



TANGO
Device
Server

Linac Modulator Auxiliary User's Guide

LinacModAux Class

Revision: LinacModAux-Release_2_1 - Author: vedder
Implemented in C++ - CVS repository: ESRF

Introduction:

This class will manage the modulator auxiliaries of the Linac.

Class Inheritance:

- Tango::Device_4Impl
 - LinacModAux

Class Description:

Properties:

Device Properties		
Property name	Property type	Description
Daresbury	Tango::DEV_STRING	Name of the daresbury device.
Heat_time	Tango::DEV_LONG	Heating time (in seconds).
Interlocks_list	Array of double	list of interlocks.
Offrelay	Tango::DEV_STRING	Name of the relay used to switch off the Modulator Auxiliary.
Onrelay	Tango::DEV_STRING	Name of the relay used to switch on the Modulator Auxiliary.
Pulsetime	Tango::DEV_LONG	Duration in milliseconds of the pulse to do on the pulsed relays.
Stateheatnum	Tango::DEV_DOUBLE	Daresbury relay number which indicates if the device is heating or not.
Stateonnum	Tango::DEV_DOUBLE	Daresbury relay number used to determine whether the modulator auxiliary is on or not.
ThyratronHeatV_adc	Tango::DEV_STRING	ADC device to read the Thyratron Heating Voltage.
HeaterPS_device	Tango::DEV_STRING	Heater Power Supply device name

Device Properties Default Values:

Property Name	Default Values
Daresbury	No default value
Heat_time	No default value
Interlocks_list	No default value
Offrelay	No default value
Onrelay	No default value
Pulsetime	No default value
Stateheatnum	No default value
Stateonnum	No default value
ThyratronHeatV_adc	No default value
HeaterPS_device	No default value

There is no Class properties.

States:

States	
Names	Descriptions
FAULT	*
INIT	Low Heating state.
MOVING	*
OFF	*
ON	*
DISABLE	

Attributes:

Scalar Attributes			
Attribute name	Data Type	R/W Type	Expert
HeatI : Heating current	DEV_DOUBLE	READ	No
HeatV : Heating Voltage	DEV_DOUBLE	READ	No
Temporization : remaining time before the ON state.	DEV_SHORT	READ	No
ThyatronHeatV : Thyatron Heat Voltage.	DEV_DOUBLE	READ	No
Economy : Economy mode. True = economy relay closed. False = economy relay open.	DEV_BOOLEAN	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
On	DEV_VOID	DEV_VOID
Off	DEV_VOID	DEV_VOID
Reset	DEV_VOID	DEV_VOID
Standby	DEV_VOID	DEV_VOID
LowHeating	DEV_VOID	DEV_VOID
SoftOff	DEV_VOID	DEV_VOID
SoftOn	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::FAULT
 - Tango::INIT
 - Tango::MOVING
 - Tango::OFF
 - Tango::ON
 - Tango::DISABLE

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::FAULT
 - Tango::INIT
 - Tango::MOVING
 - Tango::OFF
 - Tango::ON
 - Tango::DISABLE

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::FAULT
 - Tango::INIT
 - Tango::MOVING
 - Tango::OFF
 - Tango::ON
 - Tango::DISABLE

4 - On

- **Description:**
- **Argin:**
DEV_VOID :
- **Argout:**

DEV_VOID :

- **Command allowed for:**
- Tango::FAULT
- Tango::INIT
- Tango::MOVING
- Tango::OFF
- Tango::ON
- Tango::DISABLE

5 - Off

- **Description:**
- **Argin:**
DEV_VOID :
- **Argout:**
DEV_VOID :
- **Command allowed for:**
- Tango::FAULT
- Tango::INIT
- Tango::MOVING
- Tango::OFF
- Tango::ON
- Tango::DISABLE

6 - Reset

- **Description:**
- **Argin:**
DEV_VOID :
- **Argout:**
DEV_VOID :
- **Command allowed for:**
- Tango::FAULT
- Tango::INIT
- Tango::MOVING
- Tango::OFF
- Tango::ON
- Tango::DISABLE

7 - Standby

- **Description:** Put the auxiliary in Standby State.
- **Argin:**
DEV_VOID :
- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::FAULT
 - Tango::INIT
 - Tango::MOVING
 - Tango::OFF
 - Tango::ON
 - Tango::DISABLE

8 - LowHeating

- **Description:** Put the auxiliary in low heating state.
- **Argin:**
DEV_VOID :
- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::FAULT
 - Tango::INIT
 - Tango::MOVING
 - Tango::OFF
 - Tango::ON
 - Tango::DISABLE

9 - SoftOff

- **Description:** Specify that we would like to reach Off state. Do not execute Pulse command on the OffRelay.
- **Argin:**
DEV_VOID :
- **Argout:**
DEV_VOID :

- **Command allowed for:**

- Tango::FAULT
- Tango::INIT
- Tango::MOVING
- Tango::OFF
- Tango::ON
- Tango::DISABLE

10 - SoftOn

- **Description:** Specify that we would like to reach On state. Do not execute Pulse command on the OnRelay.

- **Argin:**

DEV_VOID :

- **Argout:**

DEV_VOID :

- **Command allowed for:**

- Tango::FAULT
- Tango::INIT
- Tango::MOVING
- Tango::OFF
- Tango::ON
- Tango::DISABLE

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