Lucia Beam Energy
User's Guide

BeamEnergy Class

Revision: release_1_2_2 - Author: langlois
Implemented in C++

Introduction:

Class representing the Lucia Energy.

Properties:

Device Properties		
Property name	**Property type**	**Description**
UndulatorAttachment	Tango::DEV_STRING	Name of the Undulator Device Server
MonochromatorAttachment	Tango::DEV_STRING	Name of the Monochromator device server (Main rotation

Device Properties Default Values:

Property Name	Default Values
UndulatorAttachment	No default value
MonochromatorAttachment	No default value

There is no Class properties.

States:

States	
Names	**Descriptions**
MOVING	The Energy is Changing
STANDBY	The Energy is not changing
FAULT	The BeamEnergy is on Fault (Monochromator,Undulator...

Attributes:

Scalar Attributes			
Attribute name	**Data Type**	**R/W Type**	**Expert**
Energy: Energy read on Monochromator (calculated from theta angle with 2dsin(theta) formula.	DEV_DOUBLE	READ_WRITE	No
UndulatorEnergy: Energy of the undulator	DEV_DOUBLE	READ	No
MonochromatorEnergy: Energy read on Monochromator (calculated from theta angle with 2dsin(theta) formula.	DEV_DOUBLE	READ	No
Theta: Angle Theta of the monochromator	DEV_DOUBLE	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
Stop	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::MOVING
  - Tango::STANDBY
  - Tango::FAULT

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::MOVING
  - Tango::STANDBY
  - Tango::FAULT

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::MOVING
  - Tango::STANDBY
  - Tango::FAULT

4 - Stop

- **Description:** Stop the Changing of Energy

- **Argin:**
  DEV_VOID :

- **Argout:**
  DEV_VOID :

- **Command allowed for:**
  - Tango::MOVING
  - Tango::STANDBY
  - Tango::FAULT

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Theta: Angle Theta of the monochromator	DEV_DOUBLE	READ	No

Commands:

More Details on commands....

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Stop	DEV_VOID	DEV_VOID

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- **Argin:**
  DEV_VOID : none.

- **Argout:**
  DEV_VOID : none.

- **Command allowed for:**
  - Tango::MOVING
  - Tango::STANDBY
  - Tango::FAULT

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::MOVING
  - Tango::STANDBY
  - Tango::FAULT

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::MOVING
  - Tango::STANDBY
  - Tango::FAULT

4 - Stop

- **Description:** Stop the Changing of Energy

- **Argin:**
  DEV_VOID :

- **Argout:**
  DEV_VOID :

- **Command allowed for:**
  - Tango::MOVING
  - Tango::STANDBY
  - Tango::FAULT

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Device Commands Description
BeamEnergy Class

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- **Description:** This command gets the device state (stored in its *device_state* data member) and returns it to the caller.

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- **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:**
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  - ○ Tango::STANDBY
  - ○ Tango::FAULT

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- **Description:** Stop the Changing of Energy

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  - ○ Tango::STANDBY
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