

LoCuM_4 Tango Cpp Class

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LoCuM_4 Class Identification :

Contact : at nexeya.com - sebastien.gara
 Class Family : Miscellaneous
 Platform : All Platforms
 Bus : Not Applicable
 Manufacturer : none
 Manufacturer ref. :

LoCuM_4 Class Inheritance :

- [Tango::DeviceImpl](#)
 - LoCuM_4

LoCuM_4 Class Description :

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

LoCuM_4 Properties :

There is no class properties

Device Properties			
Name	Description	Type	Default Value
SerialProxyName	name of the serial line proxy used	String	none
Bias	Bias of the LoCuM, among : PLUS, MINUS, EXT, DEF	String	NONE
RangeList	List of supported ranges	double[]	none

LoCuM_4 Class Commands				
Name	Input type	Output type	Level	Description
State	DEV_VOID	DEV_STATE	OPERATOR	This command gets the device state (stored in its <i>device_state</i> data member) and returns it to the caller.
Status	DEV_VOID	CONST_DEV_STRING	OPERATOR	This command gets the device status (stored in its <i>device_status</i> data member) and returns it to the caller.
SetControlMode	DEV_BOOLEAN	DEV_VOID	EXPERT	select the control mode
SendLocum4Command	DEV_STRING	DEV_STRING	EXPERT	send a Locum4 command. All commands are described in the Locum4

				programmer's guide.
RangeUp	DEV_VOID	DEV_VOID	OPERATOR	increase the range
RangeDown	DEV_VOID	DEV_VOID	OPERATOR	decrease the range
SetManualRange	DEV_DOUBLE	DEV_VOID	OPERATOR	to set the manual mode

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	State Code
DisplayLevel	OPERATOR	..
Inherited	true	..
Abstract	false	..
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	Status description

DisplayLevel	OPERATOR	..
Inherited	true	..
Abstract	false	..
Polling Period	Not polled	..
Command allowed for	All states	..

Command SetControlMode :

select the control mode

SetControlMode Definition		
Input Argument	Tango::DEV_BOOLEAN	true: local, false: remote
Output Argument	Tango::DEV_VOID	nothing
DisplayLevel	EXPERT	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command allowed for	All states	..

Command SendLocum4Command :

send a Locum4 command. All commands are described in the Locum4 programmer`s guide.

SendLocum4Command Definition		
Input Argument	Tango::DEV_STRING	Locum4 command string
Output Argument	Tango::DEV_STRING	response to the command
DisplayLevel	EXPERT	..

Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command allowed for	All states	..

Command RangeUp :

increase the range

RangeUp Definition		
Input Argument	Tango::DEV_VOID	nothing
Output Argument	Tango::DEV_VOID	nothing
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command allowed for	All states	..

Command RangeDown :

decrease the range

RangeDown Definition		
Input Argument	Tango::DEV_VOID	
Output Argument	Tango::DEV_VOID	
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..

Polling Period	Not polled	..
Command allowed for	All states	..

Command SetManualRange :

to set the manual mode

SetManualRange Definition		
Input Argument	Tango::DEV_DOUBLE	nothing
Output Argument	Tango::DEV_VOID	nothing
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command allowed for	All states	..

LoCuM_4 Class Attributes							
Name	Inherited	Abstract	Attr. type	R/W type	Data type	Level	Description
gain	false	false	Scalar	READ_WRITE	Tango::DEV_DOUBLE	OPERATOR	to select input current range.

There is no dynamic attribute defined.

Attribute gain :

to select input current range.

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ_WRITE
Data Type	Tango::DEV_DOUBLE
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	range
unit	i _z 1/2A
standard unit	i _z 1/2A
display unit	i _z 1/2A
format	%8.4f
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

LoCuM_4 Class States	
Name	Description

FAULT	serial line communication broken
ON	by default the initial state is ON
ALARM	Configured bias not properly set on hardware