

## LOCOSplitter Tango Python Class

### Contents :

- [Description](#)
- [Properties](#)
- [Commands](#)
  - [State](#)
  - [Status](#)
- [Attributes](#)
  - [IP1](#)
  - [IP2](#)
  - [IP3](#)
  - [IP4](#)
  - [IP5](#)
  - [P1](#)
  - [P2](#)
  - [P3](#)
  - [P5](#)
  - [Frequencies1s](#)
  - [Frequencies10s](#)
- [States](#)

### LOCOSplitter Class Identification :

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

### LOCOSplitter Class Inheritance :

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

### LOCOSplitter Class Description :

Device Server to read current from the LOCO Ion Pump Splitter Box.

### LOCOSplitter Properties :

**There is no class properties**

| Device Properties |   |          |               |
|-------------------|---|----------|---------------|
| Name              | Description   | Type     | Default Value |
| SerialLine        | SerialLine device server used to communicate with the LOCO splitter   | String   | none          |
| FreqCalibration   | C factor to convert from frequency to current:<br>$I = 10^{[(f-660)/80]} / C$<br><br>If the device has been pre-calibrated this value is supposed to be 1 | double[] | 1             |
| PumpK             | Used to calculate the pressure using the formula:<br>$I = K * p^n$  | double[] | none          |
| PumpN             | Used to calculate the presure using the formula:<br>$I = K * p^n$   | double[] | none          |

| LOCOSplitter 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. |

**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         | true             | ..         |
| 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              | ..                 |

| LOCOSplitter Class Attributes |           |          |            |          |                   |          |                            |
|-------------------------------|-----------|----------|------------|----------|-------------------|----------|----------------------------|
| Name                          | Inherited | Abstract | Attr. type | R/W type | Data type         | Level    | Description                |
| <a href="#">IP1</a>           | false     | false    | Scalar     | READ     | Tango::DEV_DOUBLE | OPERATOR | Current from the Ion Pump  |
| <a href="#">IP2</a>           | false     | false    | Scalar     | READ     | Tango::DEV_DOUBLE | OPERATOR | Current from the Ion Pump  |
| <a href="#">IP3</a>           | false     | false    | Scalar     | READ     | Tango::DEV_DOUBLE | OPERATOR | Current from the Ion Pump  |
| <a href="#">IP4</a>           | false     | false    | Scalar     | READ     | Tango::DEV_DOUBLE | OPERATOR | Current from the Ion Pump  |
| <a href="#">IP5</a>           | false     | false    | Scalar     | READ     | Tango::DEV_DOUBLE | OPERATOR | Current from the Ion Pump  |
| <a href="#">P1</a>            | false     | false    | Scalar     | READ     | Tango::DEV_DOUBLE | OPERATOR | Pressure from the Ion Pump |
| <a href="#">P2</a>            | false     | false    | Scalar     | READ     | Tango::DEV_DOUBLE | OPERATOR | Pressure from the Ion Pump |
| <a href="#">P3</a>            | false     | false    | Scalar     | READ     | Tango::DEV_DOUBLE | OPERATOR | Pressure from the Ion Pump |
|                               |           |          |            |          |                   |          | Pressure from the Ion Pump |

|                                |       |       |          |      |                   |          |  |
|--------------------------------|-------|-------|----------|------|-------------------|----------|--|
| <a href="#">P5</a>             | false | false | Scalar   | READ | Tango::DEV_DOUBLE | OPERATOR | Pump   |
| <a href="#">Frequencies1s</a>  | false | false | Spectrum | READ | Tango::DEV_DOUBLE | OPERATOR | Frequencies integrated in the last 1s period |
| <a href="#">Frequencies10s</a> | false | false | Spectrum | READ | Tango::DEV_DOUBLE | OPERATOR | Frequencies readed in the last 10s period    |

**There is no dynamic attribute defined.**

**Attribute IP1 :**

Current from the Ion Pump

| 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                 |                                      |
| standard unit        |                                      |
| display unit         |                                      |
| format               | scientific;uppercase;setprecision(3) |
| 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 IP2 :**

Current from the Ion Pump

| 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                 |                                      |
| standard unit        |                                      |
| display unit         |                                      |
| format               | scientific;uppercase;setprecision(3) |
| 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 IP3 :**

Current from the Ion Pump

| 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                 |                                      |
| standard unit        |                                      |
| display unit         |                                      |
| format               | scientific;uppercase;setprecision(3) |
| 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 IP4 :**

Current from the Ion Pump

| 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                 |                                      |
| standard unit        |                                      |
| display unit         |                                      |
| format               | scientific;uppercase;setprecision(3) |
| 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 IP5 :**

Current from the Ion Pump

| Attribute Definition |        |
|----------------------|--------|
| Attribute Type       | Scalar |
| R/W Type             | READ   |

| Attribute Properties |  |
|----------------------|--|
| label                |  |
| unit                 |  |

| Attribute Event Criteria |         |
|--------------------------|---------|
| Periodic                 | Not set |

|                  |                   |
|------------------|-------------------|
| Data Type        | Tango::DEV_DOUBLE |
| Display Level    | OPERATOR          |
| Inherited        | false             |
| Abstract         | false             |
| Polling Period   | Not polled        |
| Memorized        | Not set           |
| Read allowed for | All states        |

|               |                                      |
|---------------|--------------------------------------|
| standard unit |                                      |
| display unit  |                                      |
| format        | scientific;uppercase;setprecision(3) |
| max_value     |                                      |
| min_value     |                                      |
| max_alarm     |                                      |
| min_alarm     |                                      |
| max_warning   |                                      |
| min_warning   |                                      |
| delta_time    |                                      |
| delta_val     |                                      |

|                                   |         |
|-----------------------------------|---------|
| 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 P1 :**

Pressure from the Ion Pump

| Attribute Definition |                   |
|----------------------|-------------------|
| Attribute Type       | Scalar            |
| R/W Type             | READ              |
| Data Type            | Tango::DEV_DOUBLE |
| Display Level        | OPERATOR          |
| Inherited            | false             |
| Abstract             | false             |

| Attribute Properties |                                      |
|----------------------|--------------------------------------|
| label                |                                      |
| unit                 |                                      |
| standard unit        |                                      |
| display unit         |                                      |
| format               | scientific;uppercase;setprecision(3) |
| max_value            |                                      |
| min_value            |                                      |
| max_alarm            |                                      |

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



|                  |            |
|------------------|------------|
| Polling Period   | Not polled |
| Memorized        | Not set    |
|                  |            |
| Read allowed for | All states |

|             |  |
|-------------|--|
| min_alarm   |  |
| max_warning |  |
| min_warning |  |
| delta_time  |  |
| delta_val   |  |

|                                   |         |
|-----------------------------------|---------|
| 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 P2 :

Pressure from the Ion Pump

| 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                 |                                      |
| standard unit        |                                      |
| display unit         |                                      |
| format               | scientific;uppercase;setprecision(3) |
| 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 P3 :**

Pressure from the Ion Pump

| 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                 |                                      |
| standard unit        |                                      |
| display unit         |                                      |
| format               | scientific;uppercase;setprecision(3) |
| 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   |

|                                   |         |
|-----------------------------------|---------|
| user code                         |         |
| Push DataReady event by user code | Not set |

**Attribute P5 :**

Pressure from the Ion Pump

| 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                 |                                      |
| standard unit        |                                      |
| display unit         |                                      |
| format               | scientific;uppercase;setprecision(3) |
| 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 |

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**Attribute Frequencies1s :**

Frequencies integrated in the last 1s period

| Attribute Definition |                   |
|----------------------|-------------------|
| Attribute Type       | Spectrum ( 16 )   |
| 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                 |  |
| 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 |

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**Attribute Frequencies10s :**

Frequencies readed in the last 10s period

| Attribute Definition |                 |
|----------------------|-----------------|
| Attribute Type       | Spectrum ( 16 ) |
| R/W Type             | READ            |

| Attribute Properties |  |
|----------------------|--|
| label                |  |
| unit                 |  |

| Attribute Event Criteria |         |
|--------------------------|---------|
| Periodic                 | Not set |
| Relative Change          | Not set |

|                  |                   |
|------------------|-------------------|
| Data Type        | Tango::DEV_DOUBLE |
| Display Level    | OPERATOR          |
| Inherited        | false             |
| Abstract         | false             |
| Polling Period   | Not polled        |
| Memorized        | Not set           |
|                  |                   |
| Read allowed for | All states        |

|               |  |
|---------------|--|
| standard unit |  |
| display unit  |  |
| format        |  |
| max_value     |  |
| min_value     |  |
| max_alarm     |  |
| min_alarm     |  |
| max_warning   |  |
| min_warning   |  |
| delta_time    |  |
| delta_val     |  |

|                                   |         |
|-----------------------------------|---------|
|                                   |         |
| 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 |

| LOCOSplitter Class States |             |
|---------------------------|-------------|
| Name                      | Description |
| ON                        |             |
| OFF                       |             |
| ALARM                     |             |
| FAULT                     |             |
| INIT                      |             |