



TANGO
Device
Server

TDKLambdaGenesys User's Guide

TDKLambdaGenesys Class

Revision: - Author: peru
Implemented in C++ - CVS repository: ESRF

Introduction:

TDKLambdaGenesys-Genesys family power supply (e.g. Gen 100 100) by TDK-Lambda

Class Inheritance:

- Tango::Device_4Impl
 - TDKLambdaGenesys

Properties:

Device Properties		
Property name	Property type	Description
IpAddress	Tango::DEV_STRING	ip address of Genesys ETH interface
TCPPort	Tango::DEV_USHORT	tcp port number

Device Properties Default Values:

Property Name	Default Values
IpAddress	192.168.205.49
TCPPort	8003

There is no Class properties.

States:

States	
Names	Descriptions
ON	On State. The power supply is delivering current or voltage.
OFF	Off State. The power supply is not delivering current or voltage.
FAULT	generic error OR the power supply is in fault OR connection is unavailable
MOVING	temporary status...

Attributes:

Scalar Attributes			
Attribute name	Data Type	R/W Type	Expert
OperatingMode: Reads the operating mode:CV or CC	DEV_STRING	READ	No
MeasuredCurrent	DEV_DOUBLE	READ	No
MeasuredVoltage	DEV_DOUBLE	READ	No
CurrentLimit	DEV_DOUBLE	READ_WRITE	No
VoltageLimit	DEV_DOUBLE	READ_WRITE	No

Commands:

More Details on commands....

Device Commands for Operator Level		
Command name	Argument In	Argument Out
Init	DEV_VOID	DEV_VOID
State	DEV_VOID	DEV_STATE
Status	DEV_VOID	CONST_DEV_STRING
Reset	DEV_VOID	DEV_VOID
On	DEV_VOID	DEV_VOID
Off	DEV_VOID	DEV_VOID
CurrentSetPoint	DEV_DOUBLE	DEV_STRING
VoltageSetPoint	DEV_DOUBLE	DEV_VOID
SCPIcommandW	DEV_STRING	DEV_VOID
SCPIcommandWS	DEV_STRING	DEV_STRING
GetIdentificationString	DEV_VOID	DEV_STRING
SelfTest	DEV_VOID	DEV_STRING
SCPIcommandWR	DEV_STRING	DEV_STRING
SetOutputOn	DEV_VOID	DEV_STRING
SetOutputOff	DEV_VOID	DEV_STRING
SaveAllSettings	DEV_VOID	DEV_VOID
RecallAllSettings	DEV_VOID	DEV_VOID
StartCycling	DEV_VOID	DEV_VOID
AbortCycling	DEV_VOID	DEV_VOID

1 - Init

- **Description:** This commands re-initialise a device keeping the same network connection. After an Init command executed on a device, it is not necessary for client to re-connect to the device. This command first calls the device *delete_device()* method and then execute its *init_device()* method. For C++ device server, all the memory allocated in the *nit_device()* method must be freed in the *delete_device()* method. The language device desctructor automatically calls the *delete_device()* method.

- **Argin:**
DEV_VOID : none.
- **Argout:**
DEV_VOID : none.
- **Command allowed for:**
 - Tango::ON
 - Tango::OFF
 - Tango::FAULT
 - Tango::MOVING

2 - State

- **Description:** This command gets the device state (stored in its *device_state* data member) and returns it to the caller.
- **Argin:**
DEV_VOID : none.
- **Argout:**
DEV_STATE : State Code
- **Command allowed for:**
 - Tango::ON
 - Tango::OFF
 - Tango::FAULT
 - Tango::MOVING

3 - Status

- **Description:** This command gets the device status (stored in its *device_status* data member) and returns it to the caller.
- **Argin:**
DEV_VOID : none.
- **Argout:**
CONST_DEV_STRING : Status description
- **Command allowed for:**
 - Tango::ON
 - Tango::OFF
 - Tango::FAULT
 - Tango::MOVING

4 - Reset

- **Description:** Reset the powersupply to a well known state.
- **Argin:**
DEV_VOID :
- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::ON
 - Tango::OFF
 - Tango::FAULT
 - Tango::MOVING

5 - On

- **Description:** Switch powersupply ON.
- **Argin:**
DEV_VOID :
- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::ON
 - Tango::OFF
 - Tango::MOVING

6 - Off

- **Description:** Switch powersupply OFF.
- **Argin:**
DEV_VOID :
- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::ON
 - Tango::OFF

- Tango::MOVING

7 - CurrentSetPoint

- **Description:** sets the value of the output current (CURRENT mode)
- **Argin:**
DEV_DOUBLE : value of the current
- **Argout:**
DEV_STRING : result of the command
- **Command allowed for:**
 - Tango::ON
 - Tango::OFF

8 - VoltageSetPoint

- **Description:** sets the value of the output voltage (VOLTAGE mode)
- **Argin:**
DEV_DOUBLE : the voltage to be set
- **Argout:**
DEV_VOID : result of the command
- **Command allowed for:**
 - Tango::ON
 - Tango::OFF

9 - SCPIcommandW

- **Description:** SCPIcommandWrite: send command string to PS and doesn't read any answer or status from PS. This expert command is used for debug purpose.
- **Argin:**
DEV_STRING : command to send to power supply
- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::ON
 - Tango::OFF
 - Tango::MOVING

10 - SCPIcommandWS

- **Description:** SCPIcommandWrite and read System status This expert command is used for debug purpose.
- **Argin:**
DEV_STRING : SCPIcommandWrite and read System status
- **Argout:**
DEV_STRING : system error status
- **Command allowed for:**
 - Tango::ON
 - Tango::OFF
 - Tango::MOVING

11 - GetIdentificationString

- **Description:** return the identification string (*idn?)
- **Argin:**
DEV_VOID :
- **Argout:**
DEV_STRING : result of the command
- **Command allowed for:**
 - Tango::ON
 - Tango::OFF
 - Tango::FAULT
 - Tango::MOVING

12 - SelfTest

- **Description:** launch a simple self-test. Return values: 0: PASS 1: FAIL
- **Argin:**
DEV_VOID :
- **Argout:**
DEV_STRING :
- **Command allowed for:**
 - Tango::ON
 - Tango::OFF
 - Tango::FAULT

- Tango::MOVING

13 - SCPIcommandWR

- **Description:** SCPIcommandWrite and Read related response. This expert command is used for debug purpose.
- **Argin:**
DEV_STRING :
- **Argout:**
DEV_STRING :
- **Command allowed for:**
 - Tango::ON
 - Tango::OFF
 - Tango::MOVING

14 - SetOutputOn

- **Description:** Turns the PS output ON
- **Argin:**
DEV_VOID :
- **Argout:**
DEV_STRING :
- **Command allowed for:**
 - Tango::ON
 - Tango::OFF
 - Tango::MOVING

15 - SetOutputOff

- **Description:** Turns the PS output OFF
- **Argin:**
DEV_VOID :
- **Argout:**
DEV_STRING :
- **Command allowed for:**
 - Tango::ON

- Tango::OFF
- Tango::MOVING

16 - SaveAllSettings

- **Description:** Saves the present PS settings
- **Argin:**
DEV_VOID :
- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::ON
 - Tango::OFF

17 - RecallAllSettings

- **Description:** Recalls the last saved PS settings.
- **Argin:**
DEV_VOID :
- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::ON
 - Tango::OFF

18 - StartCycling

- **Description:** Begins cycling procedure: [to be described once knew]
- **Argin:**
DEV_VOID :
- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::ON
 - Tango::OFF

19 - AbortCycling

- **Description:** Aborts cycling procedure
- **Argin:**
DEV_VOID :
- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::ON
 - Tango::OFF

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