37
	Read out TRIP.vi	39
	Read out VMON.vi	40
	Read out VSET.vi	41
	Utility VI's.....	43
	Debug Command.vi	43
	Module Info.vi	44
4	Application Softwares	46
	Power Supply Modules LabView Channel Output Setting	46
	Power Supply Modules LabView Control Software.....	47

1 Overview

Power Supply Modules LabVIEW Instrument Driver is a set of VI'S, developed for LabVIEW 2009 and later releases (*LabVIEW™ is a Trademark of National Instruments Corp.*), that allow to configure and monitor all parameters of remotely controlled CAEN Programmable HV Power Supply modules. The supported power supplies (so far) are: N14xx, NDT14xx, R14xx, DT14xx and DT55xx families.

System requirements and installation setup



Host PC running LabVIEW 2009 or later releases and NI-VISA Run-Time Engine 5.3

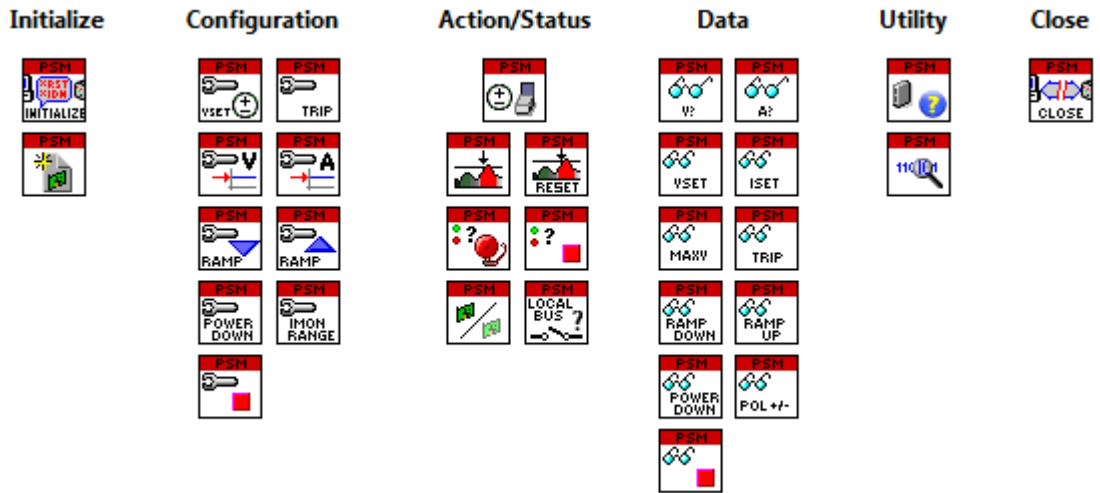
LabVIEW™ is a Trademark of National Instruments Corp.

In order to install the **Power Supply Modules LabVIEW Instrument Driver**:

- Go to CAEN web site in the “Software” area of any NIM/Desktop/Rack Programmable HV Power Supply page.
- Download the **Power Supply Modules LabVIEW Instrument Driver installation package**
- Extract files related to your host PC
- Follow the Set Up wizard instructions

2 Function Classification

Power Supply Modules LabVIEW Instrument Driver VIs are divided into 5 groups:















- Device Initialization/Termination VI's
 - CAEN PSM.lvlib:Initialize.vi
 - CAEN PSM.lvlib:OpenBoard.vi
 - CAEN PSM.lvlib:Close.vi
- Configuration VI's
 - CAEN PSM.lvlib:Configure VSET.vi
 - CAEN PSM.lvlib:Configure TRIP.vi
 - CAEN PSM.lvlib:Configure MAXV.vi
 - CAEN PSM.lvlib:Configure ISET.vi
 - CAEN PSM.lvlib:Configure RAMP UP.vi
 - CAEN PSM.lvlib:Configure RAMP DOWN.vi
 - CAEN PSM.lvlib:Configure POWER DOWN.vi
 - CAEN PSM.lvlib:Configure IMON RANGE.vi
 - CAEN PSM.lvlib:Configure INTERLOCK Mode.vi
- Action/Status VI's
 - CAEN PSM.lvlib:Channel Power Enable.vi
 - CAEN PSM.lvlib:Channel Status.vi
 - CAEN PSM.lvlib:Clear alarm signal.vi
 - CAEN PSM.lvlib:Board Alarm Status.vi
 - CAEN PSM.lvlib:INTERLOCK Status.vi
 - CAEN PSM.lvlib:Control Mode.vi
 - CAEN PSM.lvlib:Local Bus Termination.vi
- Data VI's
 - CAEN PSM.lvlib:Read out VMON.vi
 - CAEN PSM.lvlib:Read out IMON.vi

CAEN PSM.I.vlib:Read out VSET.vi
CAEN PSM.I.vlib:Read out ISET.vi
CAEN PSM.I.vlib:Read out MAXVSET.vi
CAEN PSM.I.vlib:Read out TRIP.vi
CAEN PSM.I.vlib:Read out RAMP UP.vi
CAEN PSM.I.vlib:Read out RAMP DOWN.vi
CAEN PSM.I.vlib:Read out POWER DOWN.vi
CAEN PSM.I.vlib:Read out POLARITY.vi
CAEN PSM.I.vlib:Read out INTERLOCK Mode.vi

- Utility VI's

CAEN PSM.I.vlib:Module Info.vi
CAEN PSM.I.vlib:Debug Command.vi

Data types

-  Cluster (error codes)
-  Cluster (various)
-  Cluster (numeric)
-  Input/Output name
-  Boolean
-  String
-  32bit integer
-  32bit unsigned integer numeric
-  16bit unsigned integer numeric
-  8-bit unsigned integer numeric
-  Single-precision, floating-point numeric
-  Double-precision, floating-point numeric

3 Function Description

The present sections describe in detail the **Power Supply Modules LabVIEW Instrument Driver**; more details about parameters description and ranges can be found on the Power Supply Modules User's Manual, as well as the required hardware configuration.

Initiatilze and Close VI's


Initialize.vi


Establishes communication with the. Therefore, call this VI before calling other instrument driver VIs for this instrument. Generally, you need to call the Initialize VI only once at the beginning of an application.


Connector Pane





Controls and Indicators

 **error in (no error)** can accept error information wired from VIs previously called. Use this information to decide if any functionalities should be bypassed in the event of errors from other VIs. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **status** is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **code** is the error or warning code. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.


 **source** describes the origin of the error or warning. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.


 **VISA¹ resource name** Specifies which instrument to use. Instruments that are powered on and connected to your computer are visible in the **VISA resource name** pull-down menu. Select the resource name from the **VISA resource name** pull-down menu.


Examples:

Serial: COM1




Refer to the LabVIEW Help for more information about specifying a VISA resource name.


 **Serial Configuration** This control sets the settings that will be used if initializing a device with a serial interface. **These settings must match those on the actual instrument.**


 **Baud Rate** Specifies the rate at which data is transmitted across the serial interface.


 **Parity** Specifies which kind of parity is used for error checking.


¹ Virtual Instrument Software Architecture, commonly known as VISA, is a widely used I/O API in the test and measurement (T&M) industry for communicating with instruments from a PC. VISA is an industry standard implemented by several T&M companies. The VISA standard includes specifications for communication with resources (usually, but not always, instruments) over T&M-specific I/O interfaces such as GPIB and VXI. There are also some specifications for T&M-specific protocols over PC-standard I/O, such as HiSLIP or VXI-11 (over TCP/IP) and USBTMC (over USB).


-  **Data Bits** Specifies the number of bits used for data transmission.
-  **Stop Bits** Specifies the number of stop bits in each frame.
-  **Flow Control** Specifies the protocol that is used across the interface for data transmission.

 **error out** passes error or warning information out of a VI to be used by other VIs. Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **status** is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred. Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **code** is the error or warning code. Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

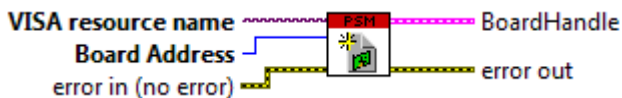
 **source** describes the origin of the error or warning. Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **VISA resource name out** A copy of the reference to the instrument in use. The reference to the resource name is created in the Initialize VI. Wire the **VISA resource name out** terminal of the Initialize VI to subsequent **VISA resource name** input terminals. You chain instrument driver VIs together by wiring the **VISA resource name out** terminal to subsequent **VISA resource name** input terminals.


OpenBoard.vi


This function allows to open the device. Therefore, call this VI after calling Initialize.vi. You need to call this function more times if you use several boards in daisy chain.


Connector Pane





Controls and Indicators


 **Board Address** is the Local Bus address for remote communication (0÷31). This value is programmed locally on the board.


 **error in (no error)** can accept error information wired from VIs previously called. Use this information to decide if any functionalities should be bypassed in the event of errors from other VIs. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **status** is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **code** is the error or warning code. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **source** describes the origin of the error or warning. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **VISA resource name** is the reference to the resource name is created in the Initialize VI


 **BoardHandle** is a reference to an open board. Wire the BoardHandle terminal of the OpenBoard VI to subsequent BoardHandle input terminals.

You can chain Library VIs together by wiring the BoardHandle out terminal to subsequent BoardHandle input terminals.


 **VISA resource name**

 **Board address**


 **NChannels**

 **error out** passes error or warning information out of a VI to be used by other VIs.


Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **status** is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **code** is the error or warning code.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

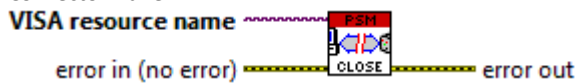
 **source** string describes the origin of the error or warning.

Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.


Close.vi


This function terminates the software connection to the instrument.

Connector Pane




Controls and Indicators

 **VISA resource name** A reference to the instrument in use. The reference to the resource name is created in the Initialize VI. Therefore, before calling this VI, you need to call the Initialize VI. To run this VI interactively, select the previously initialized resource name from the pull-down menu. To run this VI programmatically, wire the **VISA resource name out** terminal of the Initialize VI to subsequent **VISA resource name** input terminals. You chain instrument driver VIs together by wiring the **VISA resource name out** terminal to subsequent **VISA resource name** input terminals.

 **error in (no error)** can accept error information wired from VIs previously called. Use this information to decide if any functionalities should be bypassed in the event of errors from other VIs.


Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.


 **status** is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **code** is the error or warning code.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **source** describes the origin of the error or warning. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **error out** passes error or warning information out of a VI to be used by other VIs. Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **status** is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

occurred. Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



code is the error or warning code.

Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



source describes the origin of the error or warning.

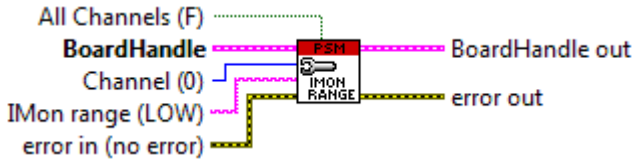
Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

Configuration VI's


Configure IMON RANGE.vi


This function allows to enable Current Monitor Zoom 10x (optional)

Connector Pane




Controls and Indicators


 **BoardHandle** is a reference to an open board

 **VISA resource name**

 **Board address**


 **NChannels**


 **IMon range (LOW)** Current Monitor Zoom 10x (optional). The admitted values are: HIGH or LOW


 **error in (no error)** can accept error information wired from VIs previously called. Use this information to decide if any functionalities should be bypassed in the event of errors from other VIs. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.


 **status** is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.


Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.


 **code** is the error or warning code. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.


 **source** describes the origin of the error or warning. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.


 **Channel (0)** : channel number; meaningless if All Channels is set to TRUE; Default 0

 **All Channels (F)**: if TRUE setting is extended to all channels; default: FALSE

 **error out** passes error or warning information out of a VI to be used by other VIs. Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **status** is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred. Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **code** is the error or warning code. Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **source** string describes the origin of the error or warning. Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

-  BoardHandle out
-  VISA resource name
-  Board address
-  NChannels














Configure INTERLOCK Mode.vi


This function allows to select Interlock logic

Connector Pane



Controls and Indicators

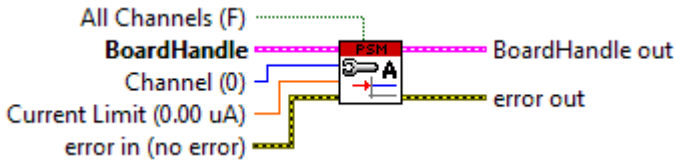
-  **error in (no error)** can accept error information wired from VIs previously called. Use this information to decide if any functionalities should be bypassed in the event of errors from other VIs. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.
-  **status** is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.
-  **code** is the error or warning code. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.
-  **source** describes the origin of the error or warning. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.
-  **Interlock mode** is the logic of Interlock. The admitted values are: OPEN or CLOSE
-  **BoardHandle** is a reference to an open board
 -  VISA resource name
 -  Board address
 -  NChannels
-  **error out** passes error or warning information out of a VI to be used by other VIs. Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.
-  **status** is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred. Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.
-  **code** is the error or warning code. Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.
-  **source** describes the origin of the error or warning. Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

-  BoardHandle out
-  VISA resource name
-  Board address
-  NChannels















Configure ISET.vi

This function allows to configure Iset

Connector Pane



Controls and Indicators

-  **error in (no error)** can accept error information wired from VIs previously called. Use this information to decide if any functionality should be bypassed in the event of errors from other VIs. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.
-  **status** is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.
-  **code** is the error or warning code. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.
-  **source** describes the origin of the error or warning. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.
-  **Current Limit (0.00 uA)** Current Limit programmed value
-  **BoardHandle** is a reference to an open board
-  **VISA resource name**
-  **Board address**
-  **NChannels**
-  **Channel (0)** channel number; meaningless if All Channels is set to TRUE; Default 0
-  **All Channels (F)**: if TRUE setting is extended to all channels; default: FALSE
-  **error out** passes error or warning information out of a VI to be used by other VIs. Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.
-  **status** is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred. Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.
-  **code** is the error or warning code. Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning**

from the shortcut menu for more information about the error.



source describes the origin of the error or warning. Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



BoardHandle out



VISA resource name



Board address

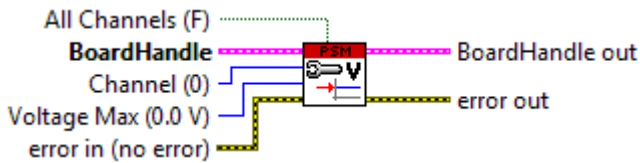


NChannels

Configure MAXV.vi

This function allows to configure Software VMax value

Connector Pane



Controls and Indicators



error in (no error) can accept error information wired from VIs previously called. Use this information to decide if any functionalities should be bypassed in the event of errors from other VIs. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



code is the error or warning code. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



source describes the origin of the error or warning. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



Voltage Max (0.0 V) Absolute maximum High Voltage level that the channel is allowed to reach



BoardHandle is a reference to an open board



VISA resource name



Board address



NChannels



Channel (0) channel number; meaningless if All Channels is set to TRUE; Default 0



All Channels (F): if TRUE setting is extended to all channels; default: FALSE



error out passes error or warning information out of a VI to be used by other VIs. Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error

occurred.

Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



code is the error or warning code.

Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



source describes the origin of the error or warning.

Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



BoardHandle out



VISA resource name



Board address

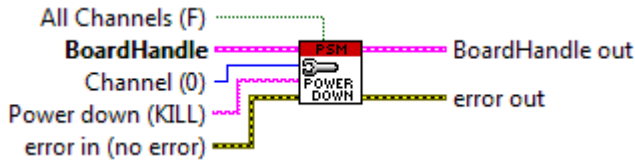


NChannels

Configure POWER DOWN.vi

This function allows to configure Power Down mode

Connector Pane



Controls and Indicators



BoardHandle is a reference to an open board



VISA resource name



Board address



NChannels



Power down (KILL) Power Down mode after channel TRIP. The admitted values are: RAMP or KILL



error in (no error) can accept error information wired from VIs previously called. Use this information to decide if any functionalities should be bypassed in the event of errors from other VIs.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



code is the error or warning code.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



source describes the origin of the error or warning.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



Channel (0) channel number; meaningless if All Channels is set to TRUE; Default 0



All Channels (F): if TRUE setting is extended to all channels; default: FALSE



error out passes error or warning information out of a VI to be used by other VIs. Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred. Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



code is the error or warning code. Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



source string describes the origin of the error or warning. Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



BoardHandle out



VISA resource name



Board address

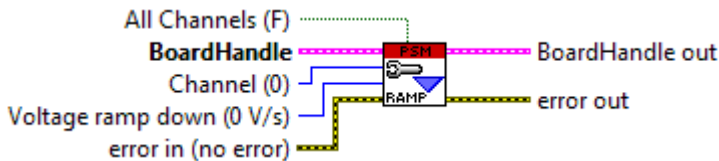


NChannels

Configure RAMP DOWN.vi

This function allows to configure Voltage Ramp Down rate

Connector Pane



Controls and Indicators



error in (no error) can accept error information wired from VIs previously called. Use this information to decide if any functionalities should be bypassed in the event of errors from other VIs. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



code is the error or warning code. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



source describes the origin of the error or warning. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



Voltage ramp down (0 V/s) Maximum High Voltage decrease rate



BoardHandle is a reference to an open board





VISA resource name





Board address


 NChannels


 Channel (0)

 All Channels (F): if TRUE setting is extended to all channels; default: FALSE

 **error out** passes error or warning information out of a VI to be used by other VIs. Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **status** is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred. Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **code** is the error or warning code. Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **source** describes the origin of the error or warning. Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **BoardHandle out**

 VISA resource name

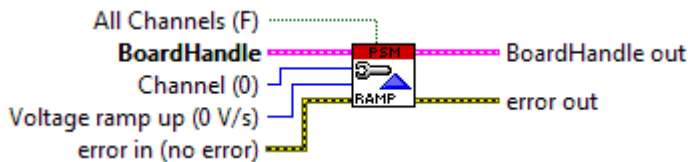
 Board address

 NChannels


Configure RAMP UP.vi


This function allows to configure Voltage Ramp Up rate


Connector Pane




Controls and Indicators

 **error in (no error)** can accept error information wired from VIs previously called. Use this information to decide if any functionalities should be bypassed in the event of errors from other VIs. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **status** is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **code** is the error or warning code. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **source** describes the origin of the error or warning. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **Voltage ramp up (0 V/s)** Maximum High Voltage increase rate



BoardHandle



VISA resource name



Board address



NChannels



Channel (0) channel number; meaningless if All Channels is set to TRUE; Default 0



All Channels (F): if TRUE setting is extended to all channels; default: FALSE



error out passes error or warning information out of a VI to be used by other VIs.

Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



code is the error or warning code.

Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



source describes the origin of the error or warning.

Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



BoardHandle out



VISA resource name



Board address

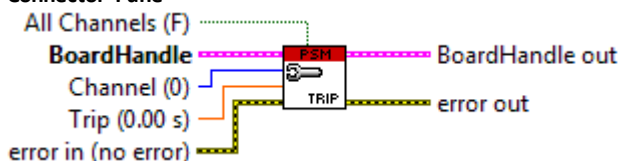


NChannels

Configure TRIP.vi

This function allows to configure Output Trip time

Connector Pane



Controls and Indicators



error in (no error) can accept error information wired from VIs previously called. Use this information to decide if any functionalities should be bypassed in the event of errors from other VIs.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.




code is the error or warning code.


Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.




source describes the origin of the error or warning.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.


 **Trip (0.00 s)** Maximum time an "overcurrent" is allowed to last expressed in seconds


 **BoardHandle** is a reference to an open board


 **VISA resource name**


 **Board address**

 **NChannels**


 **Channel (0)** channel number; meaningless if All Channels is set to TRUE; Default 0


 **All Channels (F)**: if TRUE setting is extended to all channels; default: FALSE

 **error out** passes error or warning information out of a VI to be used by other VIs. Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.


 **status** is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **code** is the error or warning code. Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **source** describes the origin of the error or warning. Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **BoardHandle out**

 **VISA resource name**

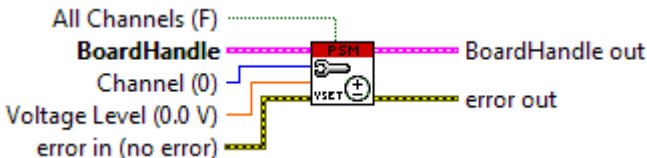
 **Board address**

 **NChannels**


Configure VSET.vi

This function allows to configure Vset

Connector Pane





Controls and Indicators


 **error in (no error)** can accept error information wired from VIs previously called. Use this information to decide if any functionalities should be bypassed in the event of errors from other VIs. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.


 **status** is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.


Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **code** is the error or warning code.
Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **source** describes the origin of the error or warning.
Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.


 **Voltage Level (0.0 V)** High Voltage programmed value


 **BoardHandle** is a reference to an open board


 **VISA resource name**


 **Board address**


 **NChannels**


 **Channel (0)** channel number; meaningless if All Channels is set to TRUE; Default 0

 **All Channels (F)**: if TRUE setting is extended to all channels; default: FALSE

 **error out** passes error or warning information out of a VI to be used by other VIs.
Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **status** is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.
Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **code** is the error or warning code.
Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **source** describes the origin of the error or warning.
Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **BoardHandle out**

 **VISA resource name**

 **Board address**

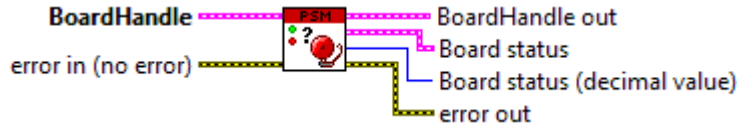
 **NChannels**

Action and Status VI's

Board Alarm Status.vi

This function reports board alarm status

Connector Pane



Controls and Indicators



error in (no error) can accept error information wired from VIs previously called. Use this information to decide if any functionalities should be bypassed in the event of errors from other VIs.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



code is the error or warning code.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



source describes the origin of the error or warning.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



BoardHandle is a reference to an open board



VISA resource name



Board address



NChannels



error out passes error or warning information out of a VI to be used by other VIs.

Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



code is the error or warning code.

Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



source describes the origin of the error or warning.

Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



BoardHandle out




VISA resource name



Board address

 **NChannels**

 **Board status** is a cluster that reports a alarm status of the channels or board.

 **CH0** if TRUE Ch0 in Alarm status

 **CH1** if TRUE Ch1 in Alarm status

 **CH2** if TRUE Ch2 in Alarm status

 **CH3** if TRUE Ch3 in Alarm status

 **PWFAIL** if TRUE Board in POWER FAIL

 **OVP** if TRUE Board in OVER POWER

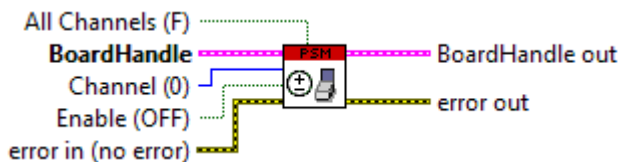
 **HVCKFAIL** if TRUE Internal HV Clock FAIL

 **Board status (decimal value)**


Channel Power Enable.vi

Enables or disables the output of the power supply.

Connector Pane




Controls and Indicators


 **BoardHandle** is a reference to an open board

 **VISA resource name**


 **Board address**

 **NChannels**


 **Enable (OFF)** if TRUE set the channel ON; if FALSE set the channel OFF


 **error in (no error)** can accept error information wired from VIs previously called. Use this information to decide if any functionalities should be bypassed in the event of errors from other VIs.


Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.


 **status** is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **code** is the error or warning code.
Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **source** describes the origin of the error or warning.
Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **Channel (0)** channel number; meaningless if All Channels is set to TRUE; Default 0

 **All Channels (F)**: if TRUE setting is extended to all channels; default: FALSE



error out passes error or warning information out of a VI to be used by other VIs. Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred. Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



code is the error or warning code. Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



source string describes the origin of the error or warning. Right-click the **error out** indicator on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



BoardHandle out



VISA resource name



Board address

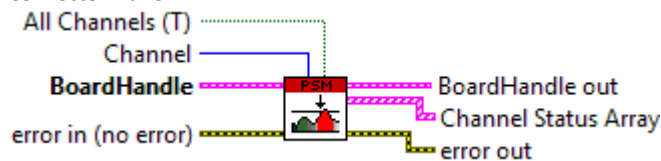


NChannels

Channel Status.vi

Returns status for channels or a desired channel.

Connector Pane



Controls and Indicators



error in (no error) can accept error information wired from VIs previously called. Use this information to decide if any functionalities should be bypassed in the event of errors from other VIs. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



code is the error or warning code. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



source describes the origin of the error or warning. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



BoardHandle is a reference to an open board




VISA resource name





Board address




NChannels

 **Channel** channel number; set is required if All Channels is set to FALSE


 **All Channels (T)**: if FALSE, the output will refer only to the desired channel; default: TRUE

 **error out** passes error or warning information out of a VI to be used by other VIs.


Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **status** is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.


 **code** is the error or warning code.

Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **source** describes the origin of the error or warning.


Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **BoardHandle out**

 **VISA resource name**


 **Board address**


 **NChannels**


 **Channel Status Array**: a array of cluster with status of the channels. By the Index Array Function you can get the cluster with the status for each channel. If All Channels is FALSE the array contains one cluster with status of the desired channel

 **Channel Status**

 **ON**: indicates whether the channel is powered


 **RUP**: indicates whether the channel is performing a voltage ramp-up

 **RDW**: indicates whether the channel is performing a voltage ramp-down

 **OVC**: indicates whether the channel is Over Current

 **OVV**: indicates whether the channel is Over Voltage

 **UNV**: indicates whether the channel is Under Voltage


 **MAXV**: indicates whether the channel is in MAXV protection


 **TRIP** indicates whether the channel will shutdown due to the trip time

 **OVP**: indicates whether the channel is Over Power Max

 **OVT**: indicates whether the channel is Over Temperature

 **DIS**: indicates whether the channel is disables

 **KILL**: indicates whether the channel is in KILL via frontal panel

 **ILK**: indicates whether the channel is in INTERLOCK via frontal panel

 **NOCAL**: indicates there is a calibration error

Clear alarm signal.vi

Resets the status of alarms that occurred

Connector Pane



Controls and Indicators



error in (no error) can accept error information wired from VIs previously called. Use this information to decide if any functionalities should be bypassed in the event of errors from other VIs. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



code is the error or warning code.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



source describes the origin of the error or warning.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



BoardHandle is a reference to an open board



VISA resource name



Board address



NChannels



error out passes error or warning information out of a VI to be used by other VIs.

Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



code is the error or warning code.

Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



source describes the origin of the error or warning.

Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



BoardHandle out



VISA resource name



Board address



NChannels

Control Mode.vi

This function allows to select control mode

Connector Pane



Controls and Indicators



error in (no error) can accept error information wired from VIs previously called. Use this information to decide if any functionalities should be bypassed in the event of errors from other VIs. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



code is the error or warning code. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



source describes the origin of the error or warning. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



BoardHandle is a reference to an open board



VISA resource name



Board address



NChannels



error out passes error or warning information out of a VI to be used by other VIs. Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred. Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



code is the error or warning code. Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



source describes the origin of the error or warning. Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



BoardHandle out



VISA resource name



Board address



NChannels



Control mode can be the string LOCAL or REMOTE and indicates the Control mode set for the board



Remote enable is TRUE if Remote Control is enabled


INTERLOCK Status.vi


This function returns interlock status


Connector Pane




Controls and Indicators


 **error in (no error)** can accept error information wired from VIs previously called. Use this information to decide if any functionalities should be bypassed in the event of errors from other VIs. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **status** is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **code** is the error or warning code.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.


 **source** describes the origin of the error or warning. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.


 **BoardHandle** is a reference to an open board


 **VISA resource name**

 **Board address**


 **NChannels**

 **error out** passes error or warning information out of a VI to be used by other VIs. Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **status** is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred. Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **code** is the error or warning code.

Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **source** describes the origin of the error or warning. Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **BoardHandle out**

 **VISA resource name**

 **Board address**

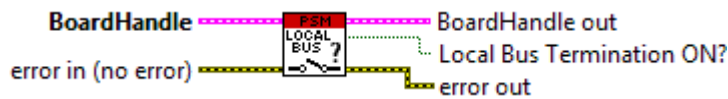
 **NChannels**

 **Interlock status** indicates the INTERLOCK status; if TRUE the board is in the INTERLOCK


Local Bus Termination.vi


This function returns bus termination status


Connector Pane





Controls and Indicators

 **error in (no error)** can accept error information wired from VIs previously called. Use this information to decide if any functionalities should be bypassed in the event of errors from other VIs. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **status** is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **code** is the error or warning code. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.


 **source** describes the origin of the error or warning. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.


 **BoardHandle** is a reference to an open board


 **VISA resource name**


 **Board address**

 **NChannels**

 **error out** passes error or warning information out of a VI to be used by other VIs. Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **status** is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred. Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **code** is the error or warning code. Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **source** describes the origin of the error or warning. Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **BoardHandle out**

 **VISA resource name**

 **Board address**

 **NChannels**

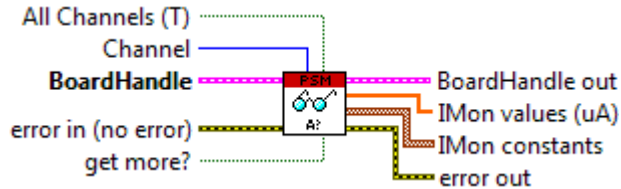
 **Local Bus Termination ON** If TRUE the Local Termination is ON

Data VI's

Read out IMON.vi

This function returns Imon value

Connector Pane



Controls and Indicators



error in (no error) can accept error information wired from VIs previously called. Use this information to decide if any functionalities should be bypassed in the event of errors from other VIs. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



code is the error or warning code.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



source describes the origin of the error or warning.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



BoardHandle is a reference to an open board



VISA resource name



Board address



NChannels



Channel channel number; set is required if All Channels is set to FALSE;



All Channels (T) if FALSE, the output will refer only to the desired channel; default: TRUE;



get more? If TRUE, get more constant information related to this parameter and return these in a cluster. The default is FALSE.

If is TRUE the VI require more time to execution



error out passes error or warning information out of a VI to be used by other VIs.

Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.













code is the error or warning code.

Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



source describes the origin of the error or warning.

Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

-  **BoardHandle out**
-  **VISA resource name**
-  **Board address**
-  **NChannels**
-  **IMon values (uA)** array of values. By the Index Array Function you can get the value for each channel. If All Channels is FALSE the array contains one element with value of the desired channel.
-  **IMon value**
-  **IMon constants** array of cluster with constant information for this parameter
-  **IMon constants**
-  **Range**
-  **Digits of precision**











Read out INTERLOCK Mode.vi

This function returns interlock mode

Connector Pane



Controls and Indicators

-  **error in (no error)** can accept error information wired from VIs previously called. Use this information to decide if any functionalities should be bypassed in the event of errors from other VIs. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.
-  **status** is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.
-  **code** is the error or warning code. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.
-  **source** describes the origin of the error or warning. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.
-  **BoardHandle** is a reference to an open board
-  **VISA resource name**
-  **Board address**
-  **NChannels**
-  **error out** passes error or warning information out of a VI to be used by other VIs. Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.
-  **status** is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error

occurred.

Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



code is the error or warning code.

Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



source describes the origin of the error or warning.

Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



BoardHandle out



VISA resource name



Board address



NChannels

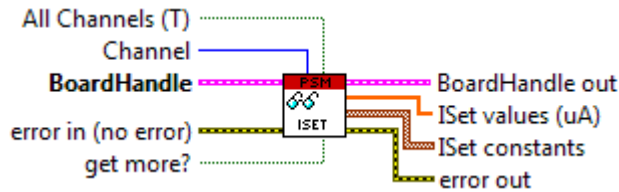


Interlock Mode is the logic of Interlock. The values can be: OPEN or CLOSE

Read out ISET.vi

This function returns Iset value

Connector Pane



Controls and Indicators



error in (no error) can accept error information wired from VIs previously called. Use this information to decide if any functionalities should be bypassed in the event of errors from other VIs. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



code is the error or warning code.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



source describes the origin of the error or warning.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



BoardHandle is a reference to an open board



VISA resource name



Board address




NChannels





Channel channel number; set is required if All Channels is set to FALSE;





All Channels (T): if FALSE, the output will refer only to the desired channel; default: TRUE;

 **get more?** If TRUE, get more constant information related to this parameter and return these in a cluster. If is TRUE the VI require more time to execution.

 **error out** passes error or warning information out of a VI to be used by other VIs. Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **status** is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred. Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **code** is the error or warning code. Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.


 **source** describes the origin of the error or warning. Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **BoardHandle out**


 **VISA resource name**

 **Board address**

 **NChannels**

 **ISet values (uA)** array of values. By the Index Array Function you can get the value for each channel. If All Channels is FALSE the array contains one element with value of the desired channel

 **ISet value**

 **Iset constants** array of cluster with constant information for this parameter

 **Iset constant**

 **Min**

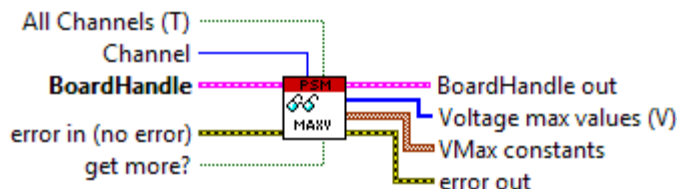
 **Max**

 **Digits of precision**


Read out MAXVSET.vi


This function returns Software MaxV value


Connector Pane





Controls and Indicators


 **error in (no error)** can accept error information wired from VIs previously called. Use this information to decide if any functionalities should be bypassed in the event of errors from other VIs. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **status** is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **code** is the error or warning code.
Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.


 **source** describes the origin of the error or warning.
Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.


 **BoardHandle** is a reference to an open board


 **VISA resource name**


 **Board address**


 **NChannels**


 **Channel** channel number; set is required if All Channels is set to FALSE;


 **All Channels (T)** : if FALSE, the output will refer only to the desired channel; default: TRUE;

 **get more?** If TRUE, get more constant information related a this paramter and return these in a cluster .
The default is FALSE.
If is TRUE the VI require more time to execution.

 **error out** passes error or warning information out of a VI to be used by other VIs.
Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **status** is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred. Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **code** is the error or warning code. Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **source** describes the origin of the error or warning.


Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **BoardHandle out**


 **VISA resource name**

 **Board address**

 **NChannels**

 **Voltage max values (V)** a array of values. By the Index Array Function you can get the value for each channel.
If All Channels is FALSE the array contains one element with value of the desired channel

 **Voltage max value**

 **VMax constants** a array of cluster with constant information for this parameter

 **VMax constant**

 **Min**

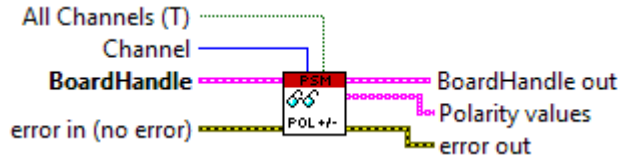
 **Max**

 **Digits of precision**


Read out POLARITY.vi


This function returns channels polarity


Connector Pane





Controls and Indicators

 **error in (no error)** can accept error information wired from VIs previously called. Use this information to decide if any functionalities should be bypassed in the event of errors from other VIs. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **status** is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **code** is the error or warning code. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.


 **source** describes the origin of the error or warning. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.


 **BoardHandle** is a reference to an open board


 **VISA resource name**


 **Board address**


 **NChannels**


 **Channel** channel number; set is required if All Channels is set to FALSE;

 **All Channels (T)** : if FALSE, the output will refer only to the desired channel; default: TRUE;

 **error out** passes error or warning information out of a VI to be used by other VIs. Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **status** is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred. Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **code** is the error or warning code. Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **source** describes the origin of the error or warning. Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **BoardHandle out**

 **VISA resource name**

 **Board address**

 NChannels

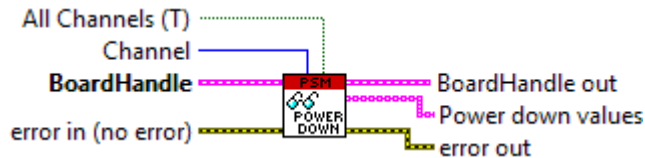
 Polarity values



Read out POWER DOWN.vi

This function returns Power Down mode

Connector Pane



Controls and Indicators



error in (no error) can accept error information wired from VIs previously called. Use this information to decide if any functionalities should be bypassed in the event of errors from other VIs.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



code is the error or warning code.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



source describes the origin of the error or warning.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



BoardHandle is a reference to an open board



VISA resource name



Board address



NChannels



Channel channel number; set is required if All Channels is set to FALSE;



All Channels (T): if FALSE, the output will refer only to the desired channel; default: TRUE;



error out passes error or warning information out of a VI to be used by other VIs.

Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



code is the error or warning code.







Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



source describes the origin of the error or warning.

Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning**

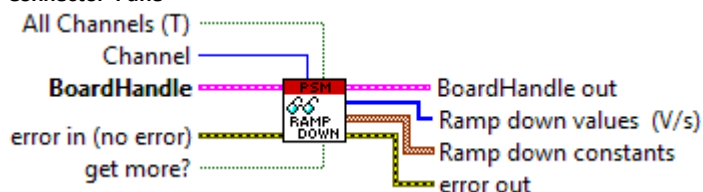
from the shortcut menu for more information about the error.

-  **BoardHandle** out
-  **VISA resource name**
-  **Board address**
-  **NChannels**
-  **Power down values**
- 


Read out RAMP DOWN.vi


This function returns Ramp Down rate


Connector Pane





Controls and Indicators




 **error in (no error)** can accept error information wired from VIs previously called. Use this information to decide if any functionalities should be bypassed in the event of errors from other VIs. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.


 **status** is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **code** is the error or warning code. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.


 **source** describes the origin of the error or warning. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.


 **BoardHandle** is a reference to an open board


-  **VISA resource name**
-  **Board address**
-  **NChannels**

 **Channel** channel number; set is required if All Channels is set to FALSE;


 **All Channels (T)** : if FALSE, the output will refer only to the desired channel; default: TRUE;

 **get more?** If **get more?** is TRUE, get more information from a parameter return in a cluster. The default is FALSE. If is TRUE the VI require more time to execution.


 **error out** passes error or warning information out of a VI to be used by other VIs. Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **status** is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.


Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **code** is the error or warning code.

Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **source** describes the origin of the error or warning.
Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **BoardHandle out**

 **VISA resource name**

 **Board address**

 **NChannels**

 **Ramp down values (V/s)**



 **Ramp down constants**



 **Min**

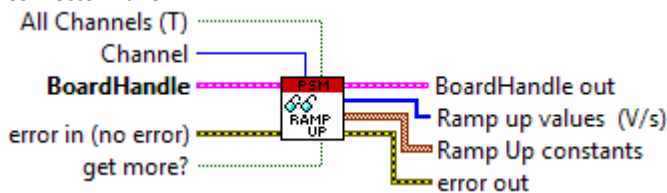
 **Max**

 **Digits of precision**


Read out RAMP UP.vi

This function returns Ramp Up rate

Connector Pane



Controls and Indicators


 **error in (no error)** can accept error information wired from VIs previously called. Use this information to decide if any functionalities should be bypassed in the event of errors from other VIs.
Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **status** is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.


Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.


 **code** is the error or warning code.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **source** describes the origin of the error or warning.


Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.


 **BoardHandle** is a reference to an open board


 **VISA resource name**

 **Board address**


 **NChannels**

 **Channel** channel number; set is required if All Channels is set to FALSE;


 **All Channels (T)**: if FALSE, the output will refer only to the desired channel; default: TRUE;

 **get more?** If **get more?** is TRUE, get more information from a parameter return in a cluster. The default is FALSE.


If is TRUE the VI require more time to execution.

 **error out** passes error or warning information out of a VI to be used by other VIs.


Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **status** is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.

Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **code** is the error or warning code.

Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **source** describes the origin of the error or warning.

Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **BoardHandle out**

 **VISA resource name**

 **Board address**

 **NChannels**

 **Ramp up values (V/s)**



 **Ramp Up constants**



 **Min**

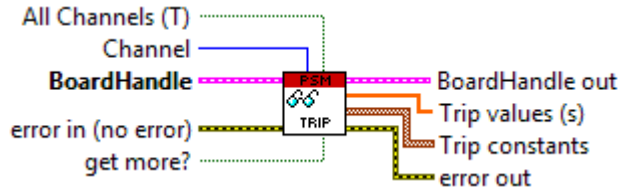
 **Max**

 **Digits of precision**


Read out TRIP.vi

This function returns Trip time


Connector Pane




Controls and Indicators

 **error in (no error)** can accept error information wired from VIs previously called. Use this information to decide if any functionalities should be bypassed in the event of errors from other VIs.


Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **status** is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.


Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **code** is the error or warning code.

Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **source** describes the origin of the error or warning.


Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.


 **BoardHandle** is a reference to an open board


 **VISA resource name**

 **Board address**


 **NChannels**

 **Channel** channel number; set is required if All Channels is set to FALSE;

 **All Channels (T)** : if FALSE, the output will refer only to the desired channel; default: TRUE;

 **get more?** If TRUE, get more constant information related to this parameter and return these in a cluster. The default is FALSE.


If is TRUE the VI require more time to execution.

 **error out** passes error or warning information out of a VI to be used by other VIs.


Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **status** is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.












Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **code** is the error or warning code.

Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **source** describes the origin of the error or warning.

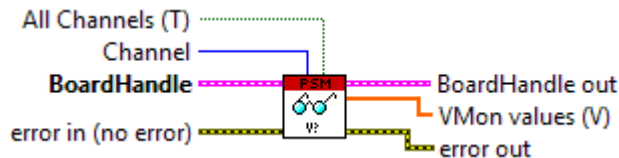
Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

-  **BoardHandle** out
-  **VISA resource name**
-  **Board address**
-  **NChannels**
-  **Trip values (s)** a array of values. By the Index Array Function you can get the value for each channel. If All Channels is FALSE the array contains one element with value of the desired channel
-  **Trip value**
-  **Trip constants** a array of cluster with constant information for this parameter
-  **Trip constant**
 -  **Min**
 -  **Max**
 -  **Digits of precision**











Read out VMON.vi

This function returns VMon value

Connector Pane



Controls and Indicators

-  **error in (no error)** can accept error information wired from VIs previously called. Use this information to decide if any functionalities should be bypassed in the event of errors from other VIs. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.
-  **status** is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.
-  **code** is the error or warning code. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.
-  **source** describes the origin of the error or warning. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.
-  **BoardHandle** is a reference to an open board
-  **VISA resource name**
-  **Board address**
-  **NChannels**
-  **Channel** channel number; set is required if All Channels is set to FALSE;
-  **All Channels (T)** : if FALSE, the output will refer only to the desired channel; default: TRUE;



error out passes error or warning information out of a VI to be used by other VIs. Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred. Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



code is the error or warning code. Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



source describes the origin of the error or warning. Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



BoardHandle out



VISA resource name



Board address



NChannels

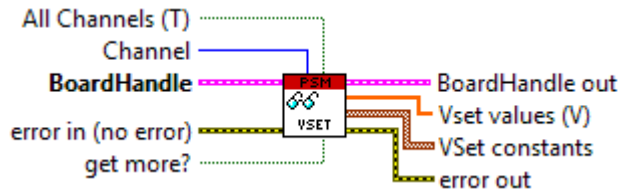


VMon values (V) array of values. By the Index Array Function you can get the value for each channel. If All Channels is FALSE the array contains one element with value of the desired channel

Read out VSET.vi

This function returns VSet value

Connector Pane



Controls and Indicators



error in (no error) can accept error information wired from VIs previously called. Use this information to decide if any functionalities should be bypassed in the event of errors from other VIs. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



code is the error or warning code. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



source describes the origin of the error or warning. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



BoardHandle is a reference to an open board





VISA resource name





Board address


 **NChannels**


 **Channel** channel number; set is required if All Channels is set to FALSE;


 **All Channels (T)** : if FALSE, the output will refer only to the desired channel; default: TRUE;

 **get more?** If TRUE, get more constant information related a this paramter and return these in acluster . The default is FALSE.
If is TRUE the VI require more time to execution.

 **error out** passes error or warning information out of a VI to be used by other VIs.
Right-dick the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **status** is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.
Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **code** is the error or warning code.
Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **source** describes the origin of the error or warning.


Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.


 **BoardHandle out**


 **VISA resource name**

 **Board address**

 **NChannels**

 **Vset values (V)** array of values. By the Index Array Function you can get the value for each channel. If All Channels is FALSE the array contains one element with value of the desired channel

 **Vset value**

 **VSet constants** array of cluster with constant information for this parameter

 **VSet constant**

 **Min**

 **Max**

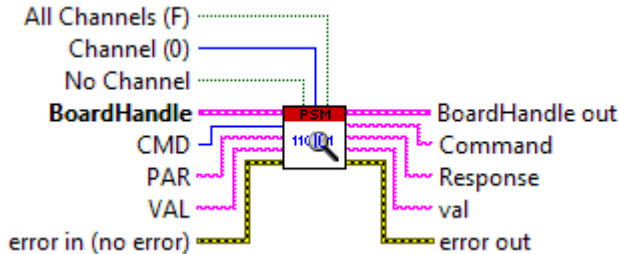
 **Digits of precision**

Utility VI's

Debug Command.vi

This function can be used for debug purpose. This allows to prepare and forward a command and view the received response string

Connector Pane



Controls and Indicators



error in (no error) can accept error information wired from VIs previously called. Use this information to decide if any functionalities should be bypassed in the event of errors from other VIs. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



code is the error or warning code. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



source describes the origin of the error or warning. Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



BoardHandle is a reference to an open board



VISA resource name



Board address



NChannels



Channel channel number; set is required if All Channels is set to FALSE;



All Channels (T): if FALSE, the output will refer only to the desired channel; default: TRUE;



CMD Command type: MON (monitor) or SET.



PAR parameter to be monitor or set



VAL If required, value to set



No Channel set TRUE for commands related to the module; FALSE for commands related to the channels




error out passes error or warning information out of a VI to be used by other VIs.


Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.



status is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred. Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning**

from the shortcut menu for more information about the error.

 **code** is the error or warning code.
Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.


 **source** describes the origin of the error or warning.
Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.


 **BoardHandle out**

 **VISA resource name**

 **Board address**

 **NChannels**

 **val** If expected, the value field in the response

 **Response** Response received from board

 **Command** Command sent to board


Module Info.vi


This function returns some information of the board


Connector Pane





Controls and Indicators

 **error in (no error)** can accept error information wired from VIs previously called. Use this information to decide if any functionalities should be bypassed in the event of errors from other VIs.
Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **status** is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.
Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **code** is the error or warning code.
Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.


 **source** describes the origin of the error or warning.
Right-click the **error in** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.


 **BoardHandle** is a reference to an open board


 **VISA resource name**


 **Board address**

 **NChannels**


 **error out** passes error or warning information out of a VI to be used by other VIs.
Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **status** is TRUE (X) if an error occurred or FALSE (checkmark) to indicate a warning or that no error occurred.
Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **code** is the error or warning code.
Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.


 **source** describes the origin of the error or warning.
Right-click the **error out** control on the front panel and select **Explain Error** or **Explain Warning** from the shortcut menu for more information about the error.

 **BoardHandle out**

 **VISA resource name**

 **Board address**

 **NChannels**

 **Module Info** is a cluster with some information on the board

 **Name**

 **Num. Channels**

 **Firmware Release**

 **Serial Num.**

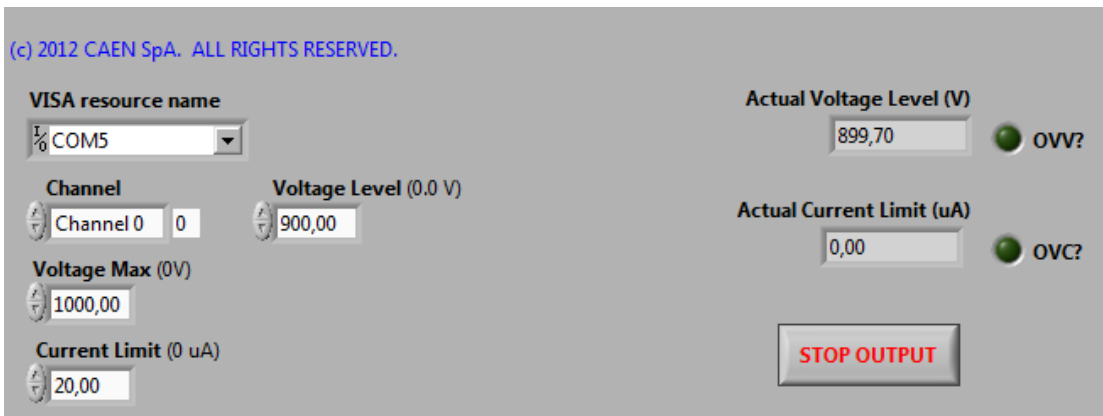
4 Application Softwares

The present section describes two applications provided as examples of Power Supply Modules LabView Instrument Driver usage; they are provided both as executable file and source code. In order to install them, follow these steps:

- have the Power Supply Modules LabView Instrument Driver installed
- go to CAEN web site in the “Software” area of any NIM/Desktop/Rack Programmable HV Power Supply page
- download the Power Supply Modules application related to your OS.
- unzip the downloaded package
- launch the Installation set up file
- follow the installer instructions

Power Supply Modules LabView Channel Output Setting

This is a very simple example that allows to set output voltage and current limits to all channels

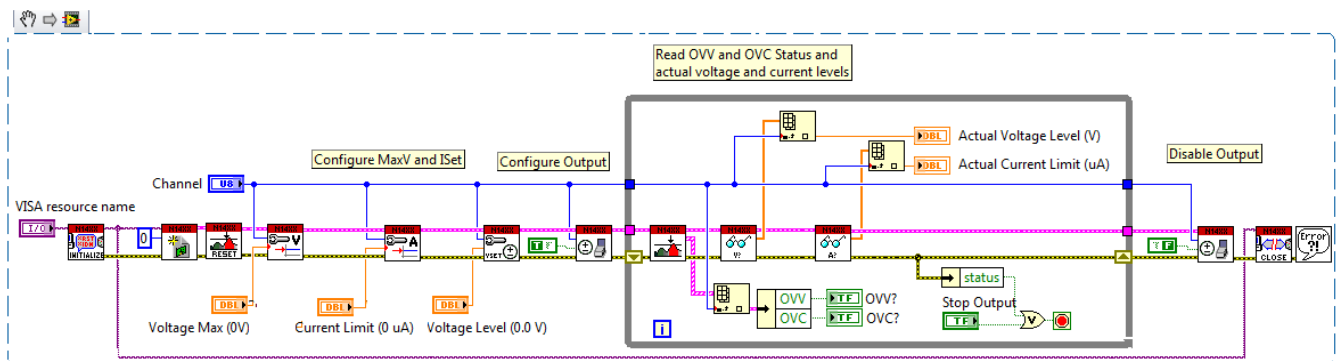


In order to do this:

- Select the host port (VISA Resource Name)
- Select the Channel number
- Set Voltage and Current Software limits
- Set Output Voltage

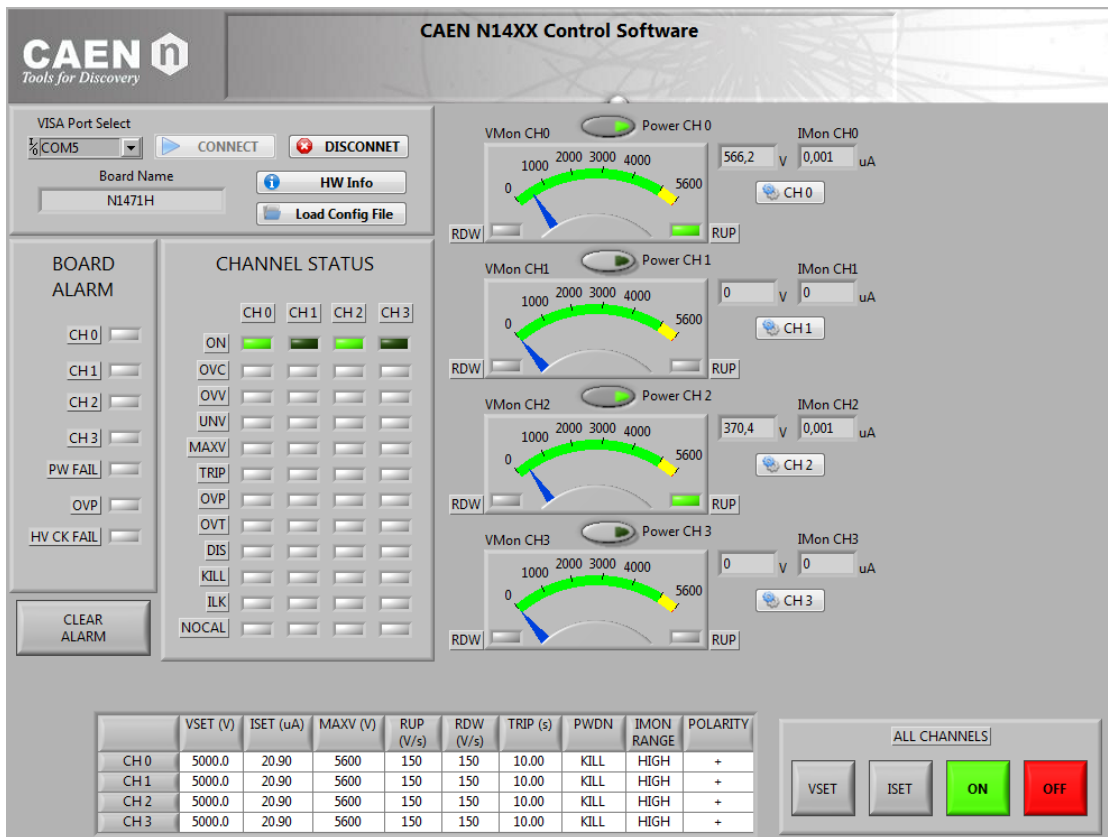
The boxes on the right monitor Output values and signal possible OVC and OVV alarms
The STOP button allows to shut down the channel

The project layout of the PSM Channel Output Setting application is the following:

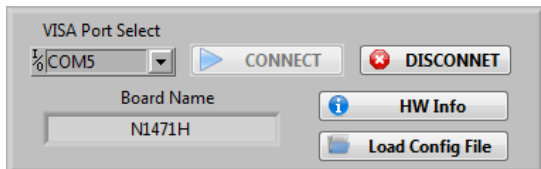


Power Supply Modules LabVIEW Control Software

This is a demo control software that allows to set and monitor, through a graphical interface, all the modules functional parameters. The application, though supporting 8 channels PSM's as well, allows to control only channels from 0 to 3.



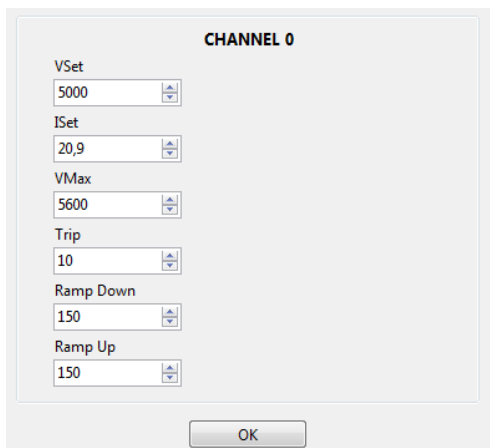
Select the Board to communicate with, by setting the host port, the confirm with [CONNECT] in the “Connection box”



“Dis connect” button allows to exit the a application. In order to set one parameter click on the “Channel button”:



And the “Channel Settings” panel will open:



Enter the desired set value and confirm with [OK]

The “All Channels box” allows to perform group settings (VSET/ISET) and to turn all channels ON/OFF:



It is also possible to load a configuration file with proper settings, through the relevant button: click it then browse and select the desired file (for example: *Configuration_N1470.ini*)



Configuration files shall have the following layout:

```
[Module Settings]
;Set Interlock mode (OPEN / CLOSED)
BDILMKM = CLOSED
```

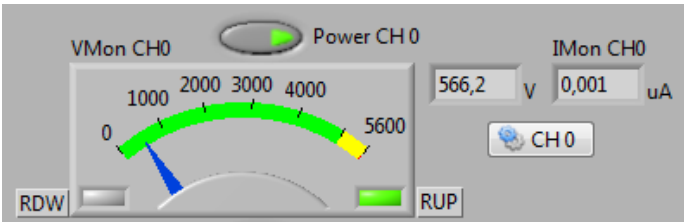
```
[Channel Setting #00]
VSET = 0.0
ISET = 3100.00
MAXV = 8100
RUP = 500
RDW = 500
TRIP = 10.0
;Set Power Down mode (RAMP / KILL)
PDWN = KILL
;Set IMON RANGE (HIGH / LOW)
IMRANGE = HIGH
```

```
[Channel Setting #01]
VSET = 0.0
ISET = 3100.00
MAXV = 8100
RUP = 500
RDW = 500
TRIP = 10.0
;Set Power Down mode (RAMP / KILL)
PDWN = KILL
;Set IMON RANGE (HIGH / LOW)
IMRANGE = HIGH
```

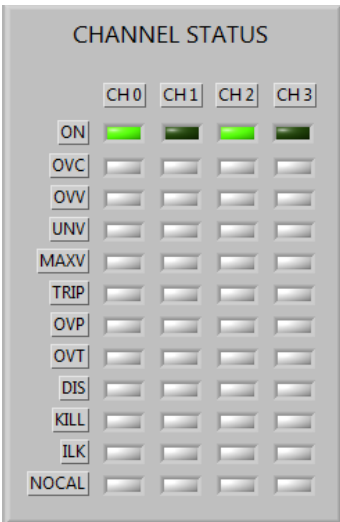
```
[Channel Setting #02]
VSET = 0.0
ISET = 3100.00
MAXV = 8100
RUP = 500
RDW = 500
TRIP = 10.0
;Set Power Down mode (RAMP / KILL)
PDWN = KILL
;Set IMON RANGE (HIGH / LOW)
IMRANGE = HIGH
```

```
[Channel Setting #03]
VSET = 0.0
ISET = 3100.00
MAXV = 8100
RUP = 500
RDW = 500
TRIP = 10.0
;Set Power Down mode (RAMP / KILL)
PDWN = KILL
;Set IMON RANGE (HIGH / LOW)
IMRANGE = HIGH
```

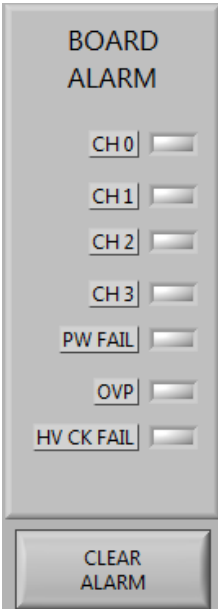

The “Analog dashboard” allows to monitor the channel ramping up/down:



The “CHANNEL STATUS” box reports the status bits (coloured = Bit ON):



The “BOARD ALARM” box reports Alarm detected (coloured = alarm) and the CLEAR ALARM button performs a software Alarm condition removal



The lower panel reports a summary of all settings:

	VSET (V)	ISET (uA)	MAXV (V)	RUP (V/s)	RDW (V/s)	TRIP (s)	PWDN	IMON RANGE	POLARITY
CH 0	5000.0	20.90	5600	150	150	10.00	KILL	HIGH	+
CH 1	5000.0	20.90	5600	150	150	10.00	KILL	HIGH	+
CH 2	5000.0	20.90	5600	150	150	10.00	KILL	HIGH	+
CH 3	5000.0	20.90	5600	150	150	10.00	KILL	HIGH	+



CAEN SpA is acknowledged as the only company in the world providing a complete range of High/Low Voltage Power Supply systems and Front-End/Data Acquisition modules which meet IEEE Standards for Nuclear and Particle Physics. Extensive Research and Development capabilities have allowed CAEN SpA to play an important, long term role in this field. Our activities have always been at the forefront of technology, thanks to years of intensive collaborations with the most important Research Centres of the world. Our products appeal to a wide range of customers including engineers, scientists and technical professionals who all trust them to help achieve their goals faster and more effectively.



CAEN S.p.A.
Via Vetraia, 11
55049 Viareggio
Italy
Tel. +39.0584.388.398
Fax +39.0584.388.959
info@caen.it
www.caen.it

CAEN GmbH
Klingenstraße 108
D-42651 Solingen
Germany
Tel. +49 (0)212 254 4077
Mobile +49 (0)151 16 548 484
Fax +49 (0)212 25 44079
info@caen-de.com
www.caen-de.com

CAEN Technologies, Inc.
1140 Bay Street - Suite 2 C
Staten Island, NY 10305
USA
Tel. +1.718.981.0401
Fax +1.718.556.9185
info@caentechnologies.com
www.caentechnologies.com