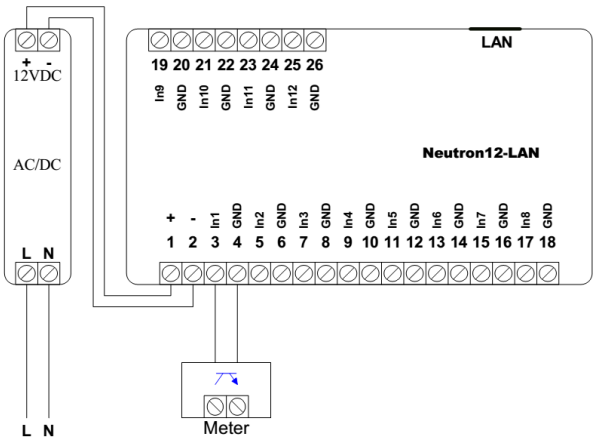
Quick Guide

Neutron12-LAN Remote Pulse Collector



For example JAMAK 2x(2+1)x0,5mm2 instrumentation cable can be used between the meter and Neutron12-LAN. The open collector or relay output of a single meter is connected to Neutron12-LAN as shown above.

Introducing Neutron12-LAN:

1. Install Lantronix DeviceInstaller to your workstation (http://bit.ly/2FIXaJD).
2. Connect the power supply, meter(s), and LAN cable as in the enclosed diagram. Connect the device to the mains, the PWR led lights up.
3. Use a LAN cable to connect the device to your workstation or the same LAN.
4. Open the DeviceInstaller application, find the device and make necessary settings. Init led blinks when settings are in place. Init led is lit continuously when the device also has server connection.
5. Data logging has commenced.

When in operation, the Signal led toggles between ON/OFF with every pulse received.

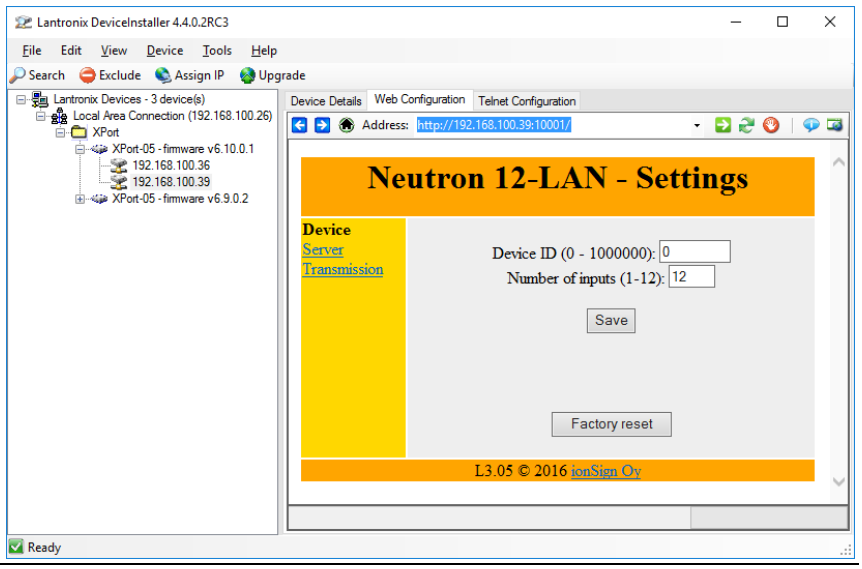
Connecting to the Device

The device is configured with the Lantronix DeviceInstaller application. The application should be installed to a PC that is connected either to the same LAN with the device, or directly to the device. If the LAN has an active DHCP server, Neutron12-LAN assumes an IP address from the LAN, when powered up with default settings. Also a fixed IP address may be used.

The device appears in the device list on the left, see picture. Firmware version v6.9.0.2 and device IP address 192.168.100.29 can also be found here. If the device does not appear, click the *Search* button.

Click on the device IP address and choose the Web configuration tab on the right side of the application window. If a Lantronix configuration page appears, do not make any changes there.

In the address field, set 10001 as the port of the device IP address (write ":10001" after the IP in the address field) and click on the white arrow on the right side of the field. The Settings menu appears. Make necessary settings according to section 3 of user guide.



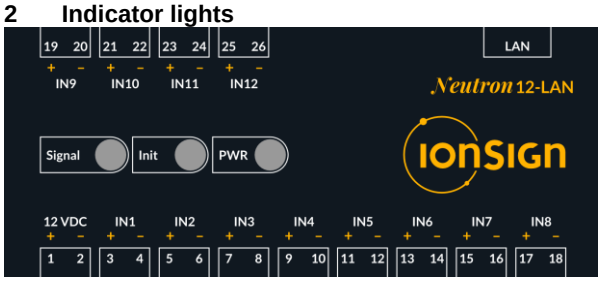
User and Installation Guide

Neutron12-LAN Remote Pulse Collector

1 General

Neutron12-LAN is a pulse concentrator designed for collecting and reporting pulses from varying kinds of consumption meters with a pulse output, e.g. electricity, gas, heat or water meters. Pulses are collected, locally stored and sent to the server as set up by the user.

2 Indicator lights



PWR led is ON	The device has power
Signal led goes ON or OFF	A pulse was registered
Init led blinks	The device has settings, server connection is not established
Init led is ON	The device has server connection

3 Settings

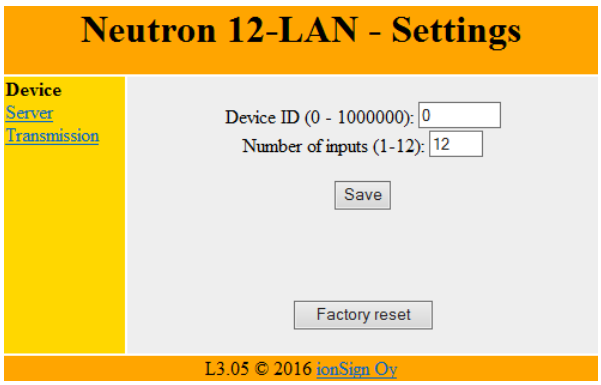
The settings are in three sections: **Device**, **Server** and **Transmission**.

In the **Device** section, following parameters are given:

Device ID is a unique identifier for each device. Values in the range 1-1000000. Value 0 indicates that the device is not operational.

Number of inputs is the number of connected meters to log and transmit pulse data of. Values in the range 1-12.

Save after making changes to settings.



Factory reset restores factory settings.

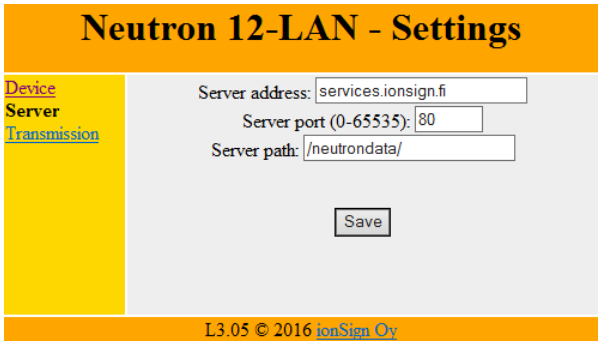
In the **Server** section, following parameters are given:

Server address is the address of the server, to which the device transmits the pulse data. The address may be input either as an IP address or in DNS format. Maximum address length is 30 characters.

Server port is the number of port to be connected at the server. Values in the range 1-65535.

Server path is the folder at the server where the pulse data is stored. Maximum path length is 50 characters.

Save after making changes to settings.



In the **Transmission** section, following parameters are given:

Periodic mode interval sets the device to send the data of a specific time to the server, at specified intervals.

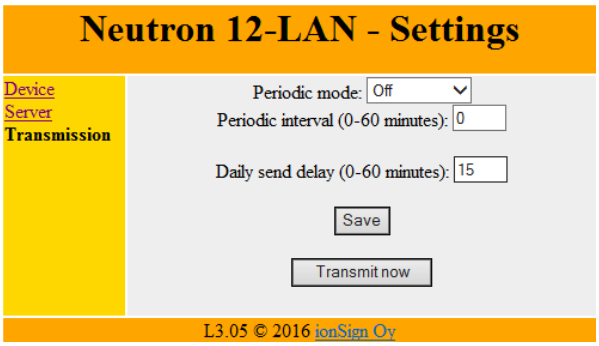
Periodic mode periodic sets the device to send the data of a specific time period to the server, at specified intervals.

Periodic interval sets the time between consecutive data transmissions. Values in the range 0-60 minutes. This transmission takes place *in addition to* the daily transmission of hourly data. If value is set to 0, only the hourly data is transmitted, once a day.

Daily send delay enables staggered transmissions to avoid jamming of server in case of a large number of transmitting devices. It sets the delay after midnight to start the daily transmission. Values in the range 0-60 minutes. With a zero value (0), transmission occurs at midnight sharp.

Transmit now button can be used to transmit the data immediately.

Save after making changes to settings.



4 Failure recovery

The device has no built-in backup power, so pulses are not collected nor sent during power failures. When power supply resumes however, the device assumes all prior settings and starts collecting and sending data without any need for user intervention. For LAN network failures, the device has a built-in local buffer of 30 days for keeping collected data stored for later transmission. When the LAN network resumes service, all buffered data is sent to the server without any need for user intervention.

5 Neutron12-LAN technical specifications

- Inputs: 12 pulse inputs for open collector or relay outputs of meters. Open collector or relay output sourcing voltage 12 VDC, maximum sourcing current 5mA.
- Operating voltage: 11…13 VDC.
- Real-time clock: 4 days backup.
- Size: WxHxD 105 x 90 x 52 mm (6 module wide DIN rail enclosure).
- Protection class: IP20.
- Operating temperature: -25 °C...+55 °C.
- RH: 5 % - 95 % non-condensing.
- Local data storage capacity: 30 days of hourly data for each input channel.
- Data communication: LAN / TCP-IP.

6 Warranty

ionSign grants a warranty of two (2) years for all delivered devices and software services. The warranty starts on the date of the delivery and it covers material and manufacturing defects. The warranty does not cover defects caused by improper use or installation nor does it cover defects caused by factors out of ionSign's control. These would be for instance grid malfunction or service changes of network operators services. ionSign delivers a new device to replace the defected one, without cost. Alternatively, ionSign may repair the defected device. The defected device must be returned to ionSign, if required, at ionSign's cost. The warranty does not cover dismantling, installation, and introduction costs and the like. ionSign warrants that the provided software essentially manage with their designed tasks, at the time of delivery. All significant software defects are covered by the warranty. The defects will be resolved without unnecessary delay. The resolution may be an instruction to circumvent the defect. If the delivery includes third party products or services, these are only covered by the applicable warranty provided by that third party. Title to the delivered goods transfers to the client, when the invoiced price is paid in full. All immaterial rights related to devices and services remain the property of ionSign. If the service was a design assignment, the client assumes the right to use and further develop the assignment results. ionSign is eligible to use the client's name as a reference in its marketing. ionSign is not eligible to disclose the order details without prior consent. In case of a force majeure, preventing to act according to the purchase agreement, the affected party will start immediate negotiations to assess the effects of the obstacle on the scope and schedule of the purchase agreement. ionSign appropriately backs up client's data residing on its servers. In spite of this, ionSign assumes no responsibility of possible damage due to loss of data. ionSign assumes no responsibility of direct or indirect damage to property or people, nor work or travel expenses, caused by using its services or devices, unless due to gross negligence. ionSign's financial liability is always limited to the value of the delivered goods and services, unless otherwise inflicted by the Finnish law.

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