
labequipment

Release 0.0.1

Aug 04, 2023

Contents

1	Arduino Sketches for Lab Equipment	1
1.1	Shaker Arduino Sketch	1
2	Lab Equipment	3
2.1	Arduino	3
2.2	Lauda Water Bath	4
2.3	Omega Temperature and Humidity Sensor	4
2.4	Shaker	4
2.5	Stepper	4
3	Indices and tables	5
	Python Module Index	7
	Index	9

Arduino Sketches for Lab Equipment

Python code for all the different bits of lab kit

1.1 Shaker Arduino Sketch

```
class labequipment.arduino.Arduino (settings, timeout=0, write_timeout=0)
    Bases: object

    choose_port (os='linux')

    flush ()
        Clears the buffer.

    ignorelines (n)

    quit_serial ()
        Close the serial port

    read_all ()

    read_serial_bytes (no_of_bytes)
        Read a given no_of_bytes from the serial port

    read_serial_line ()
        Waits for data in the input buffer then reads a single line from the serial port.

        Outputs: text the data from serial in unicode

    readlines (n)

    send_serial_line (text)
        Send a string over the serial port making sure it ends in a new line .

        Input: text the string to be sent to the arduino

labequipment.arduino.find_port ()
```


Python code for all the different bits of lab kit

2.1 Arduino

```
class labequipment.arduino.Arduino (settings, timeout=0, write_timeout=0)
```

Bases: object

```
choose_port (os='linux')
```

```
flush ()
```

Clears the buffer.

```
ignorelines (n)
```

```
quit_serial ()
```

Close the serial port

```
read_all ()
```

```
read_serial_bytes (no_of_bytes)
```

Read a given no_of_bytes from the serial port

```
read_serial_line ()
```

Waits for data in the input buffer then reads a single line from the serial port.

Outputs: text the data from serial in unicode

```
readlines (n)
```

```
send_serial_line (text)
```

Send a string over the serial port making sure it ends in a new line .

Input: text the string to be sent to the arduino

```
labequipment.arduino.find_port ()
```

2.2 Lauda Water Bath

```
class laquipment.lauda.Lauda (port)
    Bases: sphinx.ext.autodoc.importer._MockObject

    read_current_temp()

    set_pumping_speed(val)

    set_temp(new_temp)

    start()

    stop()
```

2.3 Omega Temperature and Humidity Sensor

```
class laquipment.omega_temperature_probe.Probe (port='/dev/serial/by-id/usb-
                                                Omega_Engineering_RH-
                                                USB_N13012205-if00-port0')

    Bases: sphinx.ext.autodoc.importer._MockObject

    get_relative_humidity()

    get_temp_C()
```

2.4 Shaker

2.5 Stepper

CHAPTER 3

Indices and tables

- `genindex`
- `modindex`
- `search`

I

`labequipment.arduino`, 1
`labequipment.lauda`, 4
`labequipment.omega_temperature_probe`, 4

A

Arduino (*class in labequipment.arduino*), 1, 3

C

choose_port() (*labequipment.arduino.Arduino method*), 1, 3

F

find_port() (*in module labequipment.arduino*), 1, 3
flush() (*labequipment.arduino.Arduino method*), 1, 3

G

get_relative_humidity() (*labequipment.omega_temperature_probe.Probe method*), 4
get_temp_C() (*labequipment.omega_temperature_probe.Probe method*), 4

I

ignorelines() (*labequipment.arduino.Arduino method*), 1, 3

L

labequipment.arduino (*module*), 1, 3
labequipment.lauda (*module*), 4
labequipment.omega_temperature_probe (*module*), 4
Lauda (*class in labequipment.lauda*), 4

P

Probe (*class in labequipment.omega_temperature_probe*), 4

Q

quit_serial() (*labequipment.arduino.Arduino method*), 1, 3

R

read_all() (*labequipment.arduino.Arduino method*), 1, 3
read_current_temp() (*labequipment.lauda.Lauda method*), 4
read_serial_bytes() (*labequipment.arduino.Arduino method*), 1, 3
read_serial_line() (*labequipment.arduino.Arduino method*), 1, 3
readlines() (*labequipment.arduino.Arduino method*), 1, 3

S

send_serial_line() (*labequipment.arduino.Arduino method*), 1, 3
set_pumping_speed() (*labequipment.lauda.Lauda method*), 4
set_temp() (*labequipment.lauda.Lauda method*), 4
start() (*labequipment.lauda.Lauda method*), 4
stop() (*labequipment.lauda.Lauda method*), 4