NeuLog API version 7

This Application Programming Interface (API) specifies how any software should interact with NeuLog sensors.

The API is based on HTTP protocol and can be accessed from any software like C, C++, Python, JS, Java and many more. Also, Microsoft Word™ and Acrobat™ can be used to control the sensors.

Minimum requirements:

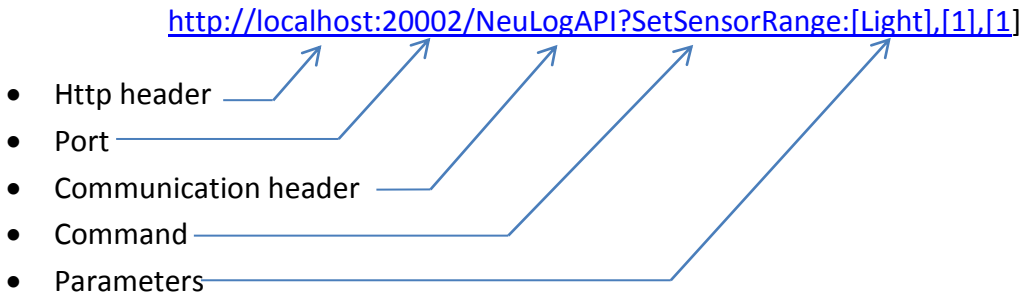
- NeuLog sensor(s)
- NeuLog USB module
- NeuLog API software

Getting started:

- Install the NeuLog API software on your PC/MAC/Linux
- Run the NeuLog API
- The API port number will appear on the software screen
- Run your software and contact the NeuLog API via the http “GET” command

The NeuLog API - general:

- The API is based on HTTP protocol and uses the standard “GET” type communication
- Each communication must be initiated by the user
- Each communication looks like this:



- The received command and the result will be shown on the API screen.
- Make sure you are using the right port number.
- The answer is a JSON string such as: {"SetSensorRange":"True"}
- This user manual appears when the “help” button ⓘ on the NeuLog API software is clicked.
- Do not use any spaces in the command string.

The API commands:

Command	Description	Parameters	Return
GetServerVersion	Get the server’s software version		{"GetServerVersion":"4.4.4"}
GetSeverStatus	The response could be: Ready, USB missing, Recording		{"GetServerStatus":"Ready"}
GetSensorValue:[sen1.type],[sen1.ID], ...,[seni.type],[seni.ID] Example: GetSensorValue:[Sound],[1],[Light],[2]	Reads one value from the sensor	1. Type & 2. ID of the sensor In the example it is: Sound sensor ID=1 and Light ID=2	{"GetSensorValue":[67.3,345] }
ResetSensor:[sen.type],[sen.ID] Example: ResetSensor:[PH],[2]	Reset the sensor value. Use in force, oxygen and a few other sensors	1. type & 2. ID of the sensor In the example it is: pH sensor ID=2	{"CalibSensor":"True"}
SetPositiveDirection:[sen.type],[sen.ID],[sen.dir] Example: SetPositiveDirection:[Force],[1],[1]	Set the force sensor positive values	1. type & 2. ID of the sensor 3. Direction (1=push positive, 2=pull positive) In the example it is Force sensor ID=1 and the direction is push positive	{"SetPositiveDirection":"True "}

StartExperiment:[sen1.type],[sen1.ID],[sen2.type],[sen2.ID],…[seni.type],[seni.ID],[rate],[samples] Example: StartExperiment:[Temperature],[1],[Temperature],[2],[Temperature],[3],[8],[101]	Start experiment with the specific parameters.	1. Sensors 2. Rate index: 1 = 10000 per second 2 = 3000 per second 3 = 2000 per second 4 = 1000 per second 5 = 100 per second 6 = 50 per second 7 = 20 per second 8 = 10 per second 9 = 5 per second 10 = 2 per second 11 = 1 per second 12 = 30 per minute 13 = 15 per minute 14 = 6 per minute 15 = 2 per minute 16 = 1 per minute 17 = 30 per hour 18 = 15 per hour 19 = 6 per hour 20 = 2 per hour 21 = 1 per hour 3. Samples (number) In the example there are 3 temperature sensors; the rate is 10 samples per second, the duration is 101 samples (10 sec)	{"StartExperiment":"True"}
StopExperiment			{"StopExperiment":"True"}
GetExperimentSamples:[sen1.typr],[sen1.ID],…[seni.type,[seni.ID] Example: GetExperimentSamples:[Light],[1],[Sound],[1]	Get all the samples from specific sensor/s of the current experiment (while running or after running)	1. Sensors	{"GetExperimentSamples":[["Light",1,20,21,22,21,20,…],["Sound",1,68.3,88.8,…]]}
SetSensorRange:[sen.type],[sen.ID],[range] Example: SetSensorRange:[Light],[1],[2]		1. Type 2. Id 3. New range	{"SetSensorRange":"True"}
SetRFID:[New ID] Example: SetRFID:[3]		1. New ID	{"SetRFID":"True"}
SetSensorsID:[NewID] Example: SetSensorsID:[3]	Set all connected sensors to the new ID	1. New ID In the example the new ID is 3	{"SetSensorsID":"True"}

Few examples working with Sound and Light sensor:

http://localhost:22001/NeuLogAPI?GetServerVersion

http://localhost:22001/NeuLogAPI?GetSeverStatus

http://localhost:22001/NeuLogAPI?GetSensorValue:[Sound],[1],[Light],[1]

http://localhost:22001/NeuLogAPI?StartExperiment:[Sound],[1],[Light],[1],[8],[101]

http://localhost:22001/NeuLogAPI?StopExperiment

http://localhost:22001/NeuLogAPI?GetExperimentSamples

http://localhost:22001/NeuLogAPI?SetSensorRange:[Light],[1],[2]

Sensor list:

'Temperature', 'Light', 'Voltage', 'Current', 'PH', 'Oxygen', 'PhotoGate', 'Pulse', 'Force', 'Sound', 'Humidity', 'Pressure', 'Motion', 'Magtnetic', 'Conductivity', 'GSR', 'CO2', 'Barometer', 'Rotary', 'Acceleration', 'Spirometer', 'SoilMoisture', 'Turbidity', 'UVB', 'EKG', 'Colorimeter', 'DropCounter', 'FlowRate', 'ForcePlate', 'BloodPressure', 'Salinity', 'UVA', 'SurfaceTemp', 'WideRangeTemp', 'InfraredThermometer', 'Respiration', 'HandDynamometer', 'Calcium', 'Chloride', 'Ammonium', 'Nitrate', 'Anemometer', 'GPS', 'Gyroscope', 'DewPoint', 'Charge'