

## T95TempProgLinkam Tango Cpp Class

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### T95TempProgLinkam Class Identification :

Contact : at mail.desy.de - tnunez  
 Class Family : Instrumentation  
 Platform : Unix Like  
 Bus : Data Socket  
 Manufacturer : Linkam Scientific Instruments  
 Manufacturer : T95 Temperature  
 ref. Programmer

### T95TempProgLinkam Class Inheritance

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- [Tango::DeviceImpl](#)
  - T95TempProgLinkam

### T95TempProgLinkam Class Description :

Class for controlling the t95 Temperature Programmer from Linkam Scientific Instruments

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## T95TempProgLinkam Properties :

There is no class properties

Device Properties			
Name	Description	Type	Default Value
IpAddr	Ip Adress for connecting to the device	String	none
PortNb	Port number	int	none
SimulationMode	If 1 simualtion mode	int	none

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T95TempProgLinkam 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 device_state 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 device_status data member) and returns it to the caller.
<a href="#">Start</a>	DEV_VOID	DEV_VOID	OPERATOR	Start heating or cooling at the rate specified by the R1 command.
<a href="#">Stop</a>	DEV_VOID	DEV_VOID	OPERATOR	Tells the programmer to stop heating or cooling.
<a href="#">Hold</a>	DEV_VOID	DEV_VOID	OPERATOR	If the programmer is heating or cooling will hold at the current temperature until either a heat or a cool command is received.
<a href="#">Heat</a>	DEV_VOID	DEV_VOID	OPERATOR	Forces heating, if while heating the controller finds that the temperature is at the limit it will hold at that value, otherwise it will heat up to the maximum temperature and stop.
<a href="#">Cool</a>	DEV_VOID	DEV_VOID	OPERATOR	Forces cooling. if while cooling the controller finds that the temperature is at the limit it will hold at that value, otherwise it will heat up to the minimum temperature and stop.

<a href="#">SetManual</a>	DEV_VOID	DEV_VOID	OPERATOR	Set manual mode, where the pump speed is controlled by the command
<a href="#">SetAutomatic</a>	DEV_VOID	DEV_VOID	OPERATOR	Set automatic mode, where the pump speed is controlled by the T95 unit

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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	Device state
DisplayLevel	OPERATOR	..
Inherited	true	..
Abstract	true	..
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	Device status
DisplayLevel	OPERATOR	..
Inherited	true	..
Abstract	true	..
Polling Period	Not polled	..
Command allowed for	All states	..

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### **Command Start :**

Start heating or cooling at the rate specified by the R1 command.

<b>Start 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 Stop :**

Tells the programmer to stop heating or cooling.

<b>Stop 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 Hold :**

If the programmer is heating or cooling will hold at the current temperature until either a heat or a cool command is received.

<b>Hold 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 Heat :**

Forces heating, if while heating the controller finds that the temperature is at the limit it will hold at that value, otherwise it will heat up to the maximum temperature and stop.

<b>Heat 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 Cool :**

Forces cooling. if while cooling the controller finds that the temperature is at the limit it will hold at that value, otherwise it will heat up to the minimum temperature and stop.

Cool 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	..

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### **Command SetManual :**

Set manual mode, where the pump speed is controlled by the command

SetManual 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	..

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### **Command SetAutomatic :**

Set automatic mode, where the pump speed is controlled by the T95 unit

SetAutomatic 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	..

T95TempProgLinkam Class Attributes							
Name	Inherited	Abstract	Attr. type	R/W type	Data type	Level	Description
<a href="#">Temperature</a>	false	false	Scalar	READ	Tango::DEV_DOUBLE	OPERATOR	
<a href="#">TempLimit</a>	false	false	Scalar	READ_WRITE	Tango::DEV_DOUBLE	OPERATOR	Sets temperature limit. Reads last set value.
<a href="#">Rate</a>	false	false	Scalar	READ_WRITE	Tango::DEV_DOUBLE	OPERATOR	Sets the heating or cooling rate. Reads last set value.
<a href="#">Speed</a>	false	false	Scalar	READ_WRITE	Tango::DEV_LONG	OPERATOR	Speed from 0 (off) to 30 (maximum)
<a href="#">CurrentAction</a>	false	false	Scalar	READ	Tango::DEV_STRING	OPERATOR	
<a href="#">ErrorInfo</a>	false	false	Scalar	READ	Tango::DEV_STRING	OPERATOR	

**There is no dynamic attribute defined.**

**Attribute Temperature :**

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 allowed for	All states

Attribute Properties	
label	
unit	C
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 TempLimit :**

Sets temperature limit. Reads last set value.

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ_WRITE
Data Type	Tango::DEV_DOUBLE
Display	

Attribute Properties	
label	
unit	C
standard unit	
display unit	

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



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

format	
max_value	
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

### **Attribute Rate :**

Sets the heating or cooling rate. Reads last set value.

<b>Attribute Definition</b>	
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

<b>Attribute Properties</b>	
label	
unit	C/min
standard unit	
display unit	
format	
max_value	
min_value	
max_alarm	
min_alarm	
max_warning	
min_warning	
delta_time	
delta_val	

<b>Attribute Event Criteria</b>	
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

Write allowed for	All states
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Push DataReady event by user code	false
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**Attribute Speed :**

Speed from 0 (off) to 30 (maximum)

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ_WRITE
Data Type	Tango::DEV_LONG
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	
unit	(0 to 30)
standard unit	
display unit	
format	
max_value	30
min_value	0
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 CurrentAction :**

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

Attribute Properties	
label	
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 ErrorInfo :**

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ
Data Type	Tango::DEV_STRING
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	Not set

Attribute Properties	
label	
unit	
standard unit	
display unit	
format	
max_value	
min_value	
max_alarm	
min_alarm	

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

Read allowed	All states
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for

max_warning
min_warning
delta_time
delta_val

Archive Absolute Change	set
Push Change event by user code	false
Push Archive event by user code	false
Push DataReady event by user code	false

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**There is no state defined**