

TwickenhamHDI Tango Python Class

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TwickenhamHDI Class Identification :

Contact : at cells.es - jmoldes
Class Family : Instrumentation
Platform : All Platforms
Bus : Serial Line
Manufacturer : Twickenham
Manufacturer ref. :

TwickenhamHDI Class Inheritance :

- [Tango::DeviceImpl](#)
 - TwickenhamHDI

TwickenhamHDI Class Description :

This class is used for controlling the main features of Twickenham Helium Depth Indicator

TwickenhamHDI Properties :

There is no class properties

| Device Properties | | | |
|-------------------|---|--------|---------------|
| Name | Description | Type | Default Value |
| SerialDevice | The name of the PySerial tango device to connect to. Its configuration: 9600 bauds, 8 data, no parity, 2 stop bits, SOFTWARE FLOW CONTROL ENABLED!, newline 0xA | String | none |

| TwickenhamHDI Class Commands | | | | |
|------------------------------|-------------|------------------|----------|---|
| Name | Input type | Output type | Level | Description |
| State | DEV_VOID | DEV_STATE | OPERATOR | This command gets the device state (stored in its device_state data member) and returns it to the caller. |
| Status | DEV_VOID | CONST_DEV_STRING | OPERATOR | This command gets the device status (stored in its device_status data member) and returns it to the caller. |
| Halt | DEV_BOOLEAN | DEV_VOID | OPERATOR | Halt or enable instrument |

Command State :

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

| State Definition | | |
|---------------------|------------------|--------------|
| Input Argument | Tango::DEV_VOID | none |
| Output Argument | Tango::DEV_STATE | Device state |
| DisplayLevel | OPERATOR | .. |
| Inherited | true | .. |
| Abstract | true | .. |
| Polling Period | Not polled | .. |
| | | |
| Command allowed for | All states | .. |

Command Status :

This command gets the device status (stored in its device_status data member) and returns it to the caller.

| Status Definition | | |
|---------------------|-------------------------|---------------|
| Input Argument | Tango::DEV_VOID | none |
| Output Argument | Tango::CONST_DEV_STRING | Device status |
| DisplayLevel | OPERATOR | .. |
| Inherited | true | .. |
| Abstract | true | .. |
| Polling Period | Not polled | .. |
| | | |
| Command allowed for | All states | .. |

Command Halt :

Halt or enable instrument

| Halt Definition | | |
|---------------------|--------------------|----------------|
| Input Argument | Tango::DEV_BOOLEAN | enable/disable |
| Output Argument | Tango::DEV_VOID | |
| DisplayLevel | OPERATOR | .. |
| Inherited | false | .. |
| Abstract | false | .. |
| Polling Period | Not polled | .. |
| | | |
| Command allowed for | All states | .. |

| TwickenhamHDI Class Attributes | | | | | | | |
|--------------------------------|-----------|----------|------------|------------|-------------------|----------|--------------------------|
| Name | Inherited | Abstract | Attr. type | R/W type | Data type | Level | Description |
| Alarm | false | false | Scalar | READ_WRITE | Tango::DEV_USHORT | OPERATOR | Alarm status and control |

| | | | | | | | |
|----------------------------|-------|-------|----------|------------|-------------------|----------|----------------------------|
| ChannelA | false | false | Scalar | READ | Tango::DEV_LONG | OPERATOR | Foreground channel reading |
| ChannelB | false | false | Scalar | READ | Tango::DEV_LONG | OPERATOR | Background channel reading |
| RelayX | false | false | Scalar | READ_WRITE | Tango::DEV_USHORT | OPERATOR | Relay X status and control |
| RelayY | false | false | Scalar | READ_WRITE | Tango::DEV_USHORT | OPERATOR | Relay Y status and control |
| Mode | false | false | Scalar | READ_WRITE | Tango::DEV_USHORT | OPERATOR | Reading mode |
| CommErrors | false | false | Spectrum | READ | Tango::DEV_STRING | OPERATOR | Communication errors |

There is no dynamic attribute defined.

Attribute Alarm :

Alarm status and control

| Attribute Definition | |
|----------------------|-------------------|
| Attribute Type | Scalar |
| R/W Type | READ_WRITE |
| Data Type | Tango::DEV_USHORT |
| Display Level | OPERATOR |
| Inherited | false |
| Abstract | false |
| Polling Period | Not polled |
| Memorized | Not set |
| | |
| Read allowed for | All states |
| Write allowed for | All states |

| Attribute Properties | |
|----------------------|-------|
| label | Alarm |
| unit | |
| standard unit | |
| display unit | |
| format | |
| max_value | |
| min_value | |
| max_alarm | |
| min_alarm | |
| max_warning | |
| min_warning | |
| delta_time | |
| delta_val | |

| Attribute Event Criteria | |
|---------------------------------|---------|
| Periodic | Not set |
| Relative Change | Not set |
| Absolute Change | Not set |
| | |
| Archive Periodic | Not set |
| Archive Relative Change | Not set |
| Archive Absolute Change | Not set |
| | |
| Push Change event by user code | false |
| | |
| Push Archive event by user code | false |
| | |

| | |
|-----------------------------------|-------|
| Push DataReady event by user code | false |
|-----------------------------------|-------|

Attribute ChannelA :

Foreground channel reading

| Attribute Definition | | Attribute Properties | | Attribute Event Criteria | |
|----------------------|-----------------|----------------------|-----------|-----------------------------------|---------|
| Attribute Type | Scalar | label | Channel A | Periodic | Not set |
| R/W Type | READ | unit | mm | Relative Change | Not set |
| Data Type | Tango::DEV_LONG | standard unit | | Absolute Change | Not set |
| Display Level | OPERATOR | display unit | | | |
| Inherited | false | format | | Archive Periodic | Not set |
| Abstract | false | max_value | | Archive Relative Change | Not set |
| Polling Period | Not polled | min_value | | Archive Absolute Change | Not set |
| Memorized | Not set | max_alarm | | | |
| | | min_alarm | | Push Change event by user code | false |
| Read allowed for | All states | max_warning | | | |
| | | min_warning | | Push Archive event by user code | false |
| | | delta_time | | | |
| | | delta_val | | Push DataReady event by user code | false |

Attribute ChannelB :

Background channel reading

| | | | |
|--|--|--|--|
| | | | |
|--|--|--|--|

| Attribute Definition | |
|----------------------|-----------------|
| Attribute Type | Scalar |
| R/W Type | READ |
| Data Type | Tango::DEV_LONG |
| Display Level | OPERATOR |
| Inherited | false |
| Abstract | false |
| Polling Period | Not polled |
| Memorized | Not set |
| | |
| Read allowed for | All states |

| Attribute Properties | |
|----------------------|-----------|
| label | Channel B |
| unit | mm |
| standard unit | |
| display unit | |
| format | |
| max_value | |
| min_value | |
| max_alarm | |
| min_alarm | |
| max_warning | |
| min_warning | |
| delta_time | |
| delta_val | |

| Attribute Event Criteria | |
|-----------------------------------|---------|
| Periodic | Not set |
| Relative Change | Not set |
| Absolute Change | Not set |
| | |
| Archive Periodic | Not set |
| Archive Relative Change | Not set |
| Archive Absolute Change | Not set |
| | |
| Push Change event by user code | false |
| | |
| Push Archive event by user code | false |
| | |
| Push DataReady event by user code | false |

Attribute RelayX :

Relay X status and control

| Attribute Definition | |
|----------------------|-------------------|
| Attribute Type | Scalar |
| R/W Type | READ_WRITE |
| Data Type | Tango::DEV_USHORT |
| Display Level | OPERATOR |
| Inherited | false |
| Abstract | false |
| Polling Period | Not polled |
| Memorized | Not set |
| | |

| Attribute Properties | |
|----------------------|---------|
| label | Relay X |
| unit | |
| standard unit | |
| display unit | |
| format | |
| max_value | |
| min_value | |
| max_alarm | |
| min_alarm | |
| max_warning | |

| Attribute Event Criteria | |
|--------------------------|---------|
| Periodic | Not set |
| Relative Change | Not set |
| Absolute Change | Not set |
| | |
| Archive Periodic | Not set |
| Archive Relative Change | Not set |
| Archive Absolute Change | Not set |

| | |
|-------------------|------------|
| Read allowed for | All states |
| Write allowed for | All states |

| | |
|-------------|--|
| min_warning | |
| delta_time | |
| delta_val | |

| | |
|-----------------------------------|-------|
| | |
| Push Change event by user code | false |
| | |
| Push Archive event by user code | false |
| | |
| Push DataReady event by user code | false |

Attribute RelayY :

Relay Y status and control

| Attribute Definition | |
|----------------------|-------------------|
| Attribute Type | Scalar |
| R/W Type | READ_WRITE |
| Data Type | Tango::DEV_USHORT |
| Display Level | OPERATOR |
| Inherited | false |
| Abstract | false |
| Polling Period | Not polled |
| Memorized | Not set |
| | |
| Read allowed for | All states |
| Write allowed for | All states |

| Attribute Properties | |
|----------------------|---------|
| label | Relay Y |
| unit | |
| standard unit | |
| display unit | |
| format | |
| max_value | |
| min_value | |
| max_alarm | |
| min_alarm | |
| max_warning | |
| min_warning | |
| delta_time | |
| delta_val | |

| Attribute Event Criteria | |
|-----------------------------------|---------|
| Periodic | Not set |
| Relative Change | Not set |
| Absolute Change | Not set |
| | |
| Archive Periodic | Not set |
| Archive Relative Change | Not set |
| Archive Absolute Change | Not set |
| | |
| Push Change event by user code | false |
| | |
| Push Archive event by user code | false |
| | |
| Push DataReady event by user code | false |

Attribute Mode :

| Attribute Definition | |
|----------------------|-------------------|
| Attribute Type | Scalar |
| R/W Type | READ_WRITE |
| Data Type | Tango::DEV_USHORT |
| Display Level | OPERATOR |
| Inherited | false |
| Abstract | false |
| Polling Period | Not polled |
| Memorized | Not set |
| | |
| Read allowed for | All states |
| Write allowed for | All states |

| Attribute Properties | |
|----------------------|------|
| label | Mode |
| unit | |
| standard unit | |
| display unit | |
| format | |
| max_value | |
| min_value | |
| max_alarm | |
| min_alarm | |
| max_warning | |
| min_warning | |
| delta_time | |
| delta_val | |

| Attribute Event Criteria | |
|-----------------------------------|---------|
| Periodic | Not set |
| Relative Change | Not set |
| Absolute Change | Not set |
| | |
| Archive Periodic | Not set |
| Archive Relative Change | Not set |
| Archive Absolute Change | Not set |
| | |
| Push Change event by user code | false |
| | |
| Push Archive event by user code | false |
| | |
| Push DataReady event by user code | false |

Attribute CommErrors :

Communication errors

| Attribute Definition | |
|----------------------|-------------------|
| Attribute Type | Spectrum (100) |
| R/W Type | READ |
| Data Type | Tango::DEV_STRING |
| Display Level | OPERATOR |
| Inherited | false |

| Attribute Properties | |
|----------------------|----------------------|
| label | Communication errors |
| unit | |
| standard unit | |
| display unit | |
| format | |
| max_value | |

| Attribute Event Criteria | |
|--------------------------|---------|
| Periodic | Not set |
| Relative Change | Not set |
| Absolute Change | Not set |
| | |
| | |

| | |
|------------------|------------|
| Abstract | false |
| Polling Period | Not polled |
| Memorized | Not set |
| | |
| Read allowed for | All states |

| | |
|-------------|--|
| | |
| min_value | |
| max_alarm | |
| min_alarm | |
| max_warning | |
| min_warning | |
| delta_time | |
| delta_val | |

| | |
|-----------------------------------|---------|
| Archive Periodic | Not set |
| Archive Relative Change | Not set |
| Archive Absolute Change | Not set |
| | |
| Push Change event by user code | false |
| | |
| Push Archive event by user code | false |
| | |
| Push DataReady event by user code | false |

| TwickenhamHDI Class States | |
|----------------------------|-----------------------------------|
| Name | Description |
| ON | No errors detected |
| STANDBY | Device is in standby mode |
| DISABLE | Device has been explicitly halted |
| ALARM | Some kind of alarm detected |
| FAULT | Something is wrong |