

Poseidon2 4002 MANUAL



Safety information

The device complies with regulations and industrial standards in force in the Czech Republic and the European Union. The device has been tested and is supplied in working order. To keep the device in this condition, it is necessary to adhere to the following safety and maintenance instructions.

Never remove the device cover if the relay terminals are connected to the electrical network!

Using the device in a manner other than prescribed by the manufacturer may cause its safeguards to fail!

The power supply outlet or disconnection point must be freely accessible.

The device must not be used in particular under any of the following conditions:

- The device is noticeably damaged
- The device does not function properly
- Unfastened parts can move inside the device
- The device has been exposed to moisture or rain
- The device has been serviced by unauthorized personnel
- The power adapter or power supply cable are noticeably damaged
- If the device is used in a manner other than designed for, the protection provided by the device may fail.
- The local electrical system must include a power switch or a circuit breaker and overcurrent protection.

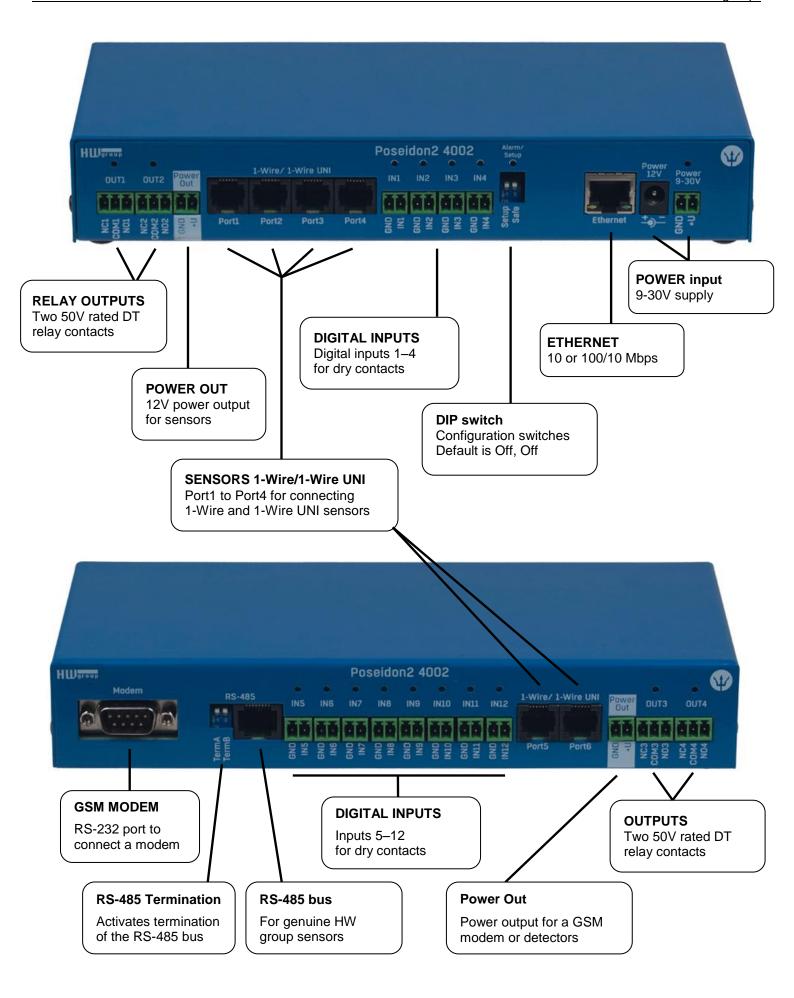
The manufacturer warrants the device only if it is powered by the supplied power adapter or an approved power supply.

If you have any problems with installing or operating the device, please contact technical support:

HW group s.r.o. http://www.hw-group.com Email: support@HWg.cz

U Pily 3 143 00 Praha 4 Czech Republic Tel. +420 222 511 918

When contacting technical support, please keep at hand the exact type of your device (at the type plate) and, if possible, the firmware version (see later in this manual).



First steps

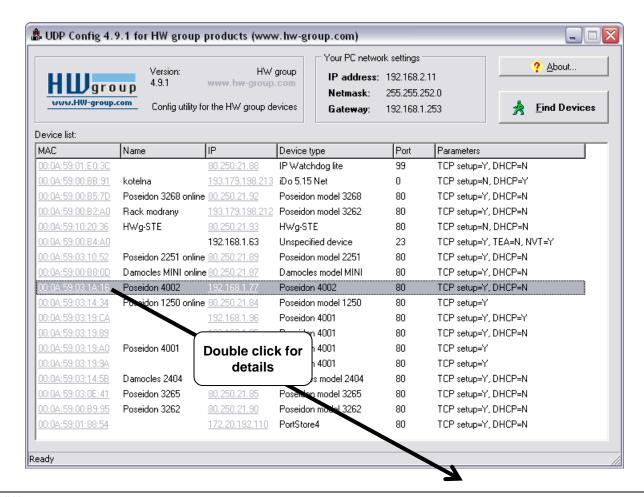
1) Connecting the cables

- Turn the unit and note its MAC address that is printed on the label on the side.
- Set the switches: DIP1=Off, DIP2=Off.
- Connect Poseidon to Ethernet (patch cable to a switch, cross-over cable to a PC), RJ-45 port.
- Plug the power adapter into a mains outlet and connect it to the Poseidon power jack.
- The green **POWER** LED lights up.
- If the Ethernet connection works properly, the **LINK** LED lights up after a short while, and then flashes whenever data are transferred (activity indication).

2) Configuring the IP address – UDP Config

UDP Config utility – root directory of the supplied CD (Windows and Linux versions). Available for download at www.HW-group.com Software > UDP Config.

- Click the icon to launch UDP Config. The program automatically looks for connected devices.
- Automatic device discovery works only in the local network.
- Individual Poseidon units are identified by their MAC addresses (on the label at the bottom).
- Double-click a MAC address to open a basic device configuration dialog.



First steps

Configure the network parameters

- IP address / HTTP port (80 by default)
- Network mask
- Gateway IP address for your network
- Device name (optional)

Click the **Apply Changes** button to save the settings.



Alternatively, you may use the following utilities to configure the IP address:

UDP Config for Linux

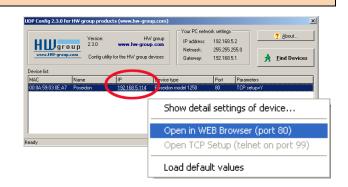
Important:

- To reset the device to factory defaults, toggle DIP1 several times within 5 seconds after applying power to the device.
- No configuration changes can be stored while DIP2=On.
 To change the IP address, set DIP2=Off.

First steps

4) WWW interface of the device

- To open the WWW interface of the device:
 - Enter the IP address into a web browser
 - Click the IP address in UDP Setup



Web interface of the device

General: Overview of current readings

General Setup: IP address, DNS, security (username/password)

SNMP: SNMP / SNMP Trap configuration (ports and alarm recipients)

■ E-mail: E-mail server, parameters, recipients, test

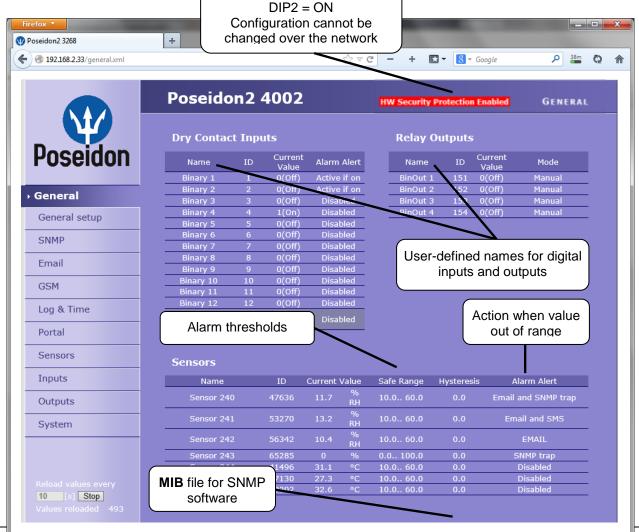
GSM: Local GSM modem / remote SMS-GW configuration

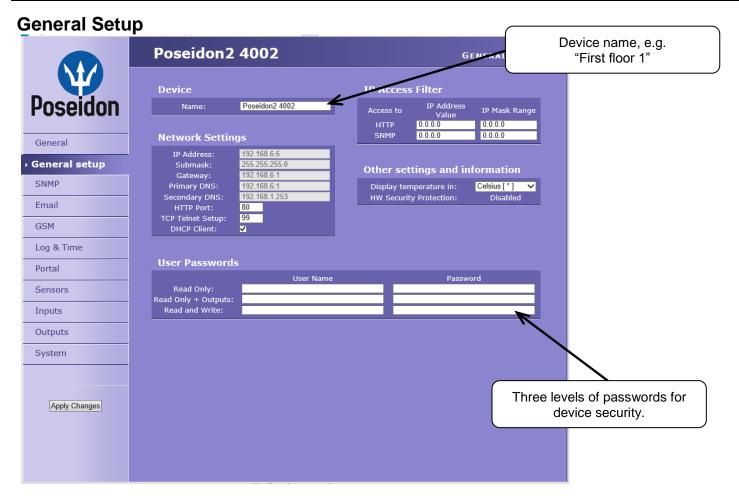
Log & Time: Time configuration, NTP server

Portal: Connection to a remote portal system

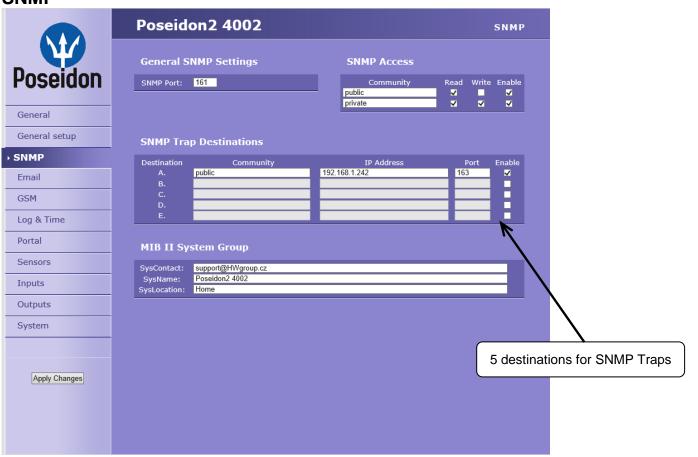
Sensors: Device name, sensor names, status overview
 Inputs: Digital Input control, names, alarm parameters
 Outputs: Digital Output control, names, local mode

System: Firmware upgrade, save/restore configuration, etc.

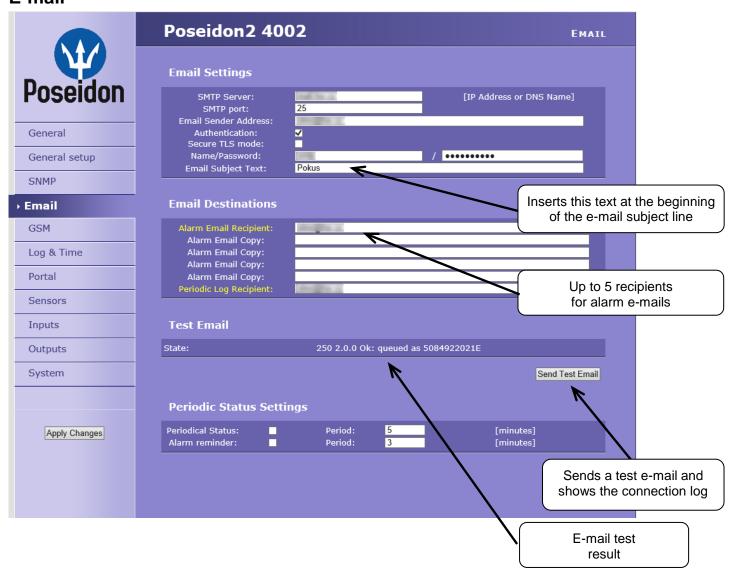




SNMP



E-mail



Periodic Status Settings

Periodical Status

When on, sends an e-mail with device status at the specified intervals. For example every 24 hours (1440 minutes).

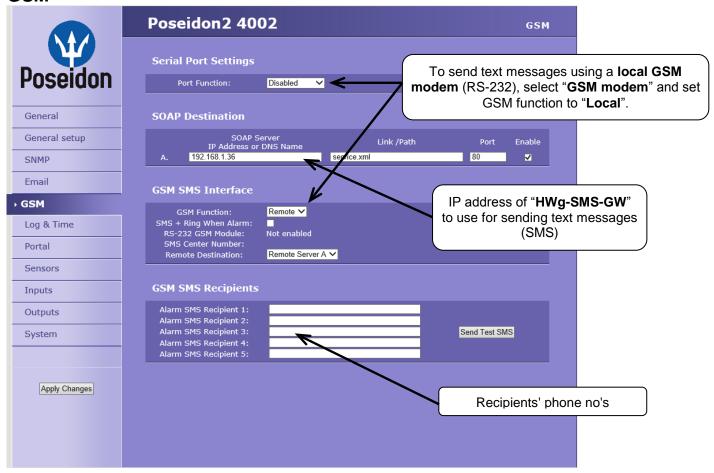
Alarm reminder

When active, sends periodic reminders that the device is in the Alarm state. For example every 15 minutes.

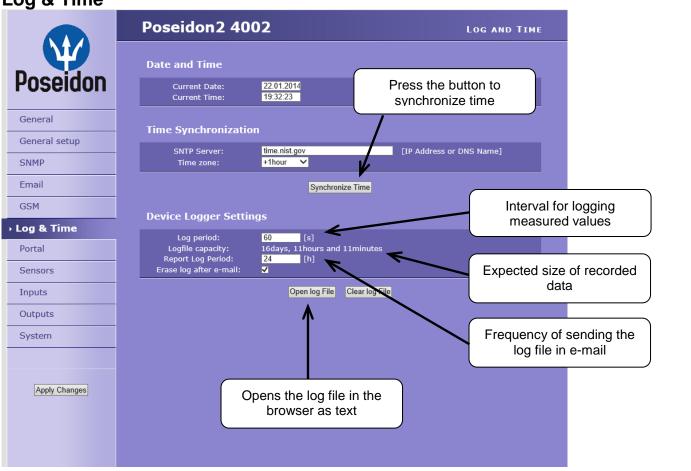
To send e-mail, check: 1) Correct Gateway IP address 2) DNS server in network settings 3) SMTP server and port 4) Authentication turned on, correct username and password 5) Spam filter for your mailbox is disabled

NOTE: Configuration changes must be confirmed by clicking the Apply Changes button.

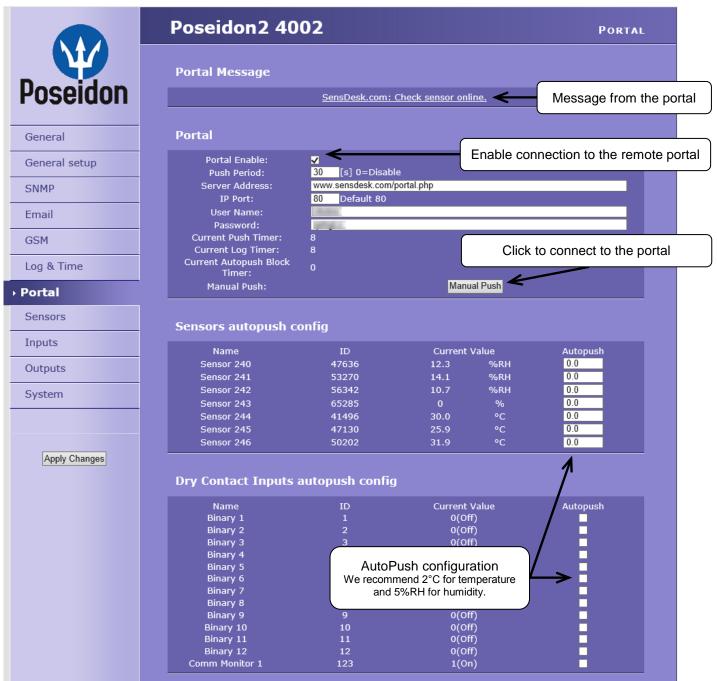
GSM



Log & Time



Portal



Configures the communication with the portal using the HWg-Push protocol. Poseidon2 is the active side and establishes the connection periodically and/or whenever a change in a sensor value exceeds the configured AutoPush value.

The www.SensDesk.com portal connection parameters are pre-filled.

AutoPush configuration

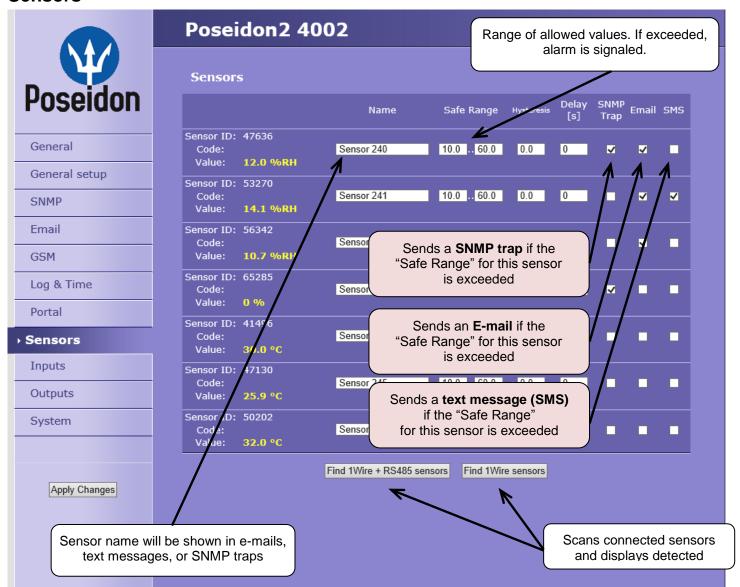
Poseidon2 connects to the portal and notifies a value change whenever a change in the sensor reading exceeds the configured AutoPush value.

This configuration only applies to the communication between Poseidon2 and the online portal. Local alarm values are configured in the portal.

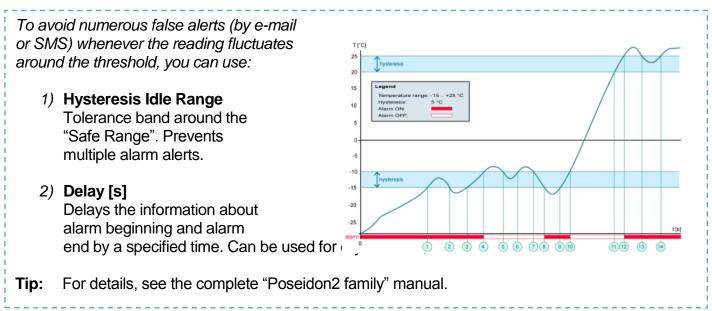
For portal connection, check:

- 1) Correct Gateway IP address
- 2) **DNS server** in network settings
- Correct Server Address of the portal

Sensors

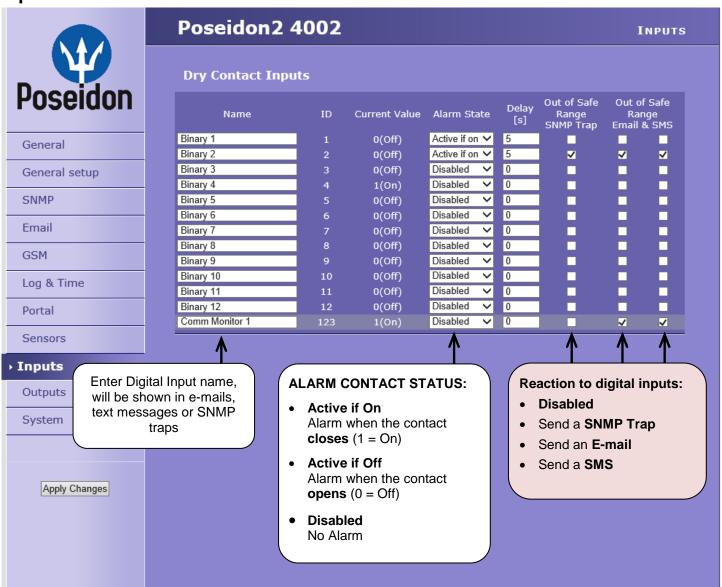


After connecting sensors or changing RJ11 connections, sensors need to be detected again.



NOTE: Configuration changes must be confirmed by clicking the Apply Changes button.

Inputs



Connecting the inputs 0 (Off) 1 (On)

FAQ

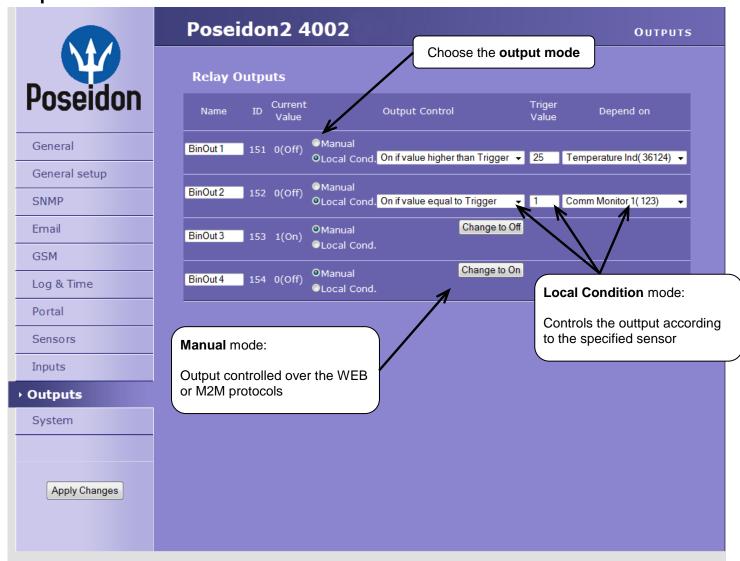
- Poseidon2 informs about alarm activation and deactivation for each Digital Input and/or sensor.
- E-mail format cannot be changed; sensors may have custom names.
- Yellow background in a line with a sensor or an input means that the safe range is exceeded but alarm notification is off.

TIP

Poseidon family manual

For a detailed description of all settings and configuration tabs, see the "Poseidon family" manual on the WEB or on the installation CD.

Outputs



Output mode:

A) Manual

Output <u>can</u> be controlled using the Web interface or externally using M2M protocols. The output <u>cannot be used in "thermostat" mode</u> – local condition.

B) Local Condition

The output <u>cannot</u> be controlled over the Web, it is controlled by the local condition. The output is read-only for all M2M protocols. Hysteresis in the sensor settings applies.

The output cannot be controlled remotely.

o On if any alarm

The output is active if at least one input or sensor is in alarm.

On if value equal to Trigger

The output is active if the selected sensor reading **is equal to** the "Target Value".

On if value higher than Trigger

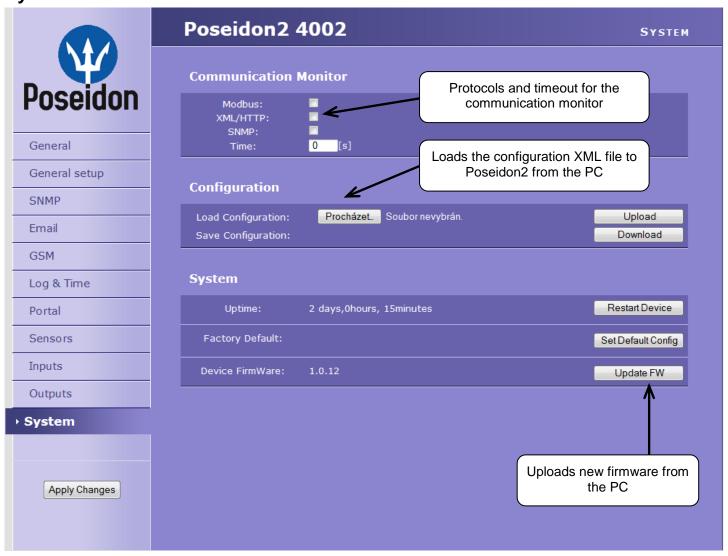
The output is active if the selected sensor reading is greater than the "Target Value".

On if value lower than Trigger

The output is active if the selected sensor reading is less than the "Target Value".

Dependent On – sensor / input to which the condition applies.

System



Configuration

- Download Retrieve the configuration from the device and store it on the PC.
- Upload Restore a configuration from the PC to the device.

System

- Restart Device Reset the device over the WEB interface.
- Set Default Config Restore factory-default settings.
- Upgrade FW Upload new firmware to the device.

Communication Monitor

This function controls a virtual Digital Input that is available in **Inputs** as "Com Monitor 1" with an ID of 123.

If no communication took place in the specified time using the selected protocols, it sets "Com Monitor 1" = 0 (Off).

This function is useful e.g. to send a warning e-mail whenever Poseidon2 ceases to be periodically monitored over SNMP or SCADA.

NOTE: Configuration changes must be confirmed by clicking the Apply Changes button.

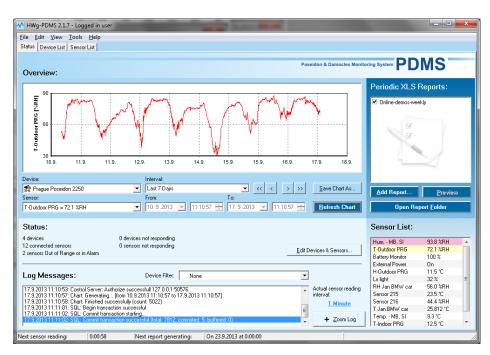
Software Applications

HWg-PDMS

Windows application that logs data from all HW group devices into its internal database.

The application runs in the background (NTservice). Data are retrieved from the device over http or e-mail.

Data can be exported over XML or automatically stored to MS Excel.



License: Free HWg-PDMS version for 3 sensors

Paid versions for 8 / 20 / 200 / unlimited sensors

HWg-Trigger

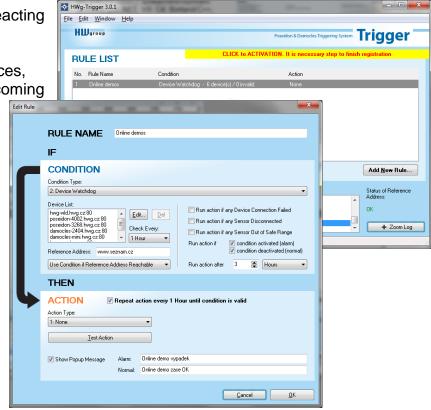
Windows application for detecting and reacting to events.

Detects, for instance, disconnected devices, failed sensors values out of range, or incoming

SNMP Trap alerts.

Possible responses include sending an e-mail, activating a relay over the network, or sending a text message (SMS) using HWg-SMS-GW.

Other responses include displaying a warning message in Windows, starting an application, or shutting down the computer.



License: 30-day trial version free of charge

PosDamIO

Poseidon Damocles I/O is a command-line utility for Windows and Linux that lets you control Poseidon and Damocles units over the XML interface. It can display the states of sensors, inputs and outputs, as well as set an output high or low.

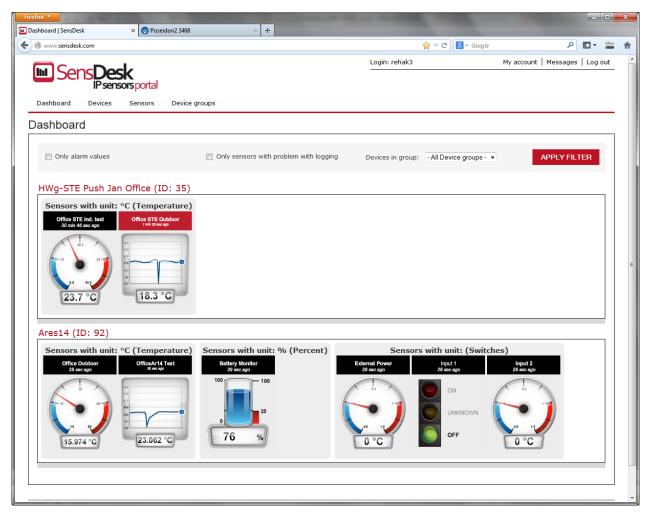


SensDesk.com

Online portal for collecting data from LAN and GSM sensors.

Poseidon2 can connect to the SensDesk internet service. All devices can be managed from a single WWW interface. Watch sensor states, display your devices in a map, compare trends in time and analyze alarm messages.

SensDesk is a way to implement fully functional monitoring of customer technology in a matter of minutes, with fixed costs of the system. No need for installing a complex system or adding another server at the customer side.

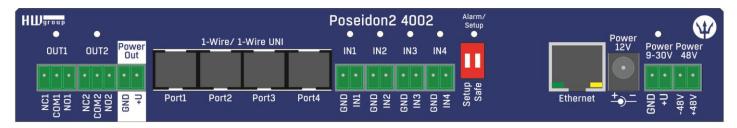


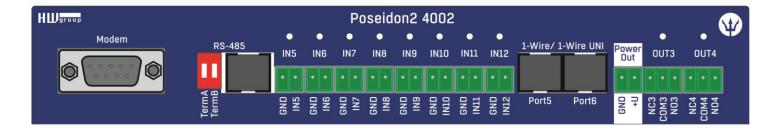
- Overview of all sensors at a single place
- Centralized alarm configuration for individual sensors
- Mobile application for monitoring
- Remote configuration of GSM devices

www.SensDesk.com

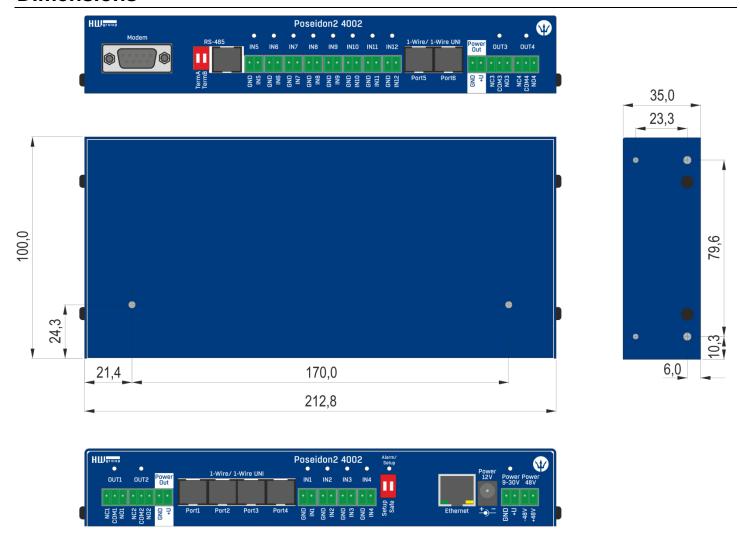
Specifications

OVERVIEW	
LAN interface	RJ45 (100BASE-Tx) – 10/100 Mbps network compatible
Supported protocols	IP: ARP, TCP/IP (HTTP, NTP, SMTP, netGSM, HWg-PUSH), UDP/IP (SNMP)
SNMP compatibility	Ver.1.00 compatible, partial ver.2.0 implementation
Internal Logger	250,000 records in flash memory (logged items: Sensors, DI, DO)
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SENSORS 1-Wire	
Туре	HW group original accessories: 1-Wire & 1-Wire UNI
Active ports / distance	6xRJ11, max distance 60m per each RJ11 active port
Sensors	Up to 16 sensors in total (temperature + humidity combo sensors count as 2 sensors)
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SENSORS RS-485	
Type	HWg original accessories
Connector / distance	RJ45 + 2x DIP for termination / Max distance 1000m
Sensors	Up to 26 sensors in total (temperature + humidity combo sensors count as 2 sensors)
DI (Digital Inputs for D	Pry Contacts)
Port / type	IN1-IN12 / Digital Input (supports NO/NC Dry contact)
Sensitivity	1 (On) = 0-500 Ω (Max. distance up to 50m)
DO - OUTPUTS	
Port / type	OUT1 - OUT4 / Relay contacts (NC-COM-NO)
Max. voltage / load	60V AC/DC, Max 1A, up to 60VA/24W (0.5A/48V)
State	Power up state (no state restart memory)
RS-232 interface	
External GSM modem	Connect external GSM modem
POWER input	
Port	POWER 9-30V DC
Power input	9-30V DC / 2,5W (typically 250 mA)
'	Connectors: Jack (barrel, inner 2.1 mm outer 5.1 mm) + Terminal Block
DOWED output	
POWER output	Dower Out Dower IN (0, 20\/)
Voltage Current / Connector	Power Out = Power IN (9–30V) Max. 150mA / Terminal Block
Current / Connector	Max. 150MA / Terminal Block
LED status indicators	
POWER (RJ45 + top)	Green – power OK (top), Ethernet enabled (RJ45)
LINK & Activity (RJ45)	Yellow - Ethernet connectivity
Setup / Alarm	Red
Inputs / Outputs	Green / Yellow
inputs / Outputs	OTCOM/ TOMOW
DIP SWITCH	
	OFF = Normal state
DIP1: Setup	Load defaults: Set ON, power-up device, toggle 3 times during first 5 seconds
DIP2: Security	ON = Secure mode (online demo) – remote configuration disabled
DIF Z. OCCUIRTY	OFF = Non-secure mode – remote configuration enabled
Physical parameters	
Temperature range	Operating: -30 to +85 °C (-22 to +185 °F) / Storage: -35 to +85 °C (-31 to +185 °F)
Dimensions / Weigh	100 x 213 x 35 [mm] / 225 g
EMC	FCC Part 15, Class B, CE - EN 55022, EN 55024, EN 61000





Dimensions

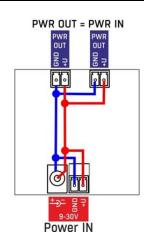




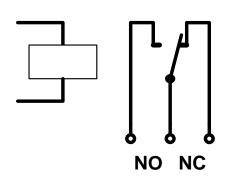
Power output

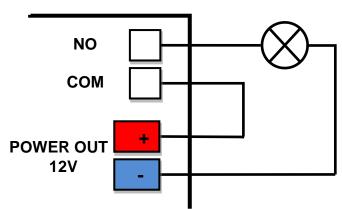
Poseidon2 4002 features the PWR OUT terminals for powering connected sensors and detectors. For example a smoke detector.

PWR OUT voltage is the same as the Poseidon2 4002 supply voltage!



Relay outputs



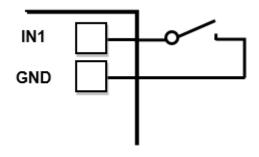


- NO and NC labels apply to Off (0) state, or device turned off
- When the output is On (1), a "Normally Open" (NO) relay contact is closed
- LEDs: Contact state (closed / open) is indicated by a LED
- Isolation: The double-throw contact is electrically isolated from the rest of the device
- ID range: Outputs use ID addresses from 151 to 180

Inputs - Digital (dry contact) inputs

Digital input terminals may be connected to voltage-free contacts or the GND pin. The inputs are electrically connected to the 12V power supply. Never connect the inputs to the 48V supply voltage!

- Unconnected inputs read as "0 (Off)"
- Active inputs read as "1 (On)"
- Supported sensors: Any contact without external voltage (dry contact)
- Polling period: 800 ms
- Range of sensor IDs: Inputs use ID addresses from 1 to 24



M2M interface

The product is ready to be connected with third-party SW applications.

For a description of the interfaces (XML format, detailed SNMP description, mapping of Modbus/TCP variables), see the detailed "**Poseidon family**" manual.

- XML (over HTTP)
- **SNMP**, SNMP traps
- Modbus/TCP
- SMTP (E-mail)

TIP

• For a detailed description of the M2M communication interface and other details, see the **detailed Poseidon family manual**.

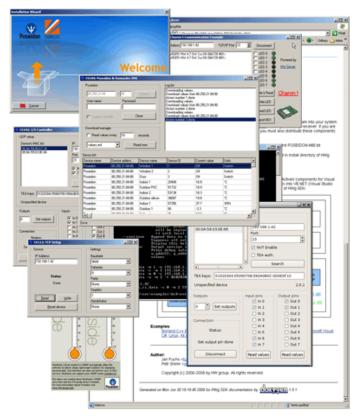
SDK (Software Development Kit)

Programmers can take advantage of the **HWg SDK** (Software Development Kit) with ActiveX

interface and ready-made examples.

VB - Visual Basic (6.0) - (3xx examples)

- Borland C++ (1xx examples)
- Microsoft Visual C++ (2xx examples)
- C# / .NET (5xx examples)
- Borland Delphi (4xx examples)
- JAVA
- PHP / ASP
- other examples that do not directly use SDK functions (all 9xx examples)

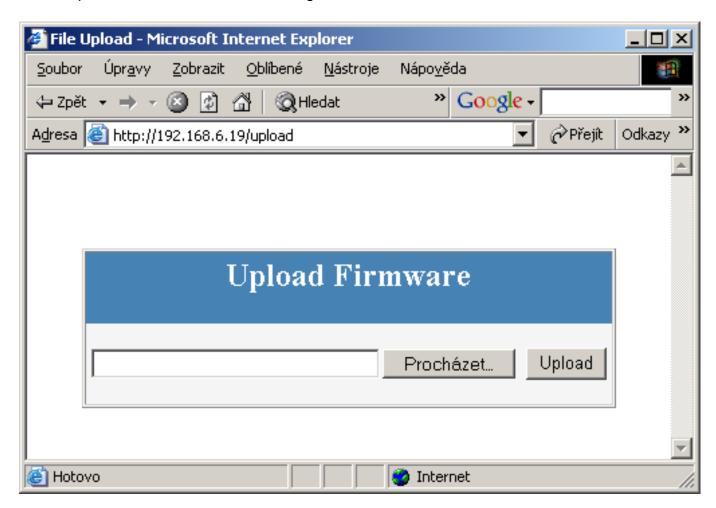


Note:

The latest version of HWg-SDK is available for download at the HWg website. You just need to register your e-mail.

Updating the firmware over the WEB

Upload the .hwg firmware file over http to http://x.x.x.x/upload/. Connection problems must be avoided during file transfer.



Firmware in the .HWg format is available at our website, or on the supplied CD.

Restoring factory defaults

To restore the factory default configuration (including deleting all passwords):

- 1) Turn the device off by disconnecting power.
- 2) Set DIP1 to ON.
- 3) Turn the device on.
- 4) Toggle DIP1 several times during the first 5 seconds after powering up.

TIP

• For a detailed product description, see the detailed Poseidon family manual.

Mounting on a wall



Contact

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http://www.HW-group.com