



**TANGO  
Device  
Server**

# **LoCuM\_4 User's Guide**

## **LoCuM\_4 Class**

**Revision: release\_2\_1\_1 - Author: buteau  
Implemented in C++**

### **Introduction:**

controls the 4 channel Low-Current Monito called LoCuM\_4. it consists of several components: -  
4 current to voltage converters - an optically isolated amplifier - BIAS supply - Controller - an  
interface to host computer

### **Class Inheritance:**

- Tango::Device\_3Impl
  - LoCuM\_4

## Properties:

<b>Device Properties</b>		
<b>Property name</b>	<b>Property type</b>	<b>Description</b>
<b>SerialProxyName</b>	Tango::DEV_STRING	name of the serial line proxy used

Device Properties Default Values:

<b>Property Name</b>	<b>Default Values</b>
SerialProxyName	No default value

**There is no Class properties.**

## States:

<b>States</b>	
<b>Names</b>	<b>Descriptions</b>
<b>FAULT</b>	serial line communication broken
<b>ON</b>	by default the initial state is ON

## Attributes:

<b>Scalar Attributes</b>			
<b>Attribute name</b>	<b>Data Type</b>	<b>R/W Type</b>	<b>Expert</b>
<b>gain:</b> to select input current range.	DEV_DOUBLE	READ	No

## Commands:

More Details on commands....

## Device Commands for Operator Level

Command name	Argument In	Argument Out
<b>Init</b>	DEV_VOID	DEV_VOID
<b>State</b>	DEV_VOID	DEV_STATE
<b>Status</b>	DEV_VOID	CONST_DEV_STRING
<b>RangeUp</b>	DEV_VOID	DEV_VOID
<b>RangeDown</b>	DEV_VOID	DEV_VOID
<b>SetManualRange</b>	DEV_DOUBLE	DEV_VOID

## Device Commands for Expert Level Only

Command name	Argument In	Argument Out
<b>SetControlMode</b>	DEV_BOOLEAN	DEV_VOID
<b>SendLocum4Command</b>	DEV_STRING	DEV_STRING

### 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::ON

### 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::ON

### 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::ON

### 4 - SetControlMode (for expert only)

- **Description:** select the control mode
- **Argin:**  
DEV\_BOOLEAN : true: local, false: remote
- **Argout:**  
DEV\_VOID : nothing
- **Command allowed for:**
  - Tango::FAULT
  - Tango::ON

### 5 - SendLocum4Command (for expert only)

- **Description:** send a Locum4 command. All commands are described in the Locum4 programmer's guide.
- **Argin:**  
DEV\_STRING : Locum4 command string
- **Argout:**  
DEV\_STRING : response to the command
- **Command allowed for:**
  - Tango::FAULT
  - Tango::ON

### 6 - RangeUp

- **Description:** increase the range
- **Argin:**  
DEV\_VOID : nothing
- **Argout:**

**DEV\_VOID** : nothing

- **Command allowed for:**

- Tango::FAULT

- Tango::ON

## 7 - RangeDown

- **Description:** decrease the range

- **Argin:**

**DEV\_VOID** :

- **Argout:**

**DEV\_VOID** :

- **Command allowed for:**

- Tango::FAULT

- Tango::ON

## 8 - SetManualRange

- **Description:** to set the manual mode

- **Argin:**

**DEV\_DOUBLE** : nothing

- **Argout:**

**DEV\_VOID** : nothing

- **Command allowed for:**

- Tango::FAULT

- Tango::ON

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# **LoCuM\_4**

## **User's Guide**

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  - LoCuM\_4

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<b>Device Properties</b>		
<b>Property name</b>	<b>Property type</b>	<b>Description</b>
<b>SerialProxyName</b>	Tango::DEV_STRING	name of the serial line proxy used

Device Properties Default Values:

<b>Property Name</b>	<b>Default Values</b>
SerialProxyName	No default value

**There is no Class properties.**

## States:

<b>States</b>	
<b>Names</b>	<b>Descriptions</b>
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<b>Scalar Attributes</b>			
<b>Attribute name</b>	<b>Data Type</b>	<b>R/W Type</b>	<b>Expert</b>
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## Commands:

More Details on commands....

## Device Commands for Operator Level

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<b>State</b>	DEV_VOID	DEV_STATE
<b>Status</b>	DEV_VOID	CONST_DEV_STRING
<b>RangeUp</b>	DEV_VOID	DEV_VOID
<b>RangeDown</b>	DEV_VOID	DEV_VOID
<b>SetManualRange</b>	DEV_DOUBLE	DEV_VOID

## Device Commands for Expert Level Only

Command name	Argument In	Argument Out
<b>SetControlMode</b>	DEV_BOOLEAN	DEV_VOID
<b>SendLocum4Command</b>	DEV_STRING	DEV_STRING

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- **Argin:**  
**DEV\_VOID** : none.
- **Argout:**  
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- **Command allowed for:**
  - Tango::FAULT
  - Tango::ON

### 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::ON

### 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::ON

### 4 - SetControlMode (for expert only)

- **Description:** select the control mode
- **Argin:**  
DEV\_BOOLEAN : true: local, false: remote
- **Argout:**  
DEV\_VOID : nothing
- **Command allowed for:**
  - Tango::FAULT
  - Tango::ON

### 5 - SendLocum4Command (for expert only)

- **Description:** send a Locum4 command. All commands are described in the Locum4 programmer's guide.
- **Argin:**  
DEV\_STRING : Locum4 command string
- **Argout:**  
DEV\_STRING : response to the command
- **Command allowed for:**
  - Tango::FAULT
  - Tango::ON

### 6 - RangeUp

- **Description:** increase the range
- **Argin:**  
DEV\_VOID : nothing
- **Argout:**

**DEV\_VOID** : nothing

- **Command allowed for:**

- Tango::FAULT

- Tango::ON

## 7 - RangeDown

- **Description:** decrease the range

- **Argin:**

**DEV\_VOID** :

- **Argout:**

**DEV\_VOID** :

- **Command allowed for:**

- Tango::FAULT

- Tango::ON

## 8 - SetManualRange

- **Description:** to set the manual mode

- **Argin:**

**DEV\_DOUBLE** : nothing

- **Argout:**

**DEV\_VOID** : nothing

- **Command allowed for:**

- Tango::FAULT

- Tango::ON

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# LoCuM\_4

## Device Commands Description

### LoCuM\_4 Class

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- **Argin:**  
**DEV\_VOID** : none.
- **Argout:**  
**DEV\_VOID** : none.
- **Command allowed for:**
  - Tango::FAULT
  - Tango::ON

## 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::ON

### 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::ON

### 4 - SetControlMode (for expert only)

- **Description:** select the control mode

- **Argin:**

**DEV\_BOOLEAN** : true: local, false: remote

- **Argout:**

**DEV\_VOID** : nothing

- **Command allowed for:**

- Tango::FAULT
- Tango::ON

### 5 - SendLocum4Command (for expert only)

- **Description:** send a Locum4 command. All commands are described in the Locum4 programmer's guide.

- **Argin:**

**DEV\_STRING** : Locum4 command string

- **Argout:**

**DEV\_STRING** : response to the command

- **Command allowed for:**

- Tango::FAULT
- Tango::ON

## 6 - RangeUp

- **Description:** increase the range
- **Argin:**  
DEV\_VOID : nothing
- **Argout:**  
DEV\_VOID : nothing
- **Command allowed for:**
  - Tango::FAULT
  - Tango::ON

## 7 - RangeDown

- **Description:** decrease the range
- **Argin:**  
DEV\_VOID :
- **Argout:**  
DEV\_VOID :
- **Command allowed for:**
  - Tango::FAULT
  - Tango::ON

## 8 - SetManualRange

- **Description:** to set the manual mode
- **Argin:**  
DEV\_DOUBLE : nothing
- **Argout:**  
DEV\_VOID : nothing
- **Command allowed for:**
  - Tango::FAULT
  - Tango::ON

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