

## PEM100 Tango Cpp Class

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### PEM100 Class Identification :

Contact : at synchrotron-soleil.fr - jean.coquet  
Class Family : Instrumentation  
Platform : All Platforms  
Bus : toto  
Manufacturer : none  
Manufacturer ref. :

### PEM100 Class Inheritance :

- [Tango::DeviceImpl](#)
  - PEM100

### PEM100 Class Description :

Device used to control the PEM100 controller associated with a photoelastic modulator  
Communication part managed by Serial Device with the following RS232 parameters:  
BaudRate = 2400  
Newline = 10  
CharLength = 8  
StopBits = 0 (means 1 bit)  
SerialLine = COMx (where x is the number of the serial port)  
TimeOut = 2000  
Parity = none

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## PEM100 Properties :

There is no class properties

Device Properties			
Name	Description	Type	Default Value
SerialLineProxyName	SerialLine Proxy Name	String	none
PEMType	model : 90 or 100	int	none

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PEM100 Class Commands				
Name	Input type	Output type	Level	Description
<a href="#">State</a>	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.
<a href="#">Status</a>	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.
<a href="#">ChangeHarmonic</a>	DEV_VOID	DEV_VOID	OPERATOR	change current harmonic monitoring
<a href="#">Set1F</a>	DEV_VOID	DEV_VOID	OPERATOR	display 1F on tyhe terminal display and on the remote control mode display
<a href="#">Set2F</a>	DEV_VOID	DEV_VOID	OPERATOR	display 2F on tyhe terminal display and on the remote control mode display

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## 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	..

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### **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	..

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### **Command ChangeHarmonic :**

change current harmonic monitoring

ChangeHarmonic 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	..

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### **Command Set1F :**

display 1F on tyhe terminal display and on the remote control mode display

<b>Set1F Definition</b>		
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	..

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### **Command Set2F :**

display 2F on tyhe terminal display and on the remote control mode display

<b>Set2F Definition</b>		
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	..

PEM100 Class Attributes							
Name	Inherited	Abstract	Attr. type	R/W type	Data type	Level	Description
<a href="#">retardation</a>	false	false	Scalar	READ_WRITE	Tango::DEV_DOUBLE	OPERATOR	Phase Shift (memorized)
<a href="#">frequency</a>	false	false	Scalar	READ	Tango::DEV_DOUBLE	OPERATOR	displays the 1F or 2 F frequency according to activated 1F or 2F
<a href="#">waveLength</a>	false	false	Scalar	READ_WRITE	Tango::DEV_DOUBLE	OPERATOR	wavelength (memorized)
<a href="#">voltage</a>	false	false	Scalar	WRITE	Tango::DEV_DOUBLE	OPERATOR	voltage control

**There is no dynamic attribute defined.**

**Attribute retardation :**

Phase Shift (memorized)

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ_WRITE

Attribute Properties	
label	retardation
unit	
standard unit	

Attribute Event Criteria	
Periodic	Not set
Relative Change	Not

Data Type	Tango::DEV_DOUBLE
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	true
Write hardware at init.	Not set
Read allowed for	All states
Write allowed for	All states

display unit	
format	%5.2f
max_value	
min_value	
max_alarm	
min_alarm	
max_warning	
min_warning	
delta_time	
delta_val	

	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 frequency :**

displays the 1F or 2 F frequency according to activated 1F or 2F

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

Attribute Properties	
label	frequency
unit	KHz
standard unit	KHz
display unit	KHz
format	
max_value	
min_value	
max_alarm	
min_alarm	
max_warning	
min_warning	
delta_time	

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
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delta_val	
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Push Change event by user code	false
Push Archive event by user code	false
Push DataReady event by user code	Not set

**Attribute waveLength :**

wavelength (memorized)

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	true
Write hardware at init.	Not set
Read allowed for	All states
Write allowed for	All states

Attribute Properties	
label	wavelength
unit	nm
standard unit	nm
display unit	nm
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 voltage :**

voltage control

Attribute 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	true
Write hardware at init.	Not set
Write allowed for	All states

Attribute Properties	
label	Voltage
unit	
standard unit	
display unit	V
format	%4.3f
max_value	5.001
min_value	-0.001
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

PEM100 Class States	
Name	Description
ON	normal operation
FAULT	communication problem