

Poseidon 3468

MANUAL



Package contents

A complete shipment contains the following items:

- Poseidon 3468
- Printed manual + datasheet

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 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

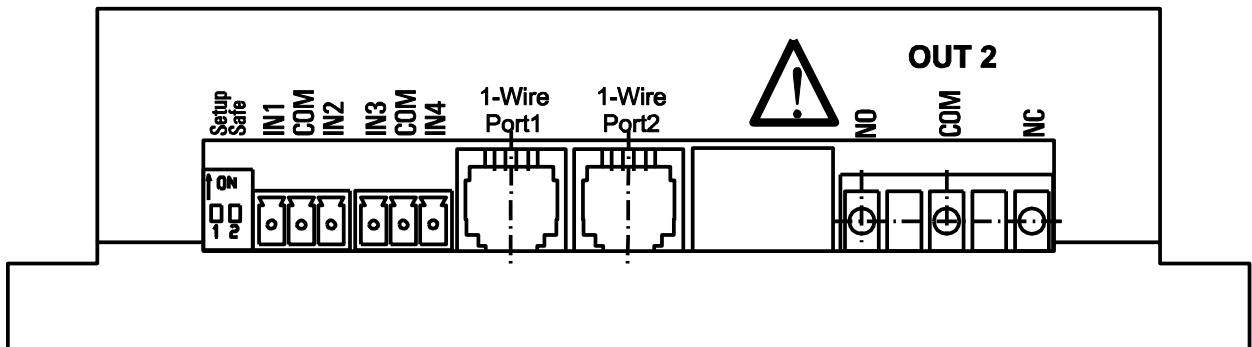
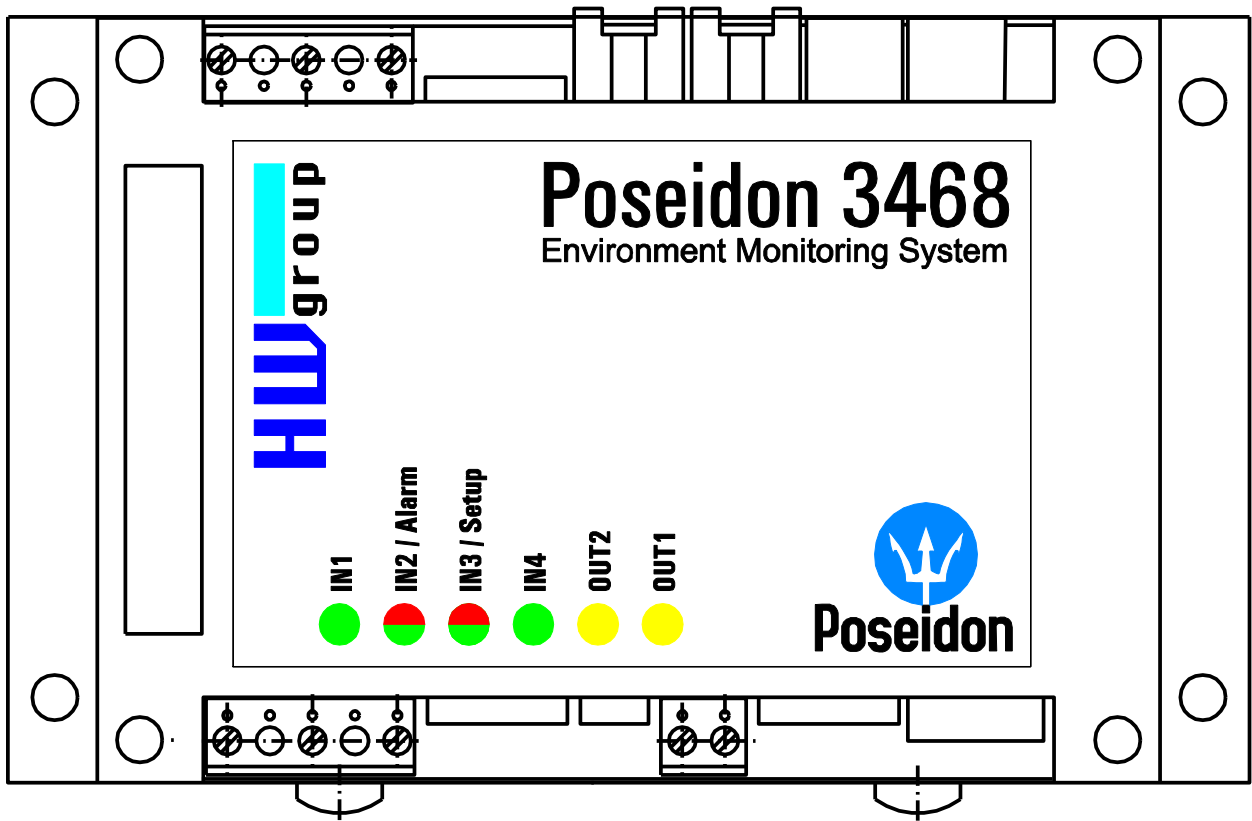
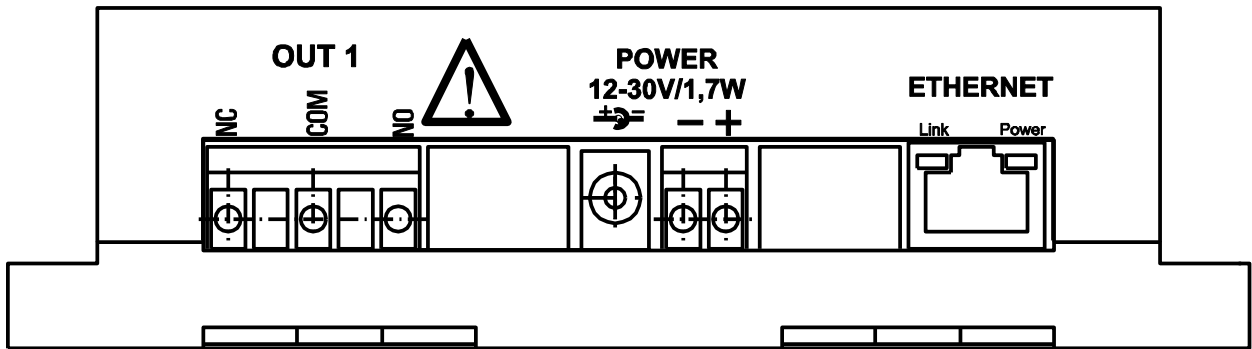
U Pily 3

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

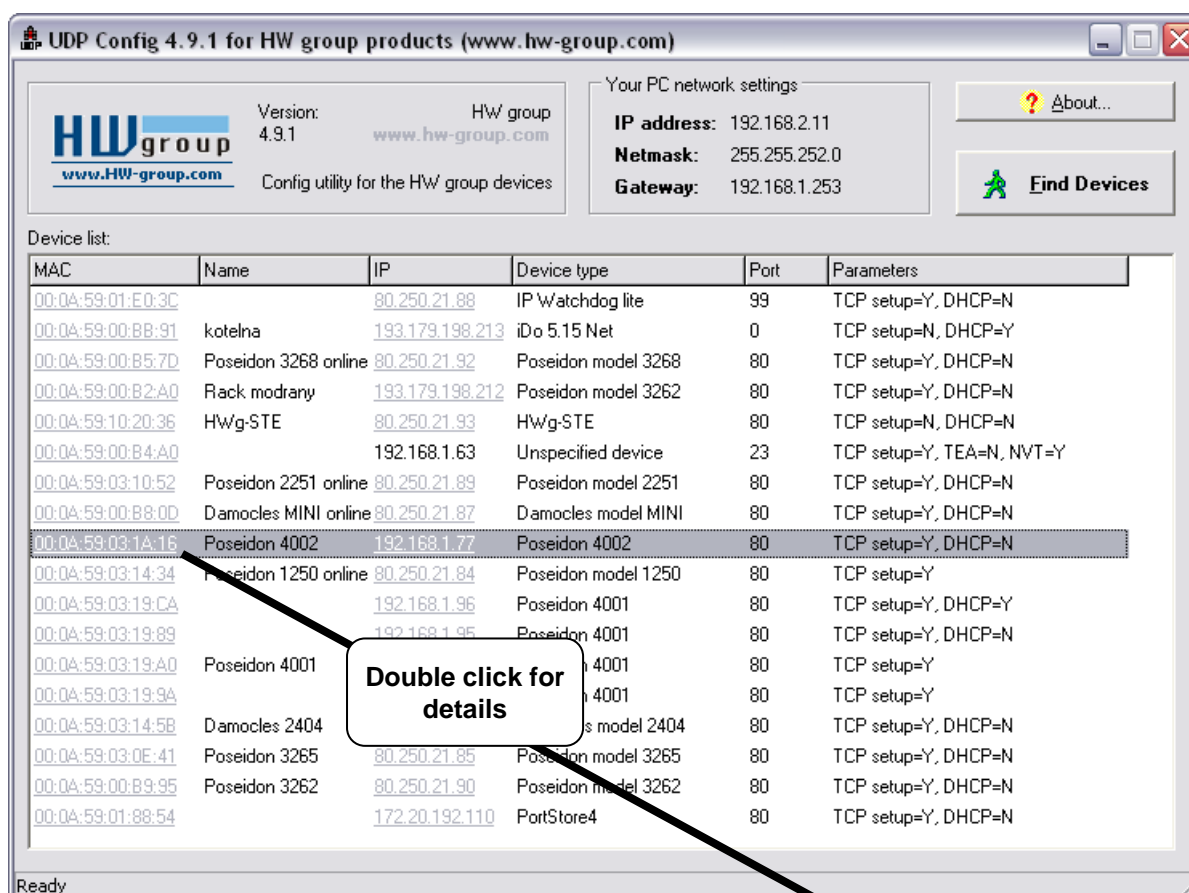
- Turn the unit upside down and write down its MAC address that is printed on the label.
- Set the switches: **DIP1=Off, DIP2=Off**.
- Connect the unit to the Ethernet (with a patch cable to a switch, cross-over cable to a PC), RJ-45 port.
- Plug the power adapter into a mains outlet and connect it to 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 (label at the bottom side).
- 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.

The screenshot shows a 'Details' configuration window for a device named 'Poseidon 4002'. The window is divided into several sections:

- Name:** Poseidon 4002
- IP address:** 192.168.1.77
- Port:** 80
- Mask:** 255.255.252.0
- Gateway:** 192.168.1.253
- MAC:** 00:0A:59:03:1A:16
- FW version:** 2.0.4
- Device type:** Poseidon 4002 (26)
- DHCP:** Supported
- Enable DHCP:**
- Enable IP access filter:**
- IP filter value:** 0.0.0.0
- IP filter mask:** 0.0.0.0
- Enable NVT:**
- Enable TEA authorisation:**
- Enable TCP setup:** (with an 'Open' button)
- Check if new IP address is empty:**
- Default values:**
- Buttons:** 'Open in WEB Browser', 'Cancel', and 'Apply changes' (highlighted with a green arrow).

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

- **UDP Config for Linux**
- **RS-232 serial port** (any terminal program, 9600 8N1, DIP1=ON, restart)

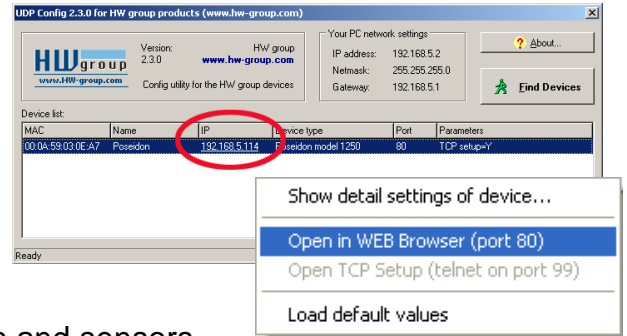
Important:

- 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 Config
 - Click the underlined IP address in UDP SETUP
- The WWW page displays current states of devices and sensors.
- Click the **“Graphic Flash SETUP”** link to open the graphical configuration interface (Flash Setup).



Poseidon model 4002 - Windows Internet Explorer
 http://192.168.1.77/values.xml

Poseidon 3468

Overview of dry contact inputs

Output relay states

| Dry Contact Inputs | | | | Relay Outputs | | | |
|--------------------|----|---------------|-------------|---------------|-----|---------------|--------|
| Name | ID | Current Value | Alarm Alert | Name | ID | Current Value | Mode |
| Binary 1 | 1 | 0 (Off) | Disabled | BinOut 1 | 151 | 0 (Off) | Manual |
| Binary 2 | 2 | 0 (Off) | Disabled | BinOut 2 | 152 | 0 (Off) | Manual |
| Binary 3 | 3 | 0 (Off) | Disabled | | | | |
| Binary 4 | 4 | 0 (Off) | Disabled | | | | |
| Binary 5 | 5 | 0 (Off) | Disabled | | | | |
| Binary 6 | 6 | 0 (Off) | Disabled | | | | |

Overview of connected sensors, their unique IDs and current readings

| Sensors | | | | | | |
|------------|-------|---------------|--------------|------------|-------------|--|
| Name | ID | Current Value | Safe Range | Hysteresis | Alarm Alert | |
| Sensor 240 | 65264 | 25.3 °C | 10.0 .. 60.0 | 0.0 | Disabled | |
| Sensor 241 | 63537 | 25.1 °C | 10.0 .. 60.0 | 0.0 | Disabled | |
| | 57541 | 41.4 %RH | 10.0 .. 60.0 | 0.0 | Disabled | |

Device name

Device name: Poseidon 4002
 Web Configuration: [Flash Setup](#)
 Terminal Configuration (TCP Setup): Connect with Telnet to [192.168.1.77 Port 99](#)
 Firmware: Version: **2.0.3 (update)** / [MIB](#) / [OID](#) / [XSD](#)

Detailed configuration in “Flash Setup”

Description of the values.XML file

Description of SNMP structures in MIB / OID list

For more information try <http://www.hw-group.com/>

Hotovo Internet

Firmware update

Flash SETUP

To open the FLASH interface, FLASH support needs to be installed on your PC. If the computer is connected to the Internet, the needed plug-in is downloaded automatically.

- **General:** Overview of current readings
- **General Setup:** IP address, DNS, security (username/password or IP range)
- **SNMP:** SNMP / SNMP Trap configuration (ports and alarm recipients)
- **Email & SMS:** Configuration and test
- **Log & Time:** Time configuration, NTP server
- **Sensors:** Device name, sensor names, status overview
- **Outputs:** Control and mode configuration of outputs
- **System:** Firmware upgrade

The screenshot shows the Flash SETUP interface with the 'Sensors' tab selected. The interface is divided into two main sections: 'Binary Inputs' and 'Sensors'.

Binary Inputs Table:

| Name | ID | Current Value | Alarm Alert |
|--------------------|----|---------------|---------------|
| Dveřní kontakt | 1 | 1 (On) | Active if Off |
| Detektor kouře | 2 | 1 (On) | Active if Off |
| Power egg - 230 OK | 3 | 1 (On) | Active if Off |
| RFID | 4 | 0 (Off) | Active if On |

Sensors Table:


| Name | Sensor ID | Current Value | SafeRange | Alarm Alert |
|-----------------|-----------|---------------|--------------|-------------|
| Temp Rack19 | 57982 | 25.2 °C | 10.0 .. 60.0 | Active |
| Htemp Rack 19 T | 10918 | 26.1 °C | 10.0 .. 60.0 | Active |
| Htemp Rack19 H | 22253 | 27.5 %RH | 10.0 .. 60.0 | Active |
| Temp 1wire | 51229 | 26.6 °C | 10.0 .. 40.0 | Active |

At the bottom of the Sensors section, there is a 'Refresh' button and a status bar showing 'Values reloaded 7 times. Reload values every 5 [s] Stop'.

Refresh: The Refresh function in the main tab sets the time interval for displaying new sensor readings.

Email & SMS

General General Setup SNMP **Email & SMS** Log & Time Sensors Inputs Outputs System Info Index Page



Email Settings

SMTP Server [IP Address or DNS Name]

Port

Email Sender Address

Authentication

Name/Password /

Email Subject Text

Alarm Email Recipient

Alarm Email Copy

Periodic Log Recipient

GSM SMS Interface Enable

RS-232 GSM Module Waiting for modem

SMS + Ring when Alarm

SMS Center Number

Alarm SMS Recipient 1

Alarm SMS Recipient 2

Sends a test e-mail and shows the connection log

Send Test Email

Send Test SMS

Apply Changes

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.

Sensors

General | General Setup | SNMP | Email & SMS | Log & Time | **Sensors** | Inputs | Outputs | System | Info | Index Page

| Name | Sensor ID | Current Value | Safe Range | Hysteresis Idle Range | Delay [s] | Out of Safe Range SNMP Trap | Out of Safe Range Email & SMS |
|-----------------|-----------|---------------|-------------|-----------------------|-----------|-------------------------------------|-------------------------------|
| Temp Rack19 | 57982 | 25.5 °C | 10.0 - 60.0 | 0.0 | 0 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Htemp Rack 19 T | 10918 | 26.1 °C | 10.0 - 60.0 | 0.0 | 0 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Htemp Rack19 H | 22253 | 25.6 %RH | 10.0 - 60.0 | 0.0 | 0 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Temp 1wire | 51229 | 26.8 °C | 10.0 - 40.0 | 0.0 | 0 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Sensor name will be shown in the e-mail, text message, or SNMP traps

Sends a SNMP trap if the "Safe Range" for this sensor is exceeded

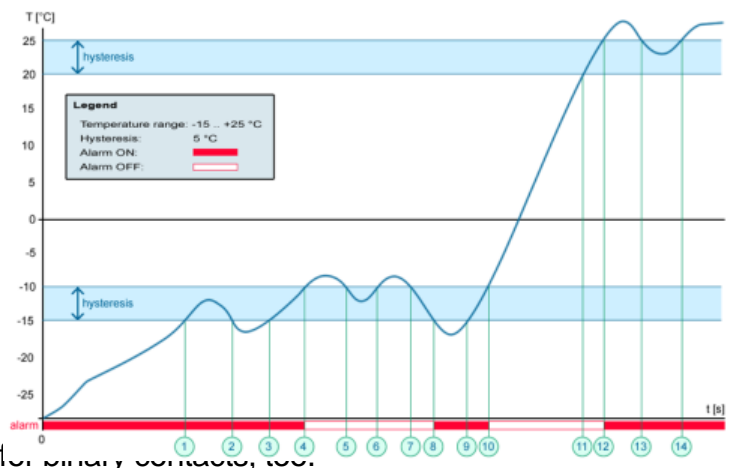
Sends a text message if the "Safe Range" for this sensor is exceeded

Scans connected sensors and displays detected sensors

Apply Changes | Autodetect Sensors

To avoid numerous false alerts (by e-mail or SMS) whenever the reading fluctuates around the threshold, you can use:

- Hysteresis Idle Range**
Tolerance band around the "Safe Range". Prevents multiple alarm alerts.
- Delay [s]**
Delays the information about alarm beginning and alarm end by a specified time. Can be used for primary contacts, too.




Tip: For details, see the complete "Poseidon family" manual.

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

Inputs

General | General Setup | SNMP | Email & SMS | Log & Time | Sensors | **Inputs** | Outputs | System | Info | Index Page



Dry Contact Inputs

Dry Contact Inputs state reaction: Inactive

| Name | ID | Current Value | Alarm State | Delay[s] |
|----------|----|---------------|---------------|----------|
| Binary 1 | 1 | 0 (Off) | Inactive | 0 |
| Binary 2 | 2 | 0 (Off) | Active if On | 0 |
| Binary 3 | 3 | 0 (Off) | Active if Off | 0 |
| Binary 4 | 4 | 0 (Off) | Inactive | 0 |
| Binary 5 | 5 | 0 (Off) | Inactive | 0 |
| Binary 6 | 6 | 0 (Off) | Inactive | 0 |

ALARM CONTACT STATUS:

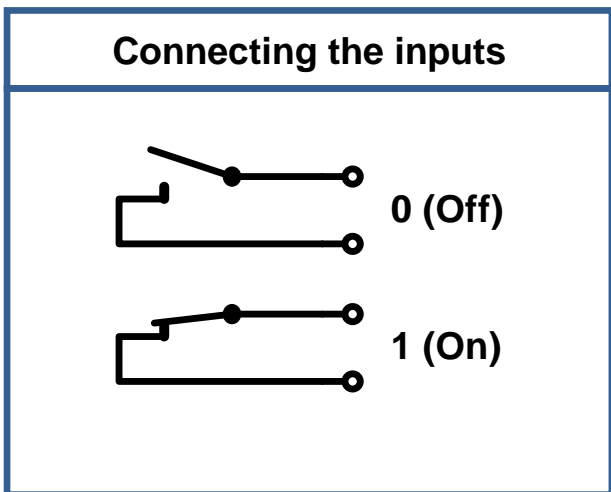
- Active if On**
Alarm when the contact **closes** (1 = On)
- Active if Off**
Alarm when the contact **opens** (0 = Off)
- Inactive**
No alarm

REACTION TO CONTACTS:

- Inactive**
- Send a **SNMP Trap**
- Send an **E-mail**
- Send **Email and SNMP Trap**

Apply Changes

Enter sensor name, will be shown in E-mail, SMS or SNMP traps



FAQ

- Poseidon informs about alarm activation and alarm deactivation for each contact 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.

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

TIP

- **Poseidon family manual**
For details about the settings and all tabs of the configuration interface, see the “Poseidon family” manual on the web or on the install CD.

Outputs

The screenshot displays the 'Outputs Settings' configuration page. At the top, there are navigation tabs: General, General Setup, SNMP, Email & SMS, Log & Time, Sensors, Inputs, **Outputs**, System, Info, and Index Page. Below the tabs is a table with the following structure:

| Name | ID | Current Value | Output Control | Target Value | Dependent on |
|----------|-----|---------------|--|--------------|-------------------|
| BinOut 1 | 151 | Off(0) | <input type="radio"/> Manual <input checked="" type="radio"/> Local Condition | 26.0 | Sensor 240(85264) |
| BinOut 2 | 152 | Off(0) | <input type="radio"/> Manual <input checked="" type="radio"/> Local Condition | | |

Additional elements in the interface include a 'Change to On' button between the two rows, an 'Apply Changes' button at the bottom right, and a 'HW Security Protection Disabled' status indicator. Callout boxes provide detailed explanations of the 'Manual' and 'Local Condition' modes.

Output mode:

A) **Manual**

Output can be controlled in the Flash interface, or from any application using M2M protocols (XML, SNMP, Modbus/TCP).

The output cannot be used in “thermostat” mode – local condition.

B) **Local Condition**

The output cannot be controlled in the Flash interface. The output is controlled with a specified condition. The output is read-only for all M2M protocols.

The output cannot be controlled remotely.

- **On if any alarm**
The output is active if at least one of the inputs or sensors is in alarm.
- **On if value equal to Trigger**
The output is active if the sensor reading matches the “Target Value”.
- **On if value higher than Trigger**
The output is active if the sensor reading exceeds the “Target Value”.
- **On if value lower than Trigger**
The output is active if the sensor reading is below the “Target Value”.
- **Dependent On** – sensor / input to which the condition applies.

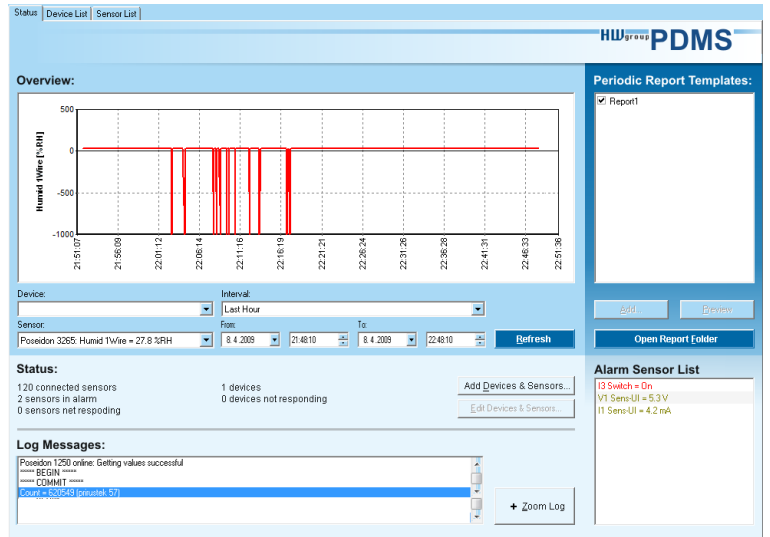
Note: Configuration changes must be confirmed by clicking the Apply Changes button.

Software Applications

HWg-PDMS

Windows application for data logging and quick export of reports to MS Excel. Sensor readings from connected devices are stored in a database. Readings are received over XML (http) or e-mail. Works with the PD Trigger application to process alarms.

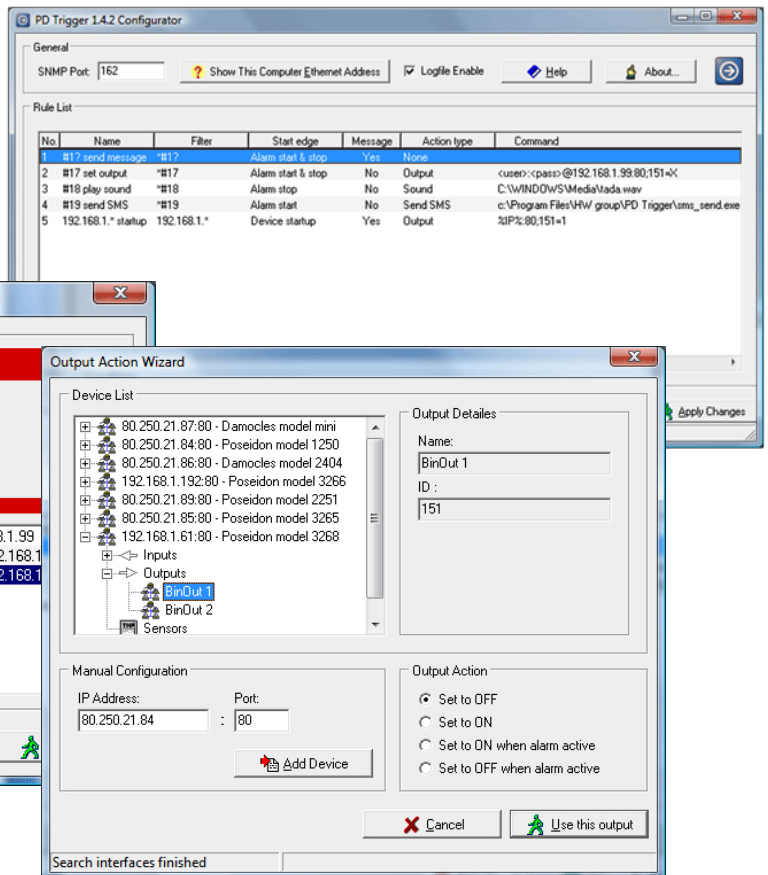
The database can be accessed from a MS EXCEL sheet, or through an API (examples are available for .NET, VB, C#, Borland C++, Delphi, Microsoft C++).



NOTE: [Free](#) HWg-PDMS version for 3 sensors

PD Trigger

To react to alarms and to control outputs, the PD Trigger application can be used. It reacts to incoming Alarm alerts by, for instance, activating a networked relay. (Available for download at our website.)



NOTE: [Free](#) HWg-PD Trigger version for 2 conditions

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.

```

C:\Program Files\HW Group\PosDamIO> PosDamIO.exe
PosDamIO v3.0.0.0
Usage: PosDamIO.exe [-s sensor] [-o output] [-p port] [-u user] [-p password] [-m mode] [-v] [-h]
-s sensor: Sensor ID (e.g. 240)
-o output: Output ID (e.g. 1)
-p port: Port (e.g. 192.168.1.100)
-u user: Username (e.g. admin)
-p password: Password (e.g. admin)
-m mode: Mode (e.g. high)
-v: Verbose
-h: Help

```

CapTemp

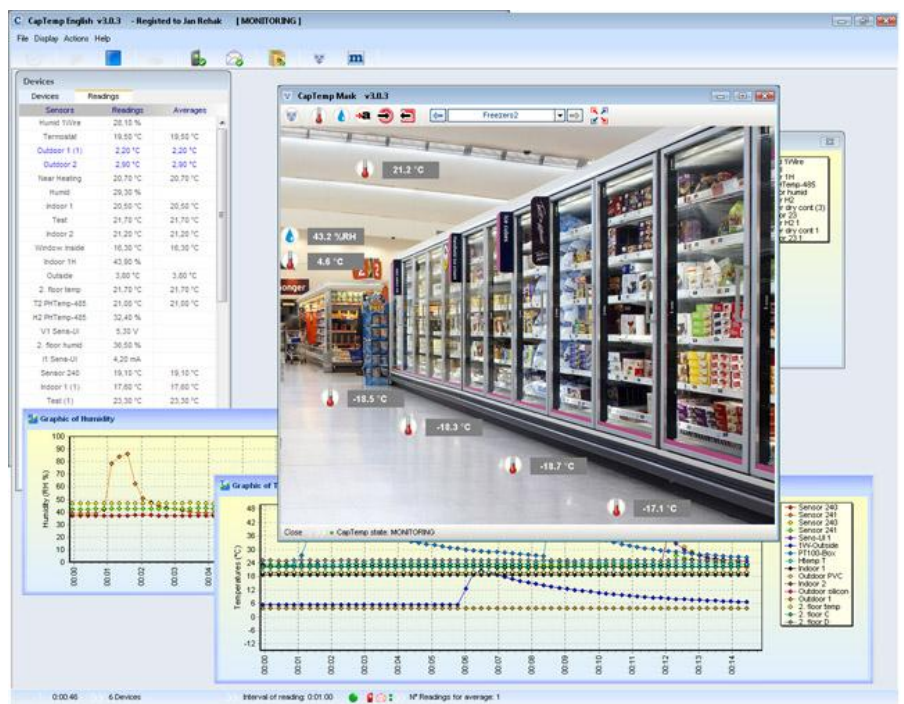
Software for collecting and analyzing sensors readings in food processing and other industries.

CapTemp and MonTemp is a pair of utilities to monitor production processes. The programs can supervise all sensors by HW group (temperature and humidity sensors, contacts, etc) as well as sensors by other manufacturers.

CapTemp logs the values into an internal database, displays several most recent ones, and processes conditions and alarms. Alerts to values within an alarm range are sent by e-mail, or by SMS via a GSM modem connected to the PC.

MonTemp subsequently processes stored data and generates graphic reports, histograms, as well as ISO or HACCP protocols.

- CapTemp supports Poseidon, Damocles and I/O Controller products
- Alarm alerts are sent by e-mail or SMS (GSM modem)
- Concise graphical environment
- Supports conditions and rules for simple control tasks
- Evaluation version functions for 21 days without restrictions

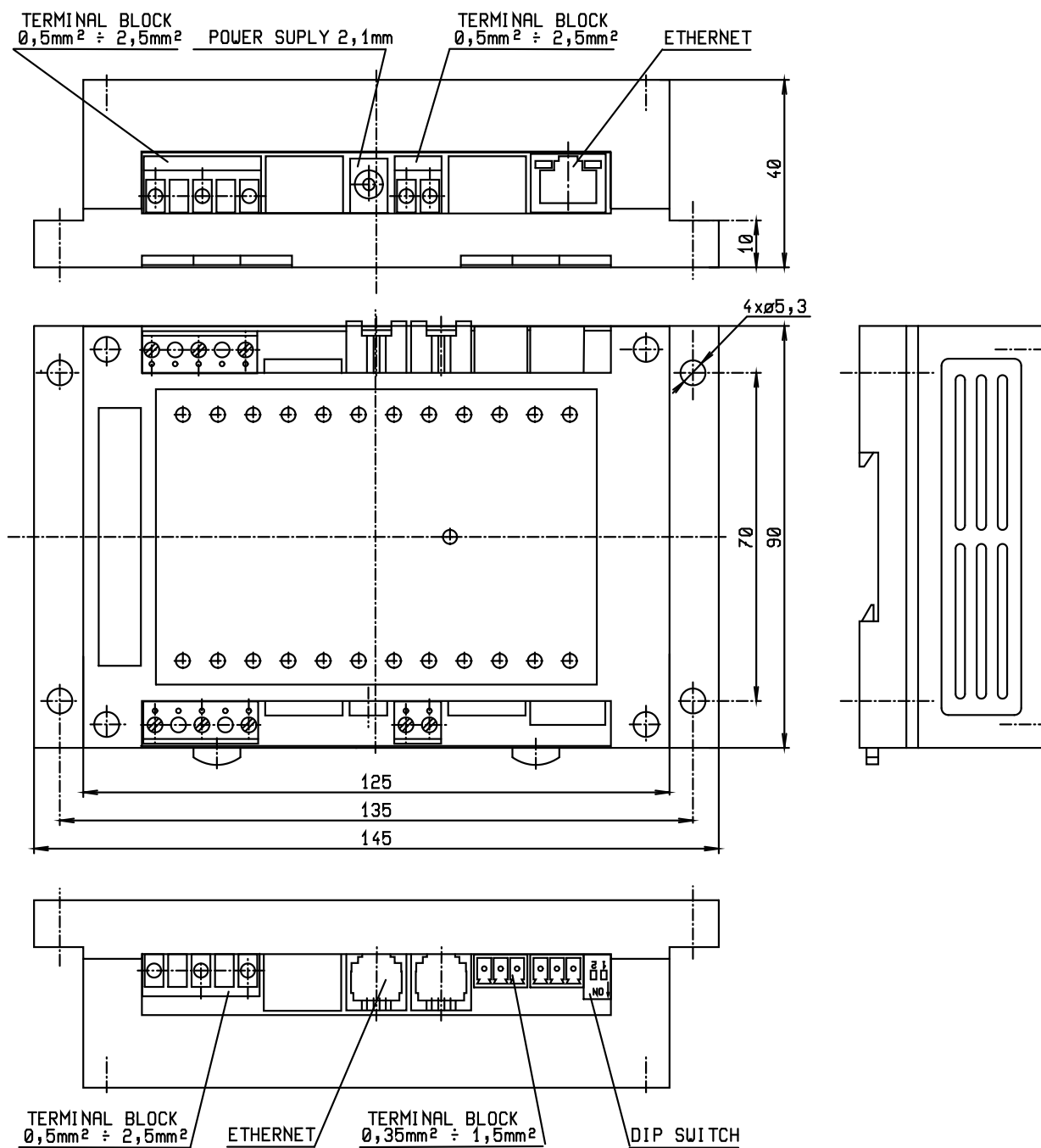


Third-party SW applications

HW group maintains a database of software applications that are tested to work with Poseidon products. See the HWG website for an overview:

- SNMP Network Management applications
- IP surveillance systems
- Security applications

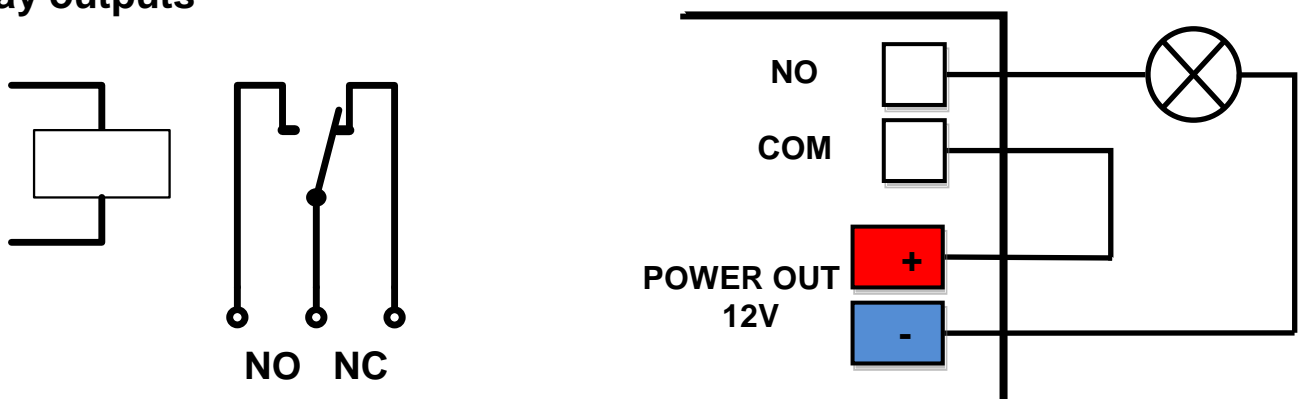
Technical specifications



- **Ethernet:** RJ45 – 10BASE-T/10 Mbit/s
- **Communication:** WEB, SNMP, XML, SMTP, DHCP
- **Sensors:** RJ11 ports for connecting 1-Wire sensors (temperature or humidity)
- **Digital inputs:** 4 dry (voltage free) input contacts
- **Digital outputs:** 2x relay - contacts rated at 110/230VAC / 16A
- **Device features**
 - **Alarming** when a reading threshold is exceeded
 - **Remote monitoring** of input states and temperature sensor
 - Remote **output control**
 - **Local output control** with Alarm conditions (Local Condition)

| ETHERNET | |
|----------------------------|--|
| Interface | RJ45 (10BASE-T) – 10 Mbps or 10/100 Mbps network compatible |
| Supported protocols | IP: ARP, TCP/IP (HTTP, Modbus over TCP, NTP, SMTP), UDP/IP (SNMP) |
| SNMP compatibility | Ver:1.00 compatible, partial ver. 2.0 implementation |
| SENSORS | |
| Port | S1, S2 |
| Type | HWg original accessories: 1-Wire (Temperature or Humidity) |
| Connector | RJ11 (1-Wire Bus) |
| Sensors | Up to 4 sensors in total |
| Sensors distance | Up to 60m per each single port – 2x 60m in total |
| DRY CONTACT INPUTS | |
| Port | I1, I2, I3, I4 |
| Type | Digital Input (ready for NO/NC Dry or Wet contact) |
| Sensitivity | 1 (On) = 0...500 Ω (Right pin from terminal block can be connected to 12V GND) |
| Max. distance | Up to 50m |
| OUTPUTS | |
| Port / type | OUT1, OUT2 / Relay contacts (NC-COM-NO) |
| Max. load | max. 24V / 16A DC; max. 250V / 16A AC |
| State | Power up state (no state restart memory) |
| POWER input | |
| Port | POWER 12-30V DC / 150 mA |
| Connector | Jack (barrel, inner 2.5 mm outer 6.3 mm) + Terminal block (parallel connection) |
| DIP SWITCH | |
| DIP1: Setup | ON = RS-232 Setup mode over serial port (RS-232 mode only) Load defaults: Toggle 3 times during first 5 seconds after power-up to load default settings. |
| DIP2: Security | ON = Secure mode – remote configuration disabled OFF = Non-secure mode – remote configuration enabled |
| Physical parameters | |
| Temperature range | Operating: -5 to 50 °C (23 to 122 °F) / Storage: -25 to 85 °C (-13 to 185 °F) |
| Dimensions / Mass | 145 x 90 x 45 [mm] / 225 g |
| EMC | FCC Part 15, Class B, CE - EN 55022, EN 55024, EN 61000 |
| Mount | Wall or DIN rail |

Relay outputs

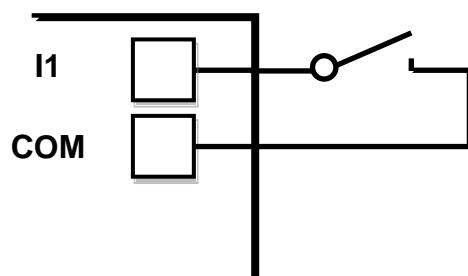


- NO and NC labels apply to Off (0) state, or device turned off
- When the output is On (1), a “**Normally Open**” (NO) relay contact is closed
- **Indication:** Contact state (closed / open) is indicated by a LED
- **Isolation:** The double-throw contact is electrically isolated from the rest of the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

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 IDs 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)

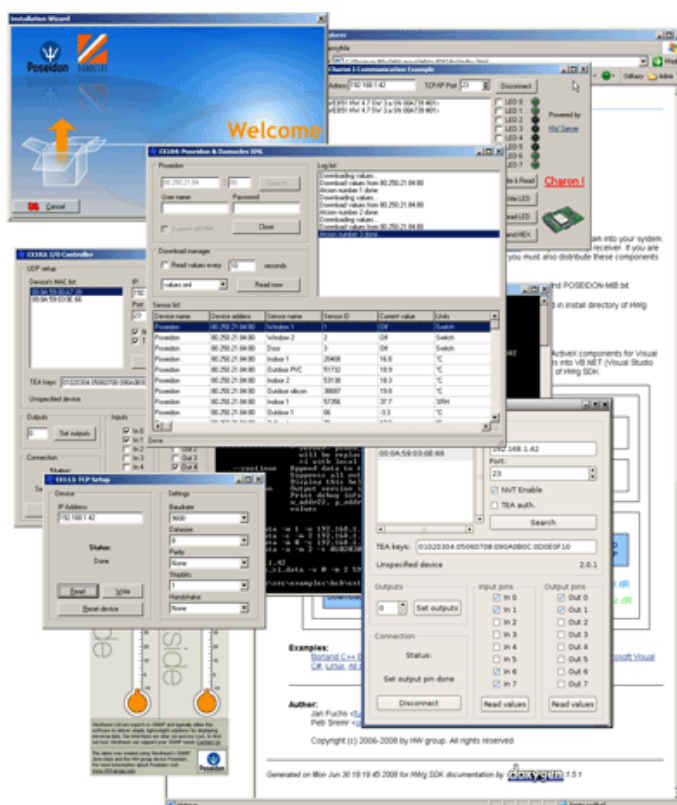
TIP

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

SDK (Software Development Kit)

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

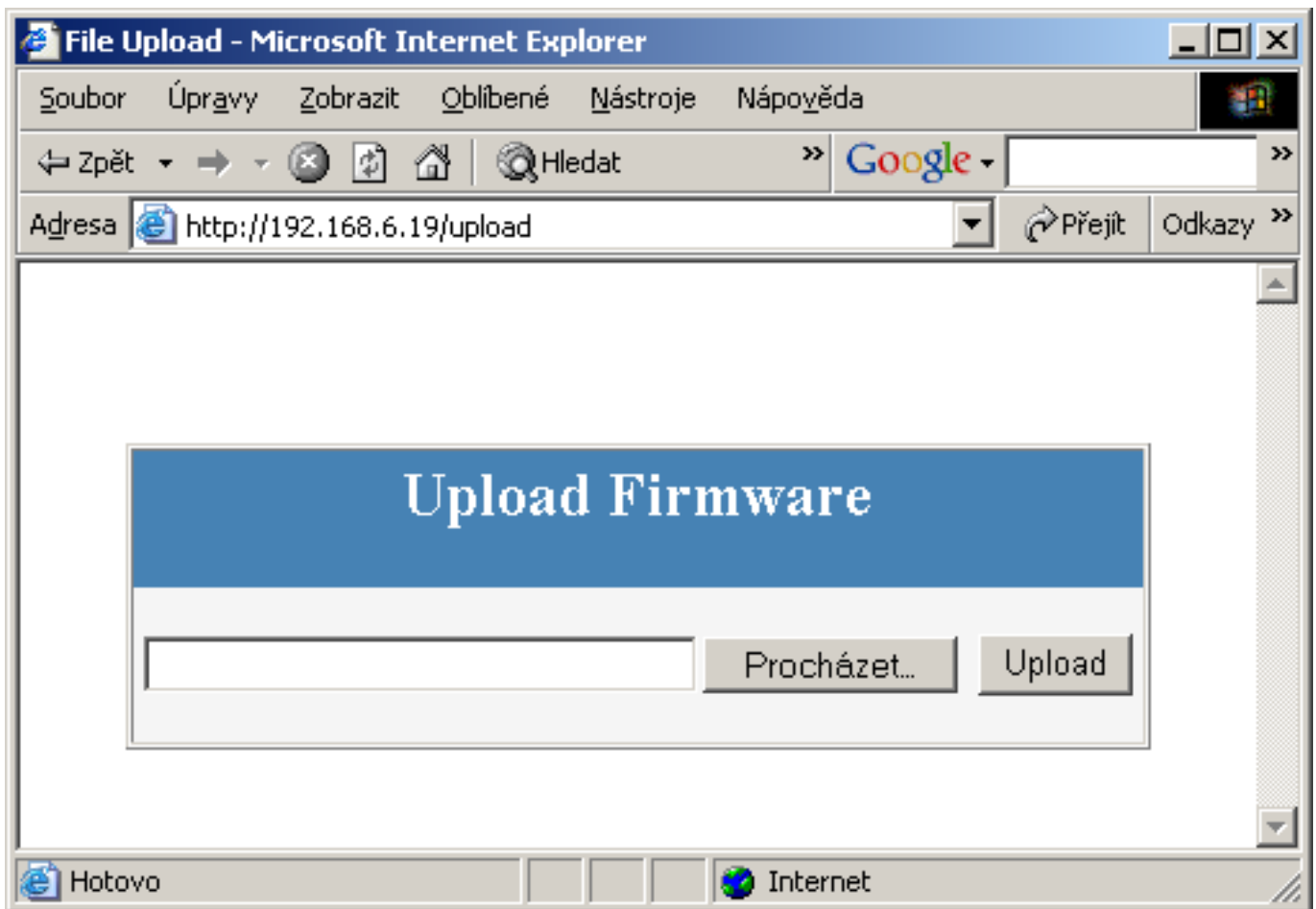


Note: The latest version of HWg SDK is available for download at the HWg website. You just need to register your e-mail.

Updating the firmware over the WEB

Upload the **.hwg** firmware file over http to <http://x.x.x.x/upload/>.

Connection problems etc. must be avoided during file transfer. If the update fails, upload the firmware over RS-232.



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**.