



TANGO
Device
Server

Slits using paragon motors User's Guide

ParagonSlit Class

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

Introduction:

control 4 axis and building 4 values vertical offset, vertical gap, horizontal offset and horizontal gap.

Class Inheritance:

- Tango::Device_4Impl
 - ParagonSlit

Class Description:

Properties:

Device Properties		
Property name	Property type	Description
Up_axis_name	Tango::DEV_STRING	name of the axis driving the upper jaw
Down_axis_name	Tango::DEV_STRING	name of the axis driving the lower jaw
Int_axis_name	Tango::DEV_STRING	name of the axis driving the internal jaw
Ext_axis_name	Tango::DEV_STRING	name of the axis driving the external jaw
Open_vgap	Tango::DEV_DOUBLE	value of the vertical gap for the open position
Open_hgap	Tango::DEV_DOUBLE	value of the horizontal gap for the open position
Open_voffset	Tango::DEV_DOUBLE	value of the vertical offset for the open position
Open_hoffset	Tango::DEV_DOUBLE	value of the horizontal offset for the open position
Nominal_vgap	Tango::DEV_DOUBLE	value of the vertical gap for nominal position
Nominal_hgap	Tango::DEV_DOUBLE	value of the horizontal gap for the nominal position
Nominal_voffset	Tango::DEV_DOUBLE	value of the vertical offset for the nominal position
Nominal_hoffset	Tango::DEV_DOUBLE	value of the horizontal offset for the nominal position
Wago_name	Tango::CONST_DEV_STRING	name of the wago controller controlling the absolute encoders
Up_enc_module	Tango::DEV_SHORT	module of the vertical top encoder
Down_enc_module	Tango::DEV_SHORT	
Int_enc_module	Tango::DEV_SHORT	
Ext_enc_module	Tango::DEV_SHORT	
Enc_resolution	Tango::DEV_LONG	absolute encoder resolution in step per mm

Device Properties Default Values:

Property Name	Default Values
Up_axis_name	No default value
Down_axis_name	No default value
Int_axis_name	No default value
Ext_axis_name	No default value
Open_vgap	No default value
Open_hgap	No default value
Open_voffset	No default value
Open_hoffset	No default value
Nominal_vgap	No default value
Nominal_hgap	No default value
Nominal_voffset	No default value
Nominal_hoffset	No default value
Wago_name	No default value
Up_enc_module	No default value
Down_enc_module	No default value
Int_enc_module	No default value
Ext_enc_module	No default value
Enc_resolution	No default value

There is no Class properties.

States:

States	
Names	Descriptions
OPEN	all the jaw are put out of the beam in a position taken in the database
ON	the 4 motors are around the nominal position
ALARM	There is an alarm on one of the motor or one of the coders
FAULT	there is a fault on one of the motor or encoder

Attributes:

Scalar Attributes			
Attribute name	Data Type	R/W Type	Expert
hgap: horizontal size of the beam window	DEV_DOUBLE	READ_WRITE	No
vgap: vertical size of the beam window	DEV_DOUBLE	READ_WRITE	No
hoffset: horizontal position of the center of the beam window	DEV_DOUBLE	READ_WRITE	No
voffset: vertical position of the center of the beam window	DEV_DOUBLE	READ_WRITE	No
up_enc: value given by the upper absolute encoder	DEV_DOUBLE	READ	Yes
down_enc: value given by the down absolute encoder	DEV_DOUBLE	READ	Yes
int_enc: value given by the internal encoder	DEV_DOUBLE	READ	Yes
ext_enc: value given by the external coder	DEV_DOUBLE	READ	Yes

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
Stop	DEV_VOID	DEV_VOID
On	DEV_VOID	DEV_VOID
Off	DEV_VOID	DEV_VOID
Nominal	DEV_VOID	DEV_VOID
Open	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::OPEN
 - Tango::ON
 - Tango::ALARM
 - 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::OPEN
 - Tango::ON
 - Tango::ALARM
 - 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::OPEN
- Tango::ON
- Tango::ALARM
- Tango::FAULT

4 - Reset

- **Description:** reread the absolute encoders and load the motor counters with it.

- **Argin:**

DEV_VOID :

- **Argout:**

DEV_VOID :

- **Command allowed for:**

- Tango::OPEN
- Tango::ON
- Tango::ALARM
- Tango::FAULT

5 - Stop

- **Description:** stop any movement in progress

- **Argin:**

DEV_VOID :

- **Argout:**

DEV_VOID :

- **Command allowed for:**

- Tango::OPEN
- Tango::ON
- Tango::ALARM
- Tango::FAULT

6 - On

- **Description:** switch on the 4 motors

- **Argin:**

DEV_VOID :

- **Argout:**
DEV_VOID :

- **Command allowed for:**

- Tango::OPEN
- Tango::ON
- Tango::ALARM
- Tango::FAULT

7 - Off

- **Description:** switch off the 4 motors

- **Argin:**
DEV_VOID :

- **Argout:**
DEV_VOID :

- **Command allowed for:**

- Tango::OPEN
- Tango::ON
- Tango::ALARM
- Tango::FAULT

8 - Nominal

- **Description:** set the 2 gaps and the 2 offsets to nominal value. this nominal value is taken from property database

- **Argin:**
DEV_VOID :

- **Argout:**
DEV_VOID :

- **Command allowed for:**

- Tango::OPEN
- Tango::ON
- Tango::ALARM
- Tango::FAULT

9 - Open

- **Description:** open the 2 gaps to the open_gap value taken from database
- **Argin:**
DEV_VOID :
- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::OPEN
 - Tango::ON
 - Tango::ALARM
 - Tango::FAULT

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