

LDS1000 Tango Cpp Class

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LDS1000 Class Identification :

Contact : at null - null
 Class Family :
 Platform :
 Bus :
 Manufacturer :
 Manufacturer ref. :

LDS1000 Class Inheritance :

- [Tango::DeviceImpl](#)
 - LDS1000

LDS1000 Class Description :

This device controls controller for laser diode sensors.
 This product come from Newport corporation.

LDS1000 Properties :

There is no class properties

Device Properties			
Name	Description	Type	Default Value
SerialProxyName		String	none

LDS1000 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.
Start	DEV_VOID	DEV_VOID	OPERATOR	command which triggers the acquisition
Reset	DEV_VOID	DEV_VOID	OPERATOR	reset the device
Stop	DEV_VOID	DEV_VOID	OPERATOR	stops acquisitions

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

Command Start :

command which triggers the acquisition

Start Definition		
Input Argument	Tango::DEV_VOID	
Output Argument	Tango::DEV_VOID	
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
		..
Command NOT allowed for	• OFF	..

Command Reset :

reset the device

Reset Definition		
Input Argument	Tango::DEV_VOID	
Output Argument	Tango::DEV_VOID	
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
		..
Command NOT allowed for	• RUNNING	..

Command Stop :

stops acquisitions

Stop Definition		
Input Argument	Tango::DEV_VOID	
Output Argument	Tango::DEV_VOID	
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
		..
Command NOT allowed for	• UNKNOWN • FAULT • OFF	..

LDS1000 Class Attributes							
Name	Inherited	Abstract	Attr. type	R/W type	Data type	Level	Description
integrationConstant	false	false	Scalar	READ_WRITE	Tango::DEV_DOUBLE	OPERATOR	The integration constant sets the duration of the digital averaging\ncarried out on acquisitions to 2kHz.\n\nThe possible values are: 0;1;2;5;10;20;50;100;200;500;1000.\n\nDo not confuse the integration constant with the sample period\n\nwhich sets the time interval separating two successive measurements\n\nin dynamic acquisition mode (TP,TK).
angleY	false	false	Scalar	READ	Tango::DEV_DOUBLE	OPERATOR	is the Y-angle measurement.\n\nThis value is the average over nb samples.\n\nIt corresponds to a rotation around the y-axis.\n\nAxis references are defined in the user's manual.\n\nThe range of the magnitude depend on the head used.
angleZ	false	false	Scalar	READ	Tango::DEV_DOUBLE	OPERATOR	is Z-angle measurement.\n\nThis value is the average over nb samples.\n\nIt corresponds to a rotation around the y-axis.\n\nAxis references are defined in the user's manual.\n\nThe range of the magnitude depend on the head used.
countingCompleted	false	false	Scalar	READ	Tango::DEV_SHORT	OPERATOR	gives an indication about the process of acquiring.\n\n2 values are possible 0 (running) and 1(standby)\n\nThe device scanservers needs it.
angleYStdDeviation	false	false	Scalar	READ	Tango::DEV_DOUBLE	OPERATOR	Provides the mean standard deviation for Y angle
angleZStdDeviation	false	false	Scalar	READ	Tango::DEV_DOUBLE	OPERATOR	Provides the mean standard deviation for Z angle
numberSamples	false	false	Scalar	READ_WRITE	Tango::DEV_LONG	OPERATOR	Number of samples for each measurement
samplePeriod	false	false	Scalar	READ_WRITE	Tango::DEV_DOUBLE	OPERATOR	Sets the sampling period to X ms
integrationTime	false	false	Scalar	WRITE	Tango::DEV_DOUBLE	OPERATOR	Not used (only for Compatibility with ScanServer)

There is no dynamic attribute defined.

Attribute integrationConstant :

The integration constant sets the duration of the digital averaging\ncarried out on acquisitions to 2kHz.\n\nThe possible values are:
0;1;2;5;10;20;50;100;200;500;1000.\n\nDo not confuse the integration constant with the sample period\n\nwhich sets the time interval separating two successive measurements\n\nin dynamic acquisition mode (TP,TK).

Attribute

Attribute

Attribute Event Criteria

Definition	
Attribute Type	Scalar
R/W Type	READ_WRITE
Data Type	Tango::DEV_DOUBLE
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	3000
Memorized	true
Write hardware at init.	true
Read NOT allowed for	<ul style="list-style-type: none"> RUNNING OFF
Write allowed for	All states

Properties	
label	Integration Constant
unit	ms
standard unit	ms
display unit	ms
format	
max_value	
min_value	
max_alarm	
min_alarm	
max_warning	
min_warning	
delta_time	
delta_val	

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	Not set

Attribute angleY :

is the Y-angle measurement.
This value is the average over nb samples.
It corresponds to a rotation around the y-axis.
Axis references are defined in the user's manual.
The range of the magnitude depend on the head used.

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ
Data Type	Tango::DEV_DOUBLE
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	Not set
Read NOT allowed for	<ul style="list-style-type: none"> OFF

Attribute Properties	
label	angle Y
unit	$\frac{1}{2}$ radian
standard unit	$\frac{1}{2}$ radian
display unit	$\frac{1}{2}$ radian
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	Not set

Attribute angleZ :

is Z-angle measurement.
This value is the average over nb samples.
It corresponds to a rotation around the y-axis.
Axis references are defined in the user's manual.
The range of the magnitude depend on the head used.

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ
Data Type	Tango::DEV_DOUBLE
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	Not set
Read NOT allowed for	• OFF

Attribute Properties	
label	angle Z
unit	î¿½radian
standard unit	î¿½radian
display unit	î¿½radian
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	Not set

Attribute countingCompleted :

gives an indication about the process of acquiring.\n2 values are possible 0 (running) and 1 (standby)\n\nThe device scanservers needs it.

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ
Data Type	Tango::DEV_SHORT
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	Not set
Read NOT allowed for	• OFF

Attribute Properties	
label	acquisition state
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	Not set

Attribute angleYStdDeviation :

Provides the mean standard deviation for Y angle

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ
Data Type	Tango::DEV_DOUBLE
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	Not set
Read NOT allowed for	• OFF

Attribute Properties	
label	dY
unit	$\hat{i}_z \frac{1}{2} \text{radian}$
standard unit	$\hat{i}_z \frac{1}{2} \text{radian}$
display unit	$\hat{i}_z \frac{1}{2} \text{radian}$
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	Not set

Attribute angleZStdDeviation :

Provides the mean standard deviation for Z angle

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ
Data Type	Tango::DEV_DOUBLE
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	Not set
Read NOT allowed for	• OFF

Attribute Properties	
label	dZ
unit	$\hat{i}_z \frac{1}{2} \text{radian}$
standard unit	$\hat{i}_z \frac{1}{2} \text{radian}$
display unit	$\hat{i}_z \frac{1}{2} \text{radian}$
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	Not set

Attribute numberSamples :

Number of samples for each measurement

Attribute Definition

Attribute Properties

Attribute Event Criteria

Attribute Type	Scalar
R/W Type	READ_WRITE
Data Type	Tango::DEV_LONG
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	3000
Memorized	true
Write hardware at init.	true
Read NOT allowed for	<ul style="list-style-type: none"> RUNNING OFF
Write allowed for	All states

label	unit	Nb samples
standard unit		
display unit		
format		
max_value		
min_value		
max_alarm		
min_alarm		
max_warning		
min_warning		
delta_time		
delta_val		

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	Not set

Attribute samplePeriod :

Sets the sampling period to X ms

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ_WRITE
Data Type	Tango::DEV_DOUBLE
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	3000
Memorized	true
Write hardware at init.	true
Read NOT allowed for	<ul style="list-style-type: none"> RUNNING OFF
Write allowed for	All states

Attribute Properties	
label	Sampling Period
unit	ms
standard unit	ms
display unit	ms
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	Not set

Attribute integrationTime :

Not used (only for Compatibility with ScanServer)

Attribute	
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Attribute	
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Attribute Event Criteria	
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Definition	
Attribute Type	Scalar
R/W Type	WRITE
Data Type	Tango::DEV_DOUBLE
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	Not set
Write allowed for	All states

Properties	
label	integration Time
unit	
standard unit	
display unit	
format	%3.1f
max_value	
min_value	
max_alarm	
min_alarm	
max_warning	
min_warning	
delta_time	
delta_val	

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	Not set

LDS1000 Class States	
Name	Description
ON	device switched on
UNKNOWN	
FAULT	
RUNNING	the device is acquiring measurements
OFF	after reset, the device is set in manual mode. therefore the state is set to OFF