



TANGO
Device
Server

Steerer based on BILT power supplies User's Guide

Steerer Class

Revision: Steerer-Release_1_8 - Author: meyer
Implemented in C++ - CVS repository: ESRF

Introduction:

The steerer device combines the three channels of the BILT power supply into a horizontal and a vertical correction current.

Class Identification:

- **Contact** : at esrf.fr - meyer
- **Class Family** : PowerSupply (Specific Specific)
- **Platform** : Unix Like
- **Bus** : Tango

Class Inheritance:

- Tango::Device_4Impl
 - Steerer

Properties:

Device Properties		
Property name	Property type	Description
BiltName	Tango::DEV_STRING	The name of the Bilt power supply device.
Plane	Tango::DEV_STRING	Gives the steering plane. Can be horizontal or vertical.

Device Properties Default Values:

Property Name	Default Values
BiltName	none
Plane	none

There is no Class properties.

States:

States	
Names	Descriptions
ON	The Bilt power supply is switched on.
OFF	The Bilt power supply is switched off.
ALARM	Alarm detected. Can be an alarm on the Bilt power supply or a local alarm.
FAULT	Fault detected on Bilt power supply.
UNKNOWN	Communication error with the Bilt power supply.

Attributes:

Scalar Attributes			
Attribute name	Data Type	R/W Type	Expert
Current: Calculated steering current value.	DEV_DOUBLE	READ_WRITE	No
Voltage: Calculated voltage value.	DEV_DOUBLE	READ	No
SetCurrentAverage: The calculated average AC current setpoint value per second.	DEV_DOUBLE	READ	No
SetCurrentRMS: The calculated RMS AC current setpoint value per second.	DEV_DOUBLE	READ	No
Location: The physical location of the power supply in the form:	DEV_STRING	READ	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
On	DEV_VOID	DEV_VOID
Off	DEV_VOID	DEV_VOID
Reset	DEV_VOID	DEV_VOID
SetpointCheck	DEV_DOUBLE	DEV_SHORT

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::ALARM
- Tango::FAULT
- Tango::UNKNOWN

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::ALARM
- Tango::FAULT
- Tango::UNKNOWN

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::ALARM
- Tango::FAULT
- Tango::UNKNOWN

4 - On

- **Description:** Switch on the Bilt power supply
- **Argin:**
DEV_VOID :
- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::ON
 - Tango::OFF
 - Tango::ALARM
 - Tango::FAULT
 - Tango::UNKNOWN

5 - Off

- **Description:** Switch off the Bilt power supply
- **Argin:**
DEV_VOID :
- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::ON
 - Tango::OFF
 - Tango::ALARM
 - Tango::FAULT
 - Tango::UNKNOWN

6 - Reset

- **Description:** Reset the Bilt power supply
- **Argin:**
DEV_VOID :
- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::ON

- Tango::OFF
- Tango::ALARM
- Tango::FAULT
- Tango::UNKNOWN

7 - SetpointCheck

- **Description:** Check the requested setpoint value against the steerer power supply current limits.
Returns 0 when inside the limits and otherwise -1.

- **Argin:**
DEV_DOUBLE : The current value to be checked

- **Argout:**
DEV_SHORT : 0 when setting is OK

- **Command allowed for:**
 - Tango::ON
 - Tango::OFF
 - Tango::ALARM
 - Tango::FAULT
 - Tango::UNKNOWN

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Device Servers : CVS repository on tango-ds project