



TANGO
Device
Server

HQPS building cell pressure User's Guide

HqpsCellPressure Class

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Implemented in C++ - CVS repository: ESRF

Introduction:

This class is part of the HQPS project. IT is used to get a measurement of the pressure difference between outside and the inside of the HQPS building cell

Class Inheritance:

- Tango::Device_4Impl
 - HqpsCellPressure

Properties:

Class Properties		
Property name	Property type	Description
ModbusDevName	Tango::DEV_STRING	Name of the Modbus device
TemperatureCalib	Tango::DEV_DOUBLE	Temperature calibration factor
PressureCalib	Tango::DEV_DOUBLE	LSB value for delta pressure value

Device Properties		
Property name	Property type	Description
ModbusDevName	Tango::DEV_STRING	Name of the Modbus device
TemperatureCalib	Tango::DEV_DOUBLE	Temperature calibration factor
TempAdr	Tango::DEV_SHORT	Adress in PLC where the cell temperature is stored
PressAdr	Tango::DEV_SHORT	Adress in PLC where the cell pressure is stored
PressureCalib	Tango::DEV_DOUBLE	LSB value for delta pressure value
TempOffset	Tango::DEV_DOUBLE	Temperature offset used in temperature effect correction in delta pressure computation

Class Properties Default Values:

Property Name	Default Values
ModbusDevName	No default value
TemperatureCalib	1.0
PressureCalib	1.0

Device Properties Default Values:

Property Name	Default Values
ModbusDevName	No default value
TemperatureCalib	No default value
TempAdr	0
PressAdr	0
PressureCalib	1.0
TempOffset	0

States:

States	
Names	Descriptions
ON	
ALARM	The delta between the outdoor and indoor pressure is too high
FAULT	The PLC software is not running

Attributes:

Scalar Attributes			
Attribute name	Data Type	R/W Type	Expert
Temperature: HQPS building cell temperature	DEV_DOUBLE	READ	No
DeltaPressure: Pressure difference between outdoor and indoor in a HQPS building cell	DEV_DOUBLE	READ	No

Commands:

More Details on commands....

Device Commands for Operator Level		
Command name	Argument In	Argument Out
Init	DEV_VOID	DEV_VOID
State	DEV_VOID	DEV_STATE
Status	DEV_VOID	CONST_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 destructor automatically calls the *delete_device()* method.

- **Argin:**
DEV_VOID : none.
- **Argout:**
DEV_VOID : none.
- **Command allowed for:**
 - Tango::ON
 - Tango::ALARM
 - Tango::FAULT

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::ON
 - Tango::ALARM
 - Tango::FAULT

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::ON
 - Tango::ALARM
 - Tango::FAULT

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Device Servers : CVS repository on tango-ds project