PRODUCT OVERVIEW
2021

Monitoring   **Access**   **IP Serial**

HW group

HW group s. r. o. is a Czech manufacturer of IoT monitoring and remote control solutions.
Our top quality products create a full ecosystem, from sensors to monitoring software.
All our units are manufactured in the European Union and sold in over 40 countries.

What do we make?

- IoT devices and sensors
- Monitoring and control solutions
- Online portal for IoT sensors
- Monitoring software and SDK
- Access control systems
- IP serial products

What makes us different?

- Rich and modular product ecosystem
- Compatible with many SW solutions and protocols
- Free SDK and Push protocol for 3rd party integration
- 18 years of experience with monitoring devices
- Strict quality control and compliance
- Made in the EU

Typical applications

- Temperature and humidity monitoring
- Water leaks and fire alarms
- Voltage, current, DI and DO monitoring
- Energy consumption metering
- Building management
- Access control and security

References

We have helped the following companies with their monitoring or access solutions.
We would be thrilled if you were the next.

Monitoring

- Sensor
- Detector
- Accessories

- Temperature
- Relative Humidity
- Dew point
- Water Leak Detection
- Voltage
- Smoke
- Pa Atmospheric pressure
- Gas
- lx Light
- A Current
- Contact
- Motion
- Airflow
- Supply
- W Energy

- 1-Wire sensors
- 1-Wire UNI sensors
- Digital input
- RS-485 industrial sensors
- M-Bus sensors
- WLD Water leak detection
- Open collector output
- Relay output
- Virtual output
- Relay output 1W-UNI
- PoE Power over Ethernet
- PoE Power over Ethernet on request
- Buffer Data logging
- SMS notification
- SNMP trap
- E-mail notification
- HW group SMS gateway
- Web server
- SensDesk compatible
- Ethernet
- Wi-Fi
- GSM / GPRS
- Lte
- NB-IoT Narrowband
- Battery / Accumulator

Access

- E-mail notification
- HW group SMS gateway
- Web server
- Data logging
- SNMP trap
- Ethernet
- Power over Ethernet on request

IP serial

- Serial port RS-232/485
- Web server
- Digital input
- Relay output
- Data logging
- Power over Ethernet on request

Monitoring

Our portfolio of monitoring and control units with LAN/WiFi/GSM/LTE connectivity offers a complete solution for monitoring your site – from measuring various quantities and watching the status to monitoring energy consumption. In addition to logging and analysis of measured values, immediate actions can be taken – an alarm immediately alerts you to a value out of a specified range.

Our units support a wide range of protocols to facilitate the integration with your existing system and 3rd party software. We offer dozens of types of sensors, detectors and accessories, particularly suitable for the areas mentioned below. We also offer our software, custom-designed to meet our clients' needs. Simply select (or ask for help with selecting) suitable device, sensors and software, easily install and configure them, and let our products do the rest.

Typical industry segments include: IT, electronics, industrial, telco, pharmaceuticals, food, shipping, transport, hotels/accommodation facilities. Our solutions are often deployed in data centers, BTS sites, factories, warehouses or pharmacies.

Data input	Processing	M2M transfer	SW apps
measured quantities, sensors, detectors, inputs / outputs	product lines, logging, analysis, alarms	XML/HTTP, SMNP, e-mail, GPRS/SMS	reports graphs, Excel, alarms

Poseidon2 4002

Secure solution for remote environment monitoring and control of outputs.

Poseidon2 4002 supports up to 16 sensors connected over 1-Wire / 1-Wire UNI, up to 26 sensors connected over RS-485 and up to 12 detectors connected to digital inputs. Poseidon2 4002 can control 4 digital NO/NC relay outputs, as well as up to 8 virtual digital outputs (VDO) at remote Poseidon2 or Damocles2 units (M2M).

This unit can be used as a stand-alone device with e-mail alerts, or as a part of a complex monitoring system with SMS alerts sent via a central HWg-SMS-GW3 / SMS-GW3 LTE gateway.

Protocols	HTTP, HTTPs, IPv6, MQTT (IoT), SMTP, SNMPv1, SNMPv3, SNMP traps, Modbus/TCP, XML, NetGSM, HWg-PUSH
Software	SensDesk, HWg-PDMS, HWg-Trigger

Poseidon2 3468

Remote monitoring and control for industrial applications with 230 V / 16 A relay outputs.

Poseidon2 3468 supports up to 8 sensors connected over 1-Wire / 1-Wire UNI and up to 4 detectors connected to digital inputs. Poseidon2 3468 can control 2 digital 230 V / 16 A relay outputs, as well as up to 8 virtual digital outputs (VDO) at remote Poseidon2 or Damocles2 units (M2M).
In addition to the standard 9–30 V power input, this unit can

be powered from -48 V to enable easy use in Telco solutions. The device can be monitored remotely over the internet using the SensDesk portal.

Protocols	HTTP, HTTPs, IPv6, MQTT (IoT), SMTP, SNMPv1, SNMPv3, SNMP traps, Modbus/TCP, XML, NetGSM, HWg-PUSH
Software	SensDesk, HWg-PDMS, HWg-Trigger

Poseidon2 3268

Remote monitoring of sensors and detectors and control of relay outputs.

Poseidon2 3268 supports up to 8 sensors connected over 1-Wire / 1-Wire UNI and up to 4 detectors connected to digital inputs. Poseidon2 3268 can control 2 digital NO/NC relay outputs, as well as up to 8 virtual digital outputs (VDO) at remote Poseidon2 or Damocles2 units (M2M).

Protocols	HTTP, HTTPs, IPv6, MQTT (IoT), SMTP, SNMPv1, SNMPv3, SNMP traps, Modbus/TCP, XML, NetGSM, HWg-PUSH
Software	SensDesk, HWg-PDMS, HWg-Trigger

Poseidon2 3266

Cost-effective model for remote monitoring of sensors and detectors.

Poseidon2 3266 supports up to 8 sensors connected over 1-Wire / 1-Wire UNI and up to 4 detectors connected to digital inputs. With support for over 50 SNMP and SCADA applications, Poseidon2 devices can be integrated in a wide range of monitoring and control systems. MQTT protocol enables integration in IoT solutions.

Protocols	HTTP, HTTPs, IPv6, MQTT (IoT), SMTP, SNMPv1, SNMPv3, SNMP traps, Modbus/TCP, XML, NetGSM, HWg-PUSH
Software	SensDesk, HWg-PDMS, HWg-Trigger

Damocles2 2404

Secure industrial I/O device with PoE and Telco -48 V power options.

Damocles2 2404 supports up to 24 detectors connected to digital inputs. In order to connect meters (such as water, gas or electricity meters), all digital inputs feature SO pulse counters with memory. Damocles2 2404 can control 4 digital NO/NC relay outputs, as well as up to 8 virtual digital outputs (VDO) at remote Poseidon2 or Damocles2 units (M2M).

Thanks to 9–30 V DC, -48 V and PoE power options, Damocles2 2404 can be deployed in a wide range of situations.

Protocols	HTTP, HTTPs, IPv6, MQTT (IoT), SMTP, SNMPv1, SNMPv3, SNMP traps, Modbus/TCP, XML, NetGSM, HWg-PUSH
Software	SensDesk, HWg-PDMS, HWg-Trigger

Damocles2 1208

Industrial I/O with enhanced IP security and OC outputs.

Damocles2 1208 supports up to 12 detectors connected to digital inputs. In order to connect meters (such as water, gas or electricity meters), all digital inputs feature S0 pulse counters with memory. Damocles2 1208 can control 8 open collector digital outputs, as well as up to 8 virtual digital outputs (VDO) at remote Poseidon2 or Damocles2 units (M2M).

Damocles2 1208 is an Ethernet I/O device with enhanced IP

security and an excellent cost per I/O pin. The device can be monitored remotely over the internet using the SensDesk portal.

Protocols	HTTP, HTTPs, IPv6, MQTT (IoT), SMTP, SNMPv1, SNMPv3, SNMP traps, Modbus/TCP, XML, NetGSM, HWg-PUSH
Software	SensDesk, HWg-PDMS, HWg-Trigger

Damocles2 MINI

Smart I/O controlled over Ethernet.

Damocles2 MINI supports up to 4 detectors connected to digital inputs. In order to connect meters (such as water, gas or electricity meters), all digital inputs feature S0 pulse counters with memory. Damocles2 MINI can control 2 digital NO/NC relay outputs, as well as up to 8 virtual digital outputs (VDO) at remote Poseidon2 or Damocles2 units (M2M).

Damocles2 MINI is a compact and cost-effective Ethernet I/O

device with enhanced IP security. The device can be monitored remotely over the internet using the SensDesk portal.

Protocols	HTTP, HTTPs, IPv6, MQTT (IoT), SMTP, SNMPv1, SNMPv3, SNMP traps, Modbus/TCP, XML, NetGSM, HWg-PUSH
Software	SensDesk, HWg-PDMS, HWg-Trigger

STE2 r2

5 1-Wire *sensors*
5 1-Wire UNI *sensors*
2 DIGITAL *input*
RS-485 INDUSTRIAL *sensors*
M-Bus *sensors*
WLD

OPEN COLLECTOR *output*
RELAY *output*
VIRTUAL *output*
External RELAY *output*
PoE
Buffer *data loger*

SMS *alert*
SNMP *trap*
2 E-mail *alert*
2 SMS *gateway*
Web *server*
SensDesk

LAN
(WiFi)
GSM/GPRS
Lte
NB-IoT
(battery)

WiFi and Ethernet temperature and humidity sensor with digital inputs.

STE2 r2 supports up to 5 sensors connected over 1-Wire / 1-Wire UNI and up to 2 detectors connected to digital inputs. Whenever a value is out of the specified range or a contact changes state, an e-mail notification is sent. Besides a standard 5 V adapter, STE2 r2 can be powered over the Ethernet (PoE).

This is an ideal solution for temperature and humidity monitoring in sensitive environments, with the possibility to connect a wide range of supplemental detectors, such as door contacts, motion detectors, water leak detectors, smoke detectors, CO_2 and voltage sensors.

Protocols	HTTP, HTTPS, SNMPv1, HWg-PUSH, XML, NetGSM
Software	SensDesk, HWg-PDMS, HWg-Trigger

HWg-Ares 12

Icons: 14 1-Wire sensors | 14 1-Wire UNI sensors | 2 DIGITAL input | RS-485 INDUSTRIAL sensors | M-Bus sensors | WLD | OPEN COLLECTOR output | RELAY output | VIRTUAL output | External RELAY output | PoE | Buffer data loger | 5 SMS alert | SNMP trap | 5 E-mail alert | SMS gateway | Web server | SensDesk | LAN | (WiFi) | GSM/GPRS | Lte | NB-IoT | ACCU

Industrial measuring and monitoring device for 14 sensors with GSM communication and back-up power.

HWg-Ares12 supports up to 14 sensors connected over 1-Wire/1-Wire UNI and up to 2 detectors connected to digital inputs. In order to connect meters (such as water, gas or electricity meters), physical digital inputs feature S0 pulse counters with memory. HWg-Ares12 can be extended with a relay output expansion module connected over the 1-Wire UNI bus to allow remote control of other appliances, or to implement a "thermostat" function. HWg-Ares12 is an industrial device with back-up power for remote monitoring and alerting over GSM from locations without LAN access.

Protocols	HWg-PUSH, NetGSM, SMTP
Software	SensDesk, HWg-PDMS

Ares 12 LTE

Icons: 14 1-Wire sensors | 14 1-Wire UNI sensors | 2 DIGITAL input | RS-485 INDUSTRIAL sensors | M-Bus sensors | WLD | OPEN COLLECTOR output | RELAY output | VIRTUAL output | External RELAY output | PoE | Buffer data loger | 5 SMS alert | SNMP trap | 5 E-mail alert | SMS gateway | Web server | SensDesk | LAN | (WiFi) | GSM/GPRS | Lte | NB-IoT | ACCU

Industrial measuring and monitoring for 14 sensors with GSM and LTE communication and back-up power.

Ares 12 LTE supports up to 14 sensors connected over 1-Wire/1-Wire UNI and up to 2 detectors connected to digital inputs. In order to connect meters (such as water, gas or electricity meters), physical-digital inputs feature S0 pulse counters with memory. Ares 12 LTE can be extended with a relay output expansion module connected over the 1-Wire UNI bus to allow remote control of other appliances, or to implement a "thermostat" function. Ares 12 LTE is an industrial device with back-up power for remote monitoring and alerting over GSM from locations without LAN access.

Protocols	HWg-PUSH, NetGSM, SMTP
Software	SensDesk, HWg-PDMS

HWg-Ares 10

Cost-effective GSM thermometer with remote management and alerts sent by e-mail, text messages or by dialing a number.

HWg-Ares 10 supports up to 6 sensors connected over 1-Wire/ 1-Wire UNI and up to 2 detectors connected to digital inputs. In order to connect meters (such as water, gas or electricity meters), the digital inputs feature S0 pulse counters with memory. HWg-Ares 10 is a cost-effective GSM thermometer for remote monitoring and alerting over GSM for locations without LAN access. During power outages or high/low temperatures this device calls your cell phone and/or immediately sends an email/SMS.

Protocols	HWg-PUSH, NetGSM, SMTP
Software	SensDesk, HWg-PDMS

Ares 10 LTE

Economical GSM and LTE thermometer with remote management and alarm via ringing, SMS and e-mail.

Ares 10 LTE supports up to 6 sensors connected over 1-Wire/ 1-Wire UNI and up to 2 detectors connected to digital inputs. In order to connect meters (such as water, gas or electricity meters), the digital inputs feature S0 pulse counters with memory. Ares 10 LTE is a cost-effective GSM thermometer for remote monitoring and alerting over GSM for locations without LAN access. During power outages or high/low temperatures this device calls your cell phone and/or immediately sends an email/SMS.

Protocols	HWg-PUSH, NetGSM, SMTP
Software	SensDesk, HWg-PDMS

Water Leak Detection system

WLD2

4 zones water leak detector with Ethernet connectivity and WIFI.

WLD2 is a WiFi / Ethernet flood detector with WWW, SNMP and PoE support, designed for flood detection using flood detection cables. The sensing cable detects as little as a few drops of liquid and can be also used to detect condensation. Whenever a liquid is detected, the device sends an e-mail or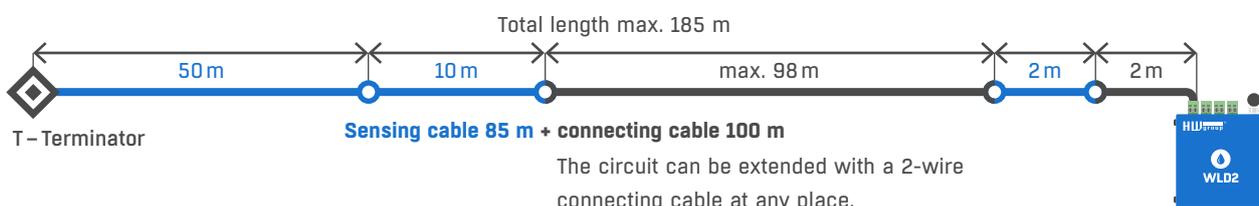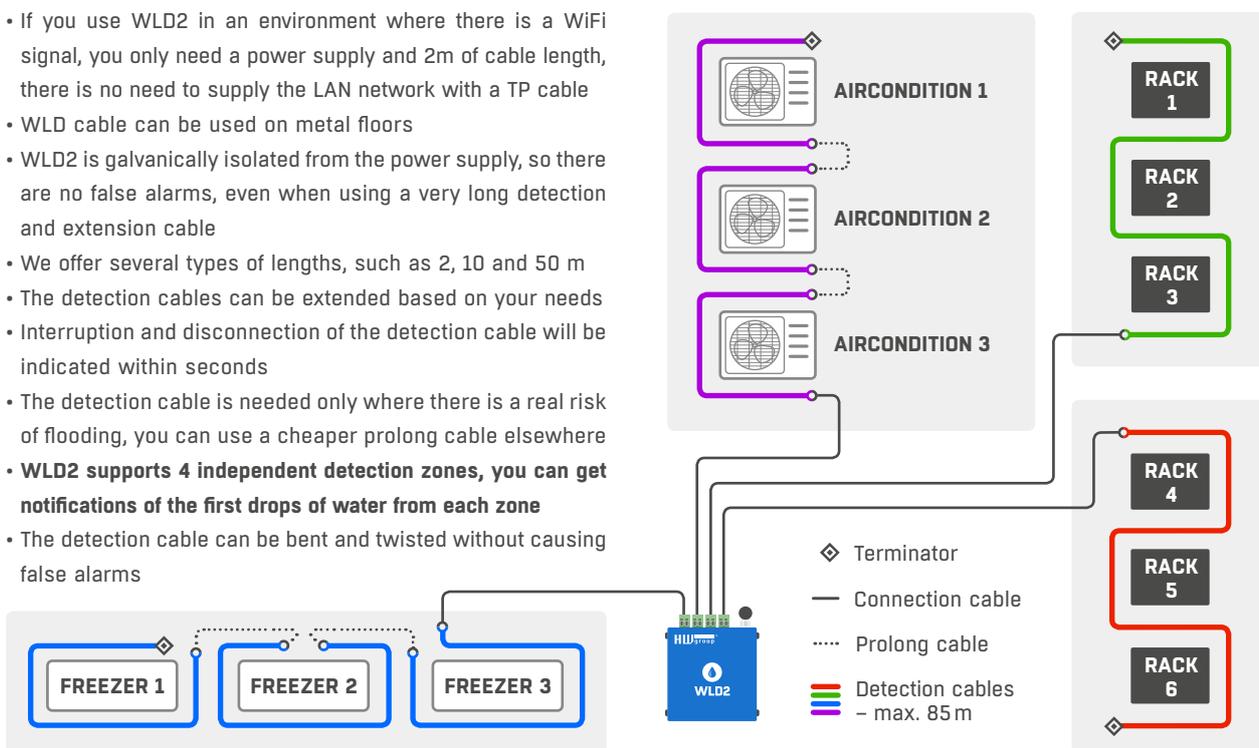 an SNMP Trap, or uses a central SMS gateway (HWg-SMS-GW3 / SMS-GW3 LTE) to send a text message. By providing early detection and warning, WLD2 can prevent water damage and avoid the associated costs.

Protocols	HTTP, HTTPS, SNMPv1, SNMP traps, XML, NetGSM
Software	SensDesk, HWg-PDMS, HWg-Trigger

Why is the WLD water cable such a robust solution?

- If you use WLD2 in an environment where there is a WiFi signal, you only need a power supply and 2m of cable length, there is no need to supply the LAN network with a TP cable
- WLD cable can be used on metal floors
- WLD2 is galvanically isolated from the power supply, so there are no false alarms, even when using a very long detection and extension cable
- We offer several types of lengths, such as 2, 10 and 50 m
- The detection cables can be extended based on your needs
- Interruption and disconnection of the detection cable will be indicated within seconds
- The detection cable is needed only where there is a real risk of flooding, you can use a cheaper prolong cable elsewhere
- **WLD2 supports 4 independent detection zones, you can get notifications of the first drops of water from each zone**
- The detection cable can be bent and twisted without causing false alarms

AIRCONDITION 1

AIRCONDITION 2

AIRCONDITION 3

RACK 1
RACK 2
RACK 3

RACK 4
RACK 5
RACK 6

FREEZER 1   FREEZER 2   FREEZER 3

◈ Terminator
— Connection cable
···· Prolong cable
Detection cables – max. 85 m

Total length max. 185 m

| 50 m | 10 m | max. 98 m | 2 m | 2 m |

T – Terminator

Sensing cable 85 m + connecting cable 100 m

The circuit can be extended with a 2-wire connecting cable at any place.

Sensor WLD Relay 1W-UNI

Water leak detector that detects water in a 2D area using a sensing cable and signals by switching a relay.

Sensor WLD Relay 1W-UNI can work as a stand-alone device, or as a sensor connected to Poseidon2 or HWg-Ares. The sensing cable detects as little as a few drops of a liquid, and can be also used to detect condensation. Whenever a liquid is detected, the device switches the relay, or uses a Poseidon2 or HWg-Ares to send an e-mail or a SNMP Trap. By providing

an early detection and warning, Sensor WLD Relay 1W-UNI can prevent damages and avoid the associated costs even at places without Ethernet connectivity.

Protocols	–
Software	–

HW group offers several products that provide ideal solutions for flood and water leak detection. See the table below and discover the best solution for your situation:

	HWg-WLD	WLD2	SD-WLD	WLD-Relay
Detection zones	1	4	1	1
Max. length of WLD sensing cable	85 m	85 m	85 m	85 m
Max. length of WLD extension cable	100 m	100 m	100 m	100 m
LAN (RJ45)	✔	✔	✔	✖
WiFi	✖	✔	✔	✖
Connection to the SensDesk Portal	✖	✔	✔	✖
Alert for broken LAN / WiFi connection	✖	SensDesk/HWg-Trigger	SensDesk	✖
1Wire-UNI output (RJ11)	✖	✖	✖	✔
Relay output	✖	✖	✖	✔
Flood / torn cable indication	✔	✔	✔	Poseidon2
It works with remote relay	✖	Poseidon2/Damocles2	SensDesk	✖

HWg-SMS-GW3
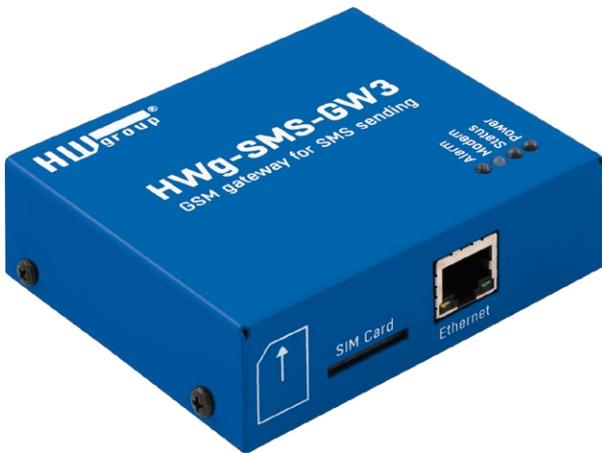
GSM gateway for sending text messages (SMS) over the Ethernet.

HWg-SMS-GW3 is a central text message (SMS) gateway that HWg devices and applications in the same network can use to dial numbers or send SMS alerts. Target phone numbers are specified in the sending device or the HWg-Trigger application. The central HWg-SMS-GW3 text message gateway significantly saves costs of external GSM modems, and the entire installation only needs one SIM card. It sends messages from any connected device, even without an internet connection.

Protocols	SNMPv1, SNMPv3, XML, NetGSM
Software	HWg-Trigger

SMS-GW3 LTE

SMS-GW3 LTE is a LAN gateway for sending alarm SMS from HW group devices.

SMS-GW3 LTE is a central text message (SMS) gateway that HWg devices and applications in the same network can use to dial numbers or send SMS alerts. Target phone numbers are specified in the sending device or the HWg-Trigger application. The central SMS-LTE text message gateway significantly saves costs of external GSM modems, and the entire installation only needs one SIM card. It sends messages from any connected device, even without an internet connection.

Protocols	SNMPv1, SNMPv3, XML, NetGSM
Software	HWg-Trigger

IP WatchDog2 Industrial

Industrial watchdog that checks devices for heartbeat over the Ethernet and RS-232.

IP WatchDog2 Industrial monitors the correct functioning of devices over LAN (PING / WEB) or serial line (RS-232). When an outage is detected, it reacts by power-cycling or restarting the device using its two output relays. Everything takes place automatically without human intervention. Up to 10 devices can be monitored. An e-mail or SNMP Trap can be also sent in response to an outage. With a SMS gateway, it can even send text message alerts.

Protocols	HTTP, SNMPv1, SNMP trap, HWg-PUSH, XML, NetGSM
Software	SensDesk, HWg-PDMS, HWg-Trigger

IP WatchDog2 Lite

A watchdog that checks devices for heartbeat over the Ethernet.

IP WatchDog2 Lite monitors the correct functioning of devices over LAN (PING / WEB). When an outage is detected, it reacts by power-cycling or restarting the device using its two output relays. Everything takes place automatically without human intervention. Up to 10 devices can be monitored. An e-mail or SNMP Trap can be also sent in response to an outage. With a SMS gateway, it can even send text message alerts thanks to when there is a problem, you will always be alerted on time.

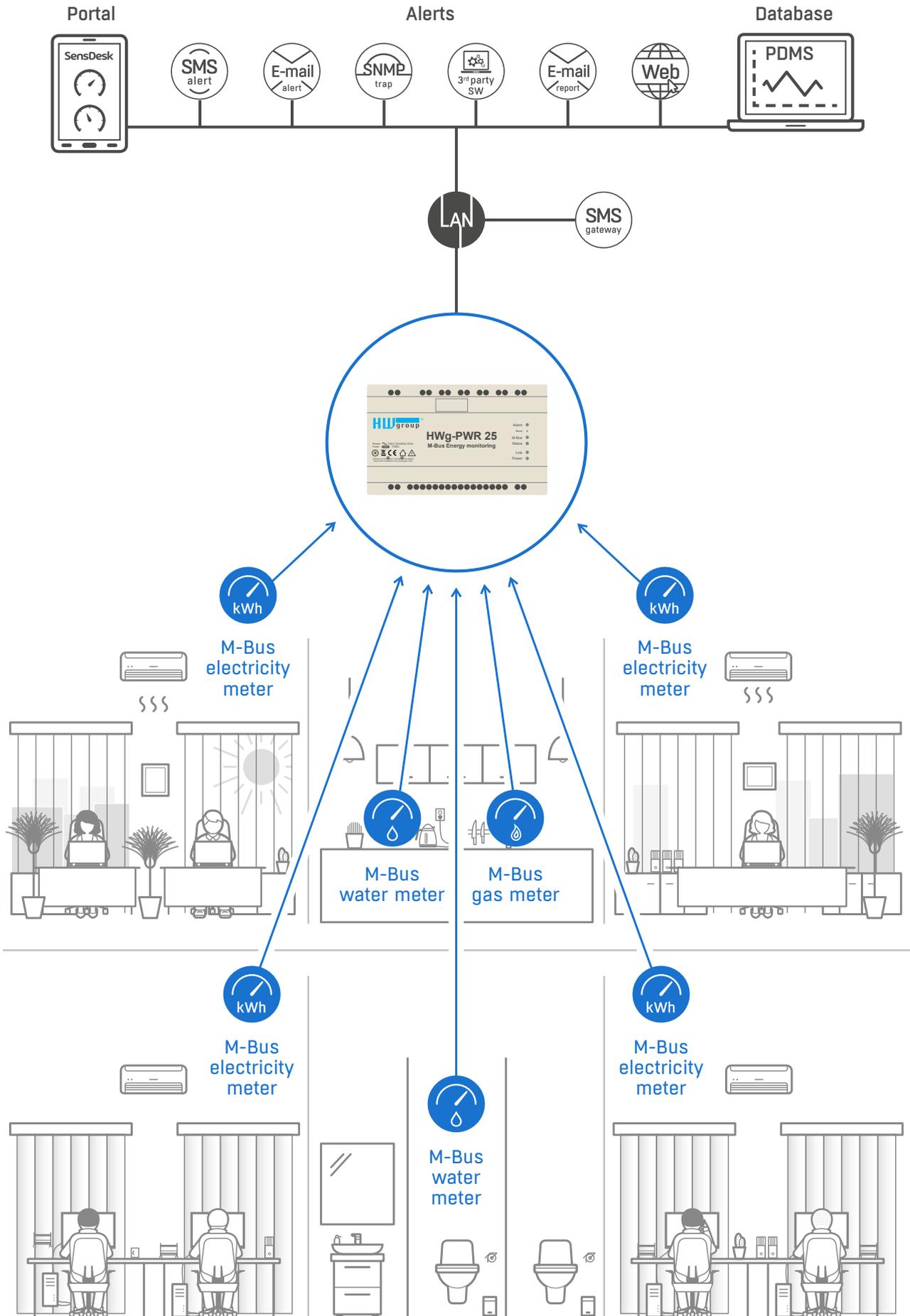| Protocols	HTTP, SNMPv1, SNMP trap, HWg-PUSH, XML, NetGSM
Software	SensDesk, HWg-PDMS, HWg-Trigger

HWg-PWR 3/12/25

Smart Ethernet device for remote consumption monitoring and collecting data from external M-Bus meters.

HWg-PWR is available in three versions for connecting 3, 12 or 25 external meters with the M-Bus (EN13757) interface. It enables remote monitoring of consumption and other data from a wide range of meters (such as electricity, gas and water meters). Meters from different manufacturers can be combined. When a value is outside of the specified range, HWg-PWR can send an e-mail alert or a SNMP Trap. With a SMS gateway, it can even send text message alerts.

Protocols	HTTP, SNMPv1, SNMP trap, HWg-PUSH, Modbus/TCP, XML, NetGSM
Software	SensDesk, HWg-PDMS, HWg-Trigger

Portal

Alerts

Database

SensDesk

SMS alert

E-mail alert

SNMP trap

3rd party SW

E-mail report

Web

PDMS

LAN

SMS gateway

HWg-PWR 25
M-Bus Energy monitoring

kWh

M-Bus electricity meter

M-Bus water meter

M-Bus gas meter

kWh

M-Bus electricity meter

kWh

M-Bus electricity meter

M-Bus water meter

kWh

M-Bus electricity meter

SD devices

The SD family are 4 simple devices for the monitoring of temperature, humidity, voltage, current and other parameters. They also detect water leaks, smoke, movement or open doors. The devices connect via Ethernet or WiFi to the SensDesk.com portal. SD devices are a full, scalable and universal monitoring solution. We offer an ecosystem of 100s of precise sensors and detectors.

Nyborgsgatan, Arvidsjaur	2	WLD		
89 Ave NW, Edmonton	45.3	%RH		
Naig Rd 29, Nágpur	24,6	°C		
7-13-5 Nishi-Shinjuku, Tokyo	0	none unit		

Dashboards   Device groups   Locations   User management   Graphs
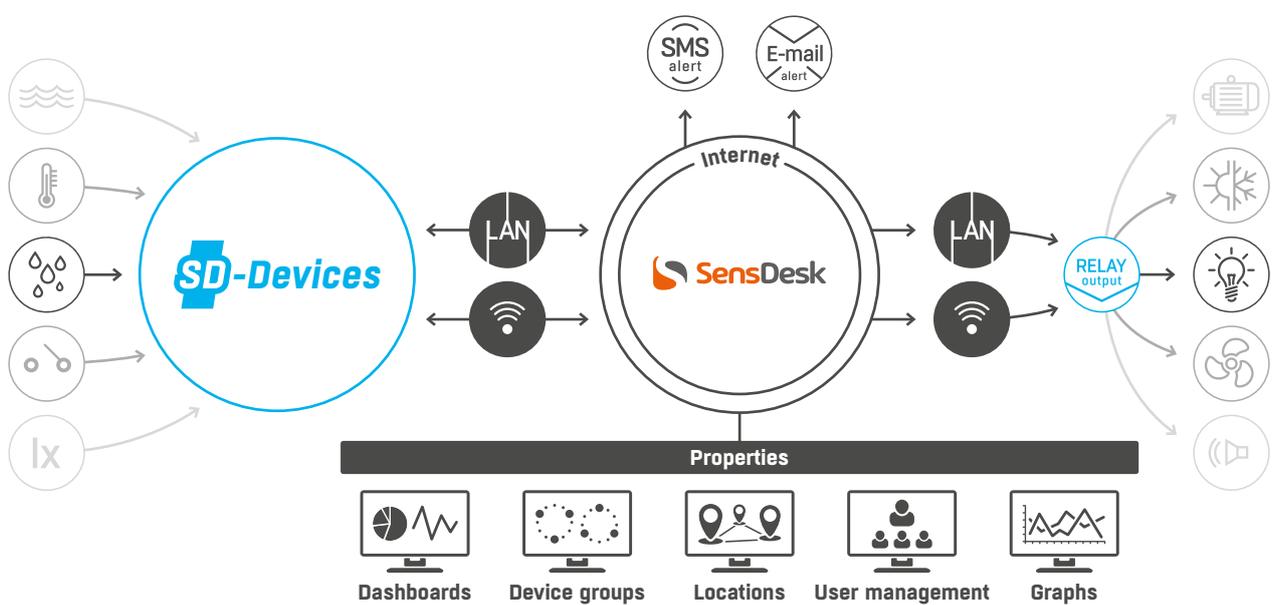
SD-2x1Wire

Simple device for monitoring temperature, humidity. Includes Ethernet and WiFi connectivity.

SD-2x1Wire is a device for connecting thermometers, humidity sensors, or other sensors via the 1-Wire bus. The device allows connecting four sensors with the 1-Wire or 1-Wire UNI bus.
For configuration, SD-2x1Wire features a built-in web server and WiFi connectivity. The device can be monitored remotely over the Internet using the free SensDesk portal and the

SensDesk Mobile app, it can send an e-mail alert whenever the specified range of values is exceeded. If you also use our SMS-GW3 together with the portal, the alerts can be also sent as text messages (SMS).

Protocols	HTTP, DHCP, SNTP, HWg-Push
Software	SensDesk

SD-WLD

SD-WLD is a water leak detector with Ethernet and WiFi that detects the presence of water using a sensing cable.

SD-WLD is a simple detector that detects water leaks using a moisture-sensing cable. Thanks to early detection and alerting, SD-WLD can prevent substantial damages caused by unexpected adverse environment conditions.
For configuration, SD-WLD features a built-in web server and WiFi connectivity. The device can be monitored remotely over

the Internet using the free SensDesk portal and the SensDesk Mobile app.

Protocols	HTTP, DHCP, SNTP, HWg-Push
Software	SensDesk

SD-2xIn

Simple device with WiFi and Ethernet for monitoring open doors and windows.

SD-2xIn is a device for connecting door or window contacts, PIR motion detectors or smoke or gas detectors with a dry contact output. It allows connecting 2 independent sensors.
For configuration, SD-2xIn features a built-in web server and WiFi connectivity. The device can be monitored remotely over the Internet using the free SensDesk portal and the SensDesk Mobile app.

Protocols	HTTP, DHCP, SNTP, HWg-Push
Software	SensDesk

SD-2xOut

Simple device with two digital outputs. Includes Ethernet and WiFi connectivity.

The SD-2xOut device features two digital outputs that can be easily controlled using the SensDesk portal.
For configuration, SD-2xOut features a built-in web server and WiFi connectivity. The device can be monitored remotely over the Internet using the free SensDesk portal and the SensDesk Mobile app.
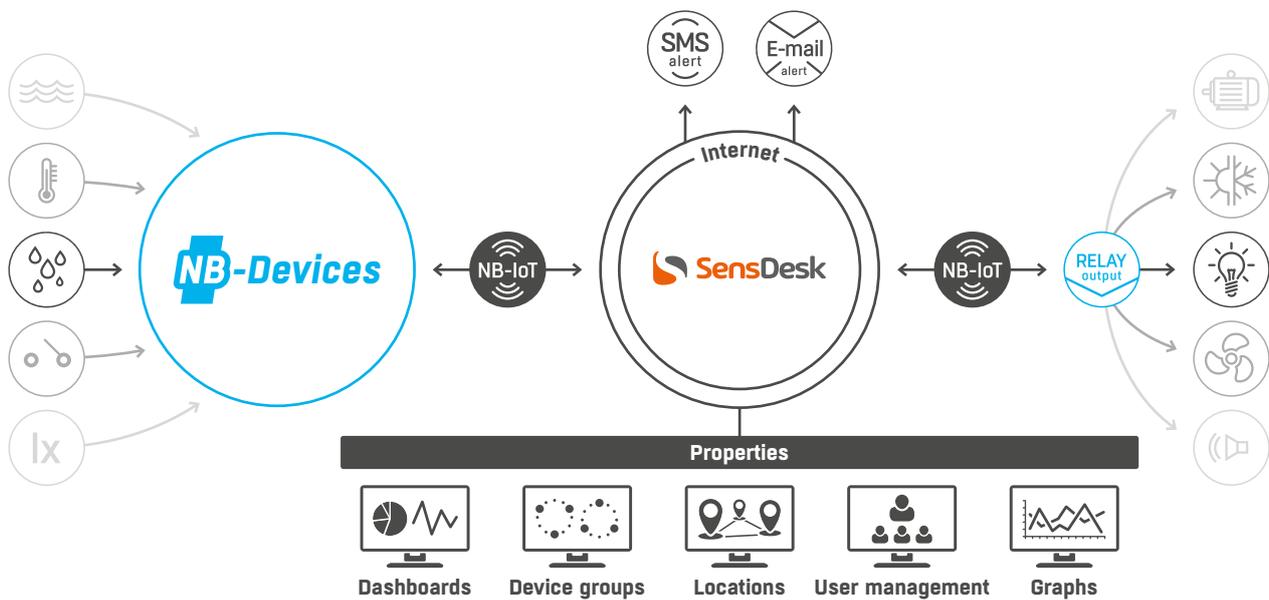
Protocols	HTTP, DHCP, SNTP, HWg-Push
Software	SensDesk

NB devices

The NB family are simple devices for the monitoring of temperature, humidity, water leaks, voltage, current and other values in remote places. The Narrowband IoT devices are battery powered with a battery lifetime of 2 years. The devices connect to the SensDesk.com portal where you can monitor and control your entire system. Your project is set up in just a few clicks and you can get your data in minutes.

SMS alert

E-mail alert

Internet

NB-Devices ↔ NB-IoT ↔ SensDesk ↔ NB-IoT ↔ RELAY output

Properties

Dashboards   Device groups   Locations   User management   Graphs

NB-2x1Wire

A simple device for monitoring temperature, humidity and more in remote places. Narrowband IoT connectivity.

NB-2x1Wire is a device for connecting temperature, humidity or other 1-wire sensors. The device allows connecting four sensors with the 1-Wire or 1-Wire UNI bus. It is powered by an internal battery or external power supply.

The device can be monitored and configured remotely using the SensDesk portal and the SensDesk Mobile app.

Protocols	COAP, DTLS
Software	SensDesk

NB-WLD

NB-WLD is a water leak detector with Narrowband IoT connectivity. It uses a very sensitive detection cable.

NB-WLD is a simple device that detects water leaks using a moisture-sensing cable. Thanks to early detection and alerting, NB-WLD can prevent substantial damages. It is powered by an internal battery or external power supply.

The device can be monitored and configured remotely using the SensDesk portal and the SensDesk Mobile app.

Protocols	COAP, DTLS
Software	SensDesk

NB-2xIn

An easy to use device with Narrowband IoT connectivity for monitoring digital inputs in remote places.

NB-2xIn is a device for connecting door contacts, smoke, gas and motion detectors with a dry contact output. It allows connecting 2 independent sensors. It is powered by an internal battery or external power supply.

The device can be monitored and configured remotely using the SensDesk portal and the SensDesk Mobile app.

Protocols	COAP, DTLS
Software	SensDesk

NB-2xOut

Narrowband IoT device with relay outputs, that can control remote technology manually or based on conditions.

The NB-2xOut device features two relay outputs that can be easily controlled using the SensDesk portal. The device can be controlled manually or based on alarms from other devices. It is powered by an internal battery or external power supply. The device can be monitored and configured remotely using the SensDesk portal and the SensDesk Mobile app.

Protocols	COAP, DTLS
Software	SensDesk

SensDesk

Monitoring portal for your IoT projects

SensDesk.com is a web-based service for online remote monitoring and control of HW group sensors and devices. You can monitor temperature, humidity, water leaks, digital inputs, voltage, current, energy consumption and many more. You can also remotely control your technology using outputs.

SensDesk is easy to setup, just connect your HW group device to the network, create an account and start monitoring!

SensDesk is for end users as well as project installations with hundreds of devices. It can even also be installed on your own servers.

The setup is quick and easy and our sensors can provide data over Ethernet, WiFi, GPRS, LTE or Narrowband IoT.

WHY USE SENSDESK.COM?

Remote monitoring
Temperature, humidity, power consumption, intrusion, water detection and many more...

Event alerts
Get alarms over SMS or e-mail and be sure you can respond to the event in time.

Reports and graphs
Generate automatic reports and access data history with just a click.

Remote output control
Use conditions to automatically respond to alarms or control outputs manually.

User friendly and reliable
Easy for home users, robust, customizable and scalable for business.

SOLUTIONS FOR YOUR BUSINESS

Data centers & server rooms

Industry & manufacturing

Warehouses & storage rooms

Schools & public buildings

Smart cities & municipal

Logistics & transportation

Hotels & house rentals

Pharmacy & medical

BTS stations & technology

Stores & retail

Alert services

You can set a safe range of values for any sens in the SensDesk. If this range is exceeded, the system shows an alert for the affected sensor. You can also set more safer ranges if you wish. Alerts can be forwarded to e-mail or SMS. All alerts, such as temporary device or sensor inaccessibility or values out of range, are recorded in the event log for easy system diagnostics.

Remote process control and switching

SensDesk can monitor and control virtual outputs of connected devices. User can switch any output manually; in addition, SensDesk provides several simple algorithms for switching the outputs automatically according to sensor states.
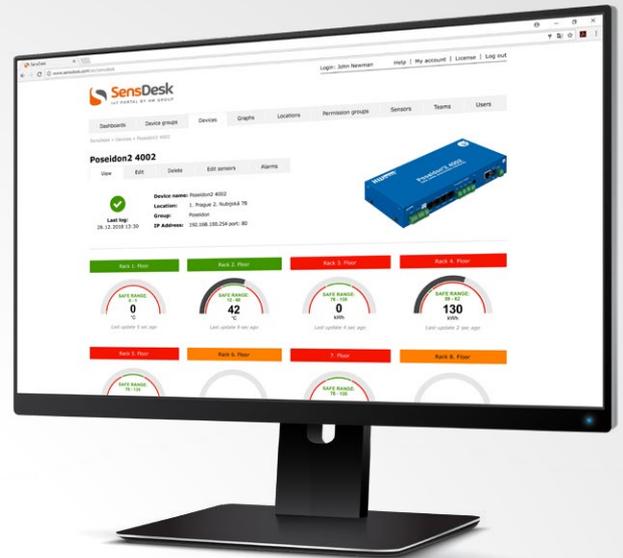
User dashboard, groups and locations

SensDesk provides tools for customizing the user interface. Users can define names of their sensors, devices and locations. You can also use group related monitoring and control. If you have 1 sensor or 1000, SensDesk always makes it easy for you to see alerts at a glance. All data are presented in charts, with visible operating/safe range limits. Recorded data can be downloaded from the portal in many formats, including XLS, CSV, PDF, JPG, SVG and more.

Quick setup and configuration

All HW group IoT devices have a built-in auto detection for the SensDesk portal. Connection of a new device to SensDesk takes less than 60 seconds! All sensors and devices can have custom names and arranged into groups and locations to provide a clear overview according to user preferences.

SensDesk is free

Free users can monitor any number of sensors, connected to up to 3 HW group devices. If you need to connect more devices, paid accounts are available.
You can also buy your own dedicated SensDesk and run it as a virtual image on your own server.

SensDesk solutions

The SensDesk portal is a universal and robust solution for many applications. You can get an account on www.sensdesk.com or you can buy the portal for yourself.

The SensDesk handles all the monitoring you need, but it can also remotely upgrade your devices, identify problems, perform mass operations and manage your entire IoT network. You can always rely on the data, and SensDesk will give you the best tools to analyze what you have measured. When there is a problem, you will always be alerted on time. You can also get periodical reports to make sure you are compliant with regulations.
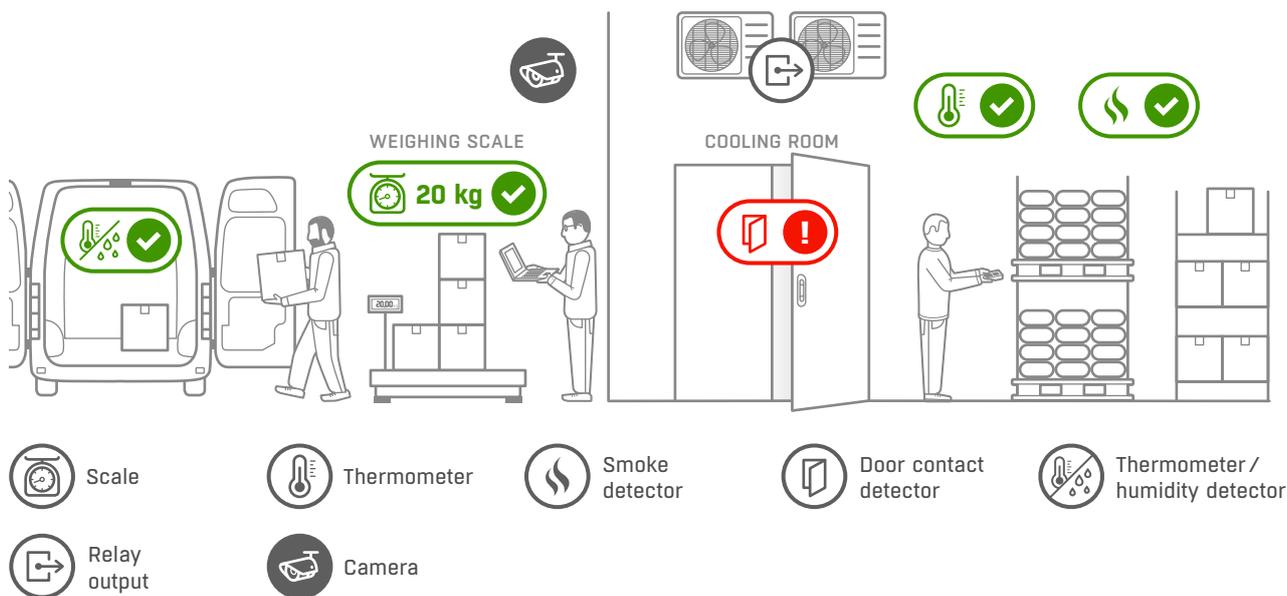
Stores and retail

Thermometer	Water leak detector	Motion detector

Storing food requires precise temperature monitoring, fast alarms and detailed reporting. SD devices with the SensDesk portal help you monitor your refrigerator temperature. The SD-WLD will detect water leaks under the refrigerator. Thanks to the SD-2xIn you receive alarms when unauthorized motion is detected in your store. All your data can be summarized in automated reports and emailed to you regularly.

✔ **Temperature and humidity monitoring**
✔ **Water leaks and fire detection**
✔ **Motion detection**
✔ **Automatic reports**
✔ **Easy installation**

Warehouses and storage rooms

WEIGHING SCALE

20 kg

COOLING ROOM

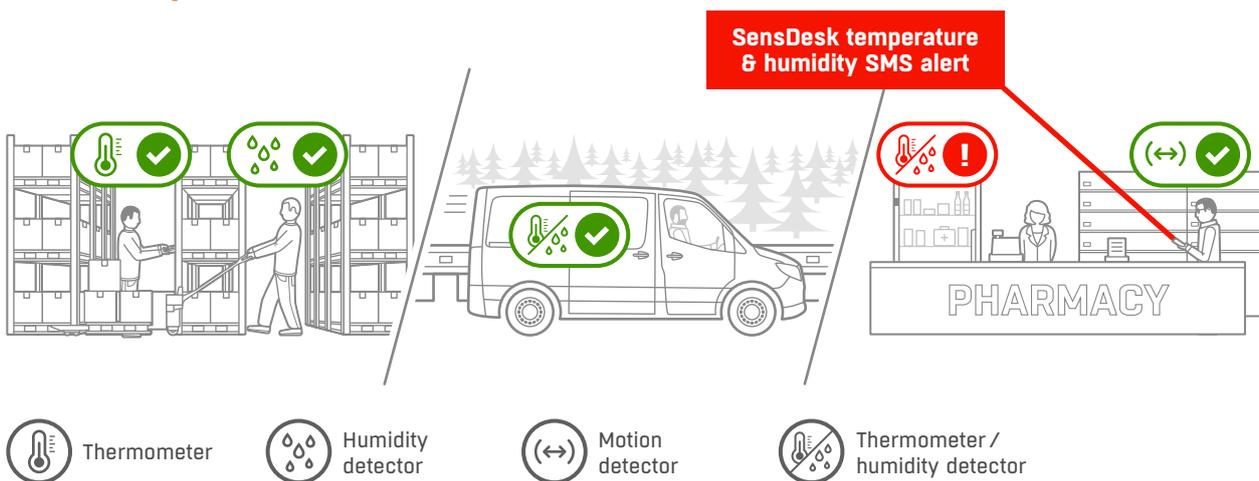|		
Scale	Thermometer	Smoke detector
Relay output	Camera	Door contact detector
		Thermometer / humidity detector

Warehouse operators need an efficient way to monitor temperature and humidity in their storage facilities and vehicles. You can also make sure your cargo is within the weight limit. In case of overheating, you can remotely control the air conditioner. Thanks to the SensDesk monitoring portal and HW group IoT devices, your storage facilities will now be safe and compliant to regulations.

✔ Temperature and humidity monitoring
✔ Water leaks and fire detection
✔ Intrusion detection
✔ Remote air condition control
✔ Easy deployment

Pharmacy and medical

SensDesk temperature & humidity SMS alert

PHARMACY

Thermometer	Humidity detector	Motion detector	Thermometer / humidity detector

Pharmacies and medical companies are required to comply with many standards and regulations. With SensDesk you can simply set the safe values of temperature, humidity and other conditions. Then you can receive alarms whenever there is a problem and you can also create reports to confirm that you are complying with regulations.

✔ Temperature and humidity monitoring
✔ Precise flat sensors for fridges
✔ Wide temperature range down to -200 °C
✔ Easy installation and setup
✔ Scalable for multiple fridges and sites

Schools and public buildings

| Icon	Label
〰 Vibration detector	
Air quality detector	
Smoke detector	
Water leak detector	
Motion detector	
Thermometer	

Schools and public need scalable and reliable monitoring, SensDesk helps you manage your IoT sensors' data even for large installations. You can control the temperature and air quality in the rooms remotely, data is also collected and ana- lysed. The system can react to alarm values immediately. Fire and water leaks are serious hazards and our SensDesk IoT solution carefully monitors these values.

✔ **Complex IoT monitoring**
✔ **Hundreds of measuring points**
✔ **Detailed analysis of data, reports**
✔ **Several layers of alarming**
✔ **Access control solution available**

Hotels and house rentals

Vibration detector	Door contact detector	Smoke detector	Water leak detector	Motion detector
Thermometer				
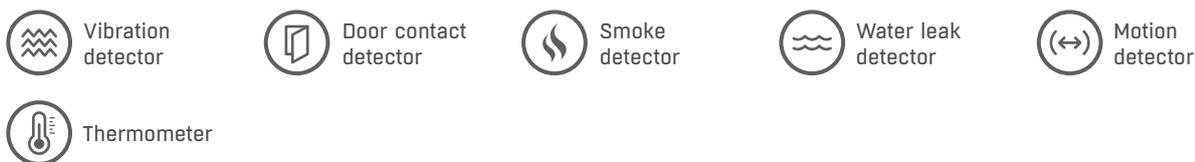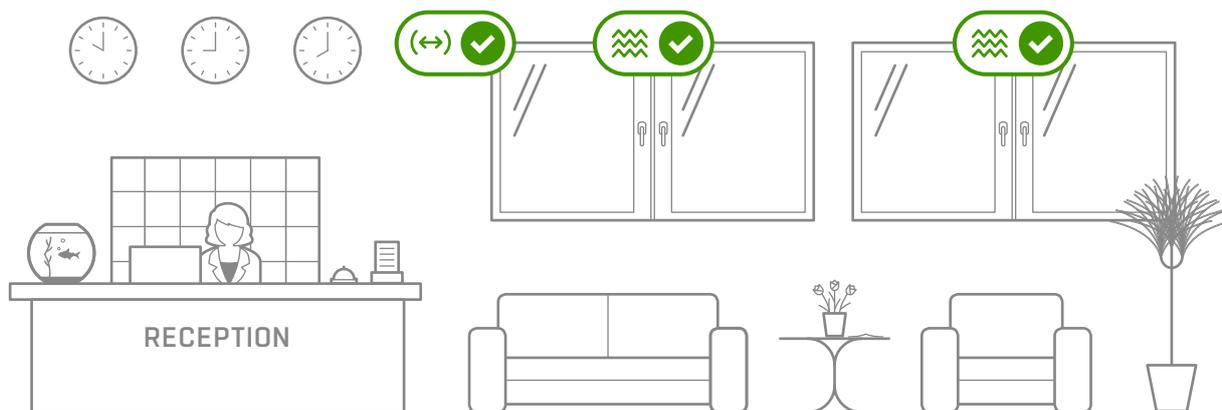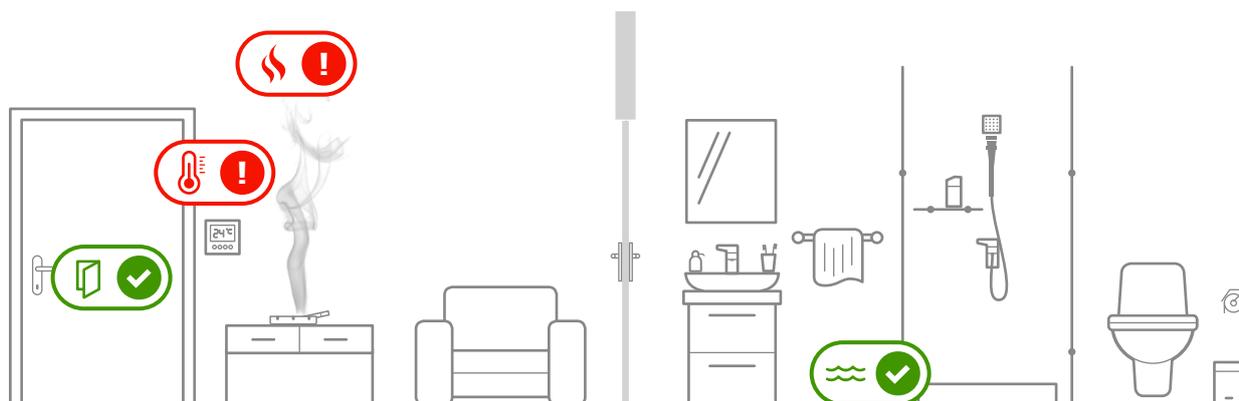
Water leaks or fires in hotels or house rentals can cause very costly damages. The SensDesk IoT portal helps you watch over all these risk factors. In case of an event it will immediately send out an alarm or react by shutting down water or activating a fire sprinkler. The SensDesk portal and HW group IoT devices have been successfully deployed in a number of solutions for many hotels and house rentals.

✔ Complex IoT monitoring
✔ Hundreds of measuring points
✔ Detailed analysis of data, reports
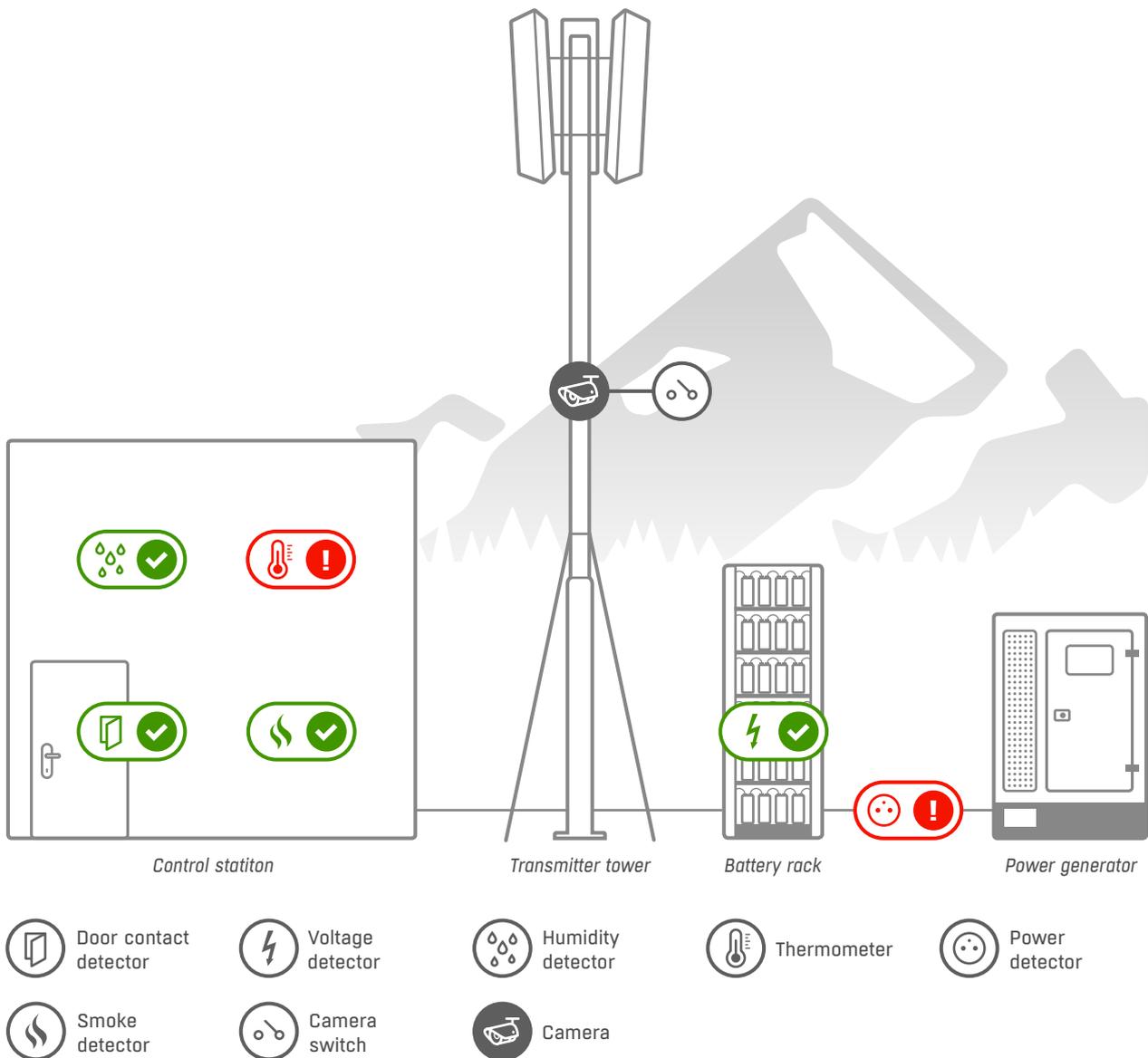✔ Several layers of alarming
✔ Access control solution available

BTS stations and technology

Control statiton   Transmitter tower   Battery rack   Power generator

Door contact detector	Voltage detector	Humidity detector
Smoke detector	Camera switch	Camera

Thermometer   Power detector

Remote technology needs reliable monitoring of cooling, heating, and site conditions. You may also need to monitor your proprietary technology using digital inputs and outputs. SensDesk and HW group IoT sensors can detect A/C failures, water leaks, movement, intrusion and more. SensDesk offers you different user and administration levels and tools for mass operations so it's robust and convenient even for large installations.

✔ Complex remote monitoring
✔ Hundreds of measuring points
✔ Detailed analysis of data, reports
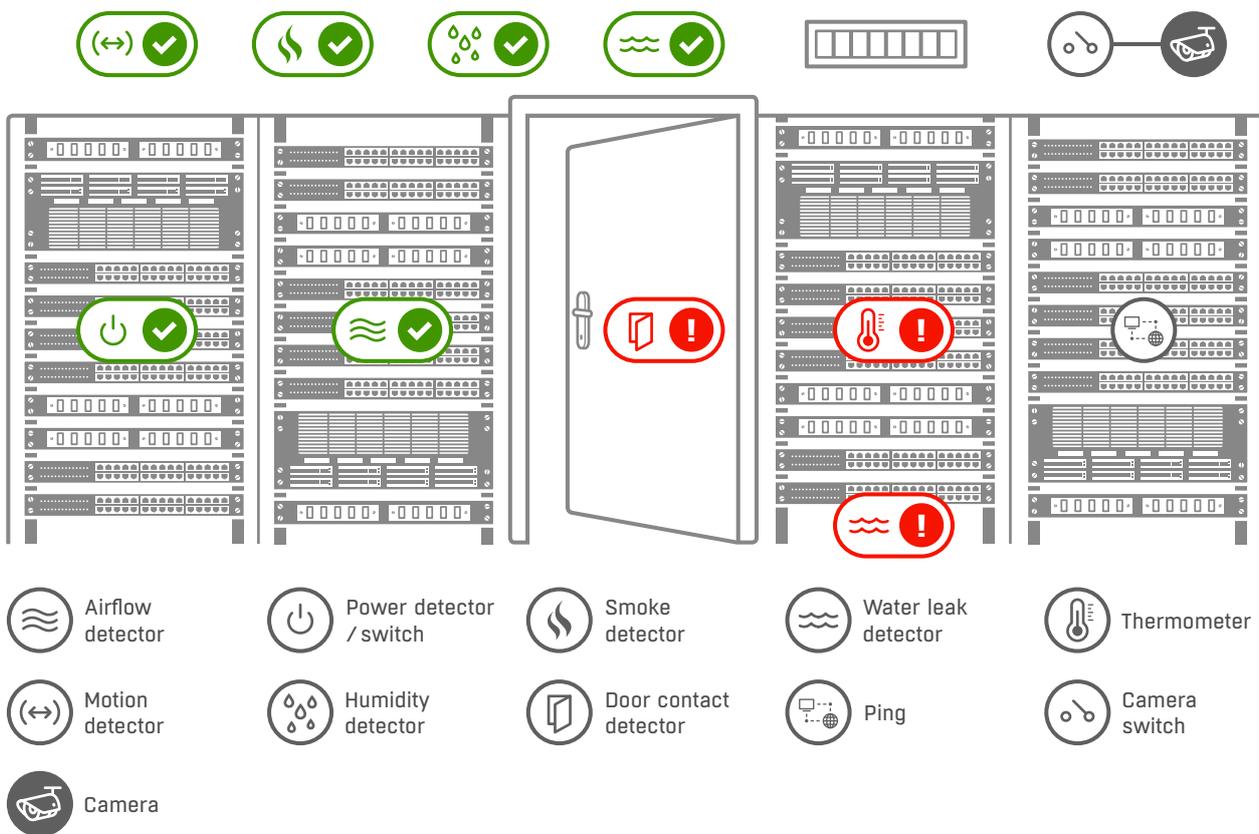✔ Several layers of alarming and users
✔ Output data to other systems

Smart cities & municipalities

| | Electricity meter | | Water meter | | Gas meter | | Water leak detector | | Air quality detector |
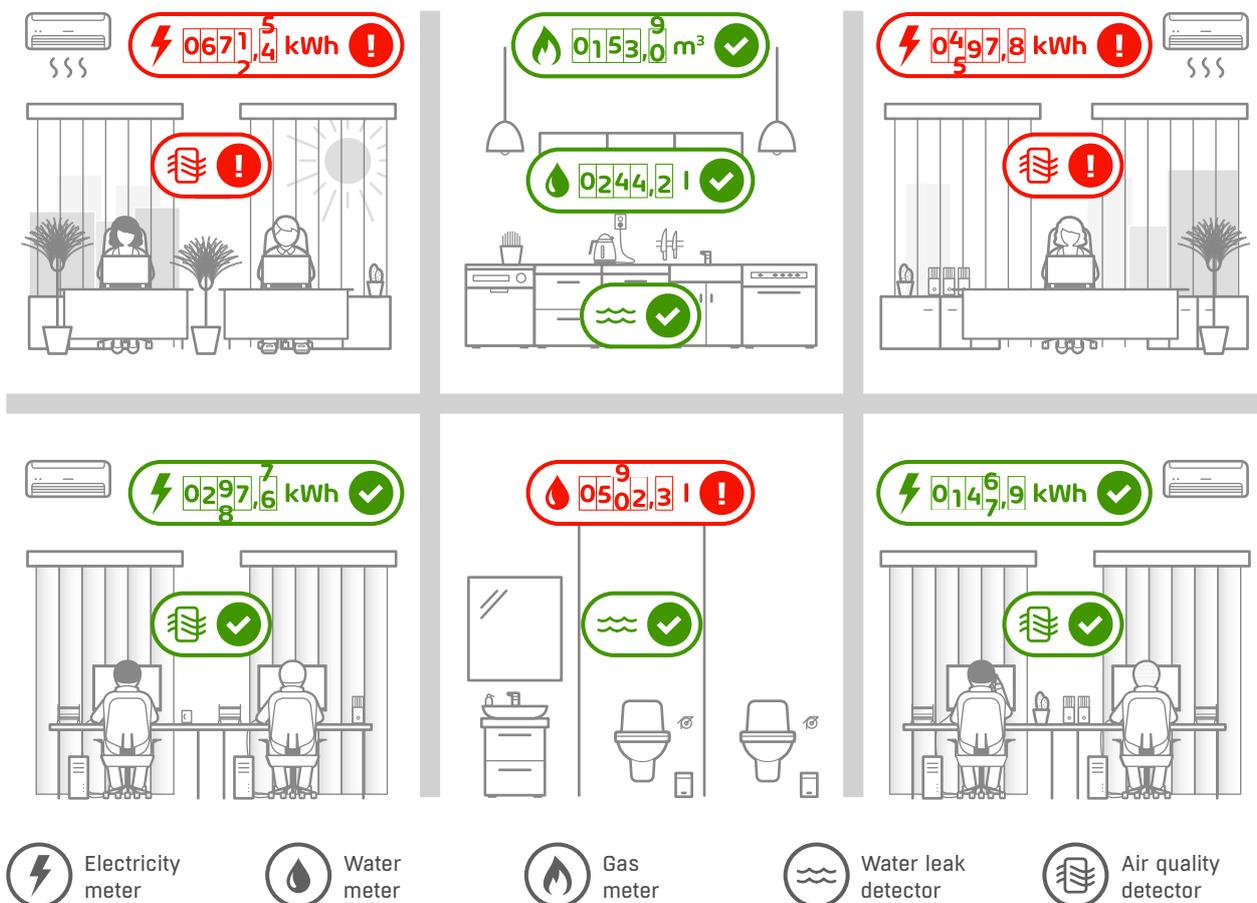
In smart cities and municipal facilities monitoring power consumption is important. These values are also affected by outdoor climatic conditions and weather. A common problem in these places is determining the optimal setting for air conditioner and CO2 concentration. Water leaks must also be monitored.The Sensdesk portal together with HW group IoT units let you develop the best solutions for your smart building's needs and have all the important values under control. Thanks to SensDesk's reports, graphs, and alarms you always know which values change and you can respond quickly to the developing situation. SensDesk portal helps the overall optimization of the building's operation and can provide you with huge cost savings.

✔ Complex IoT monitoring
✔ Hundreds of measuring points
✔ Detailed analysis of data, reports

Data centers & server rooms

Icon	Label
	Airflow detector
	Power detector / switch
	Smoke detector
	Water leak detector
	Thermometer
	Motion detector
	Humidity detector
	Door contact detector
	Ping
	Camera switch
	Camera

Data centers and server rooms are one of the most critical and vulnerable parts of every company. A simple overheating issue can degrade application performance for the end-users. Not to mention critical damage by heat, water leaks, and fire. We offer a simple and easy to install solution – HW group IoT devices and the SensDesk portal. SensDesk offers you different user and administration levels and tools for mass operations making it robust and convenient even for large installations. Thanks to SensDesk's reports, graphs, and alarms you always know where the problem is. Technicians can receive alarms in real-time, drill down to the exact issue and start troubleshooting before the end-user experiences any impact.

- ✔ Complex remote monitoring
- ✔ Detailed analysis of data, reports
- ✔ Several layers of alarming and users
- ✔ Temperature and humidity monitoring
- ✔ Water leaks and fire detection
- ✔ Motion detection
- ✔ Output data to other systems

Logistics & transportation

⬤ Humidity detector   🌡 Thermometer
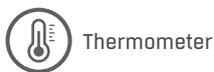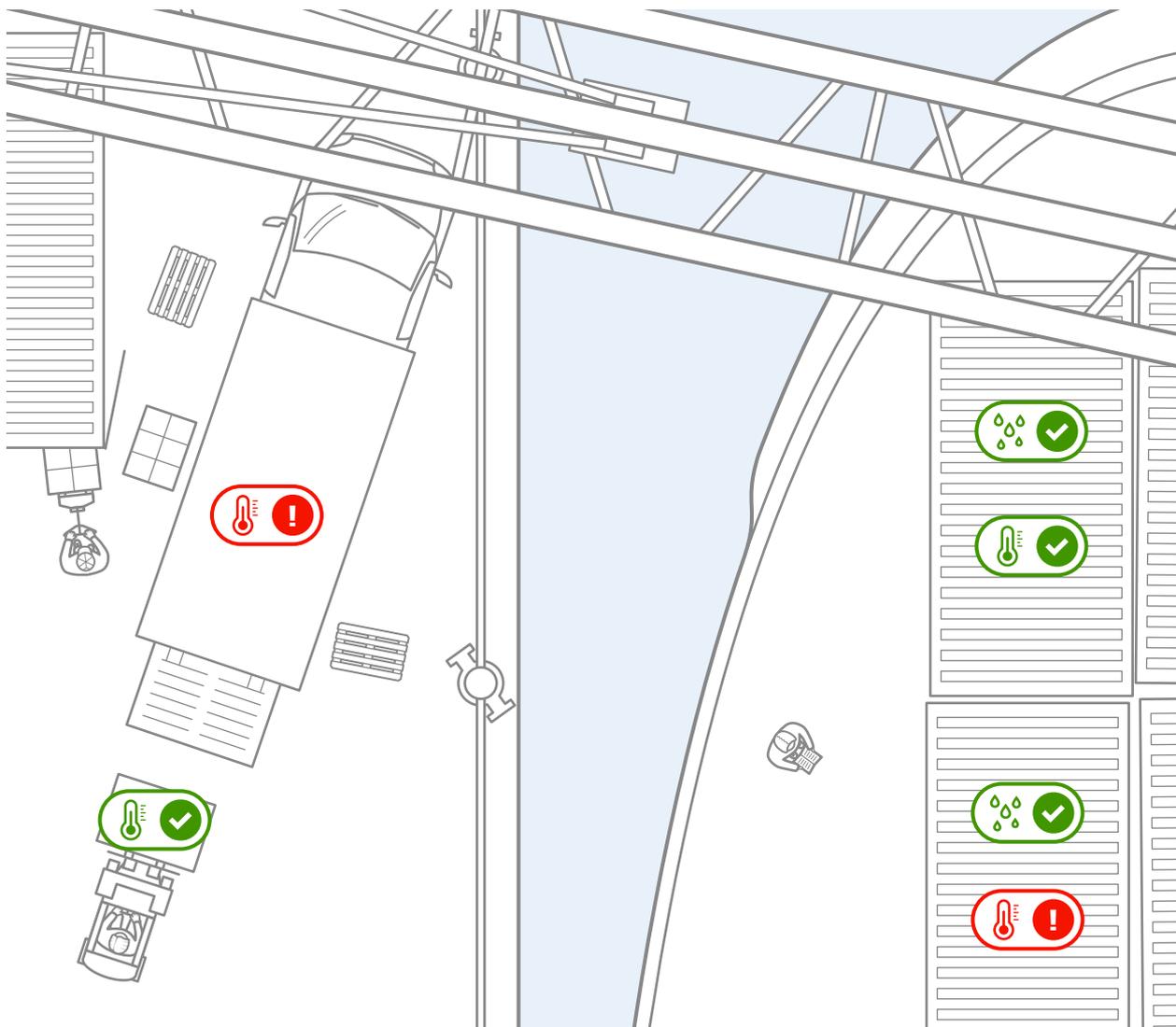
When transporting and storing sensitive goods it is very important to have all the right values under control and make sure the limits are not exceeded. Such places as container shipping yard need special supervision because there is a huge amount of goods which must be transported. If the current temperature in trucks or containers is not correct, there is a risk of significant damage. For critical shipment monitoring, we recommend the implementation of the SensDesk portal and HW group products. With alarms, graphs and timely reports, you can respond to unexpected influences promptly in order to have all shipments under control. Once a value approaches a set limit, you will automatically be alerted by email or SMS so that you can take countermeasures.

✔ **Temperature and humidity monitoring**
✔ **Immediate alarming on several levels**
✔ **Automatic reports**

```python
            mirror_mod.use_x = False
            mirror_mod.use_y = True
            mirror_mod.use_z = False
    elif _operation == "MIRROR_Z":
            mirror_mod.use_x = False
            mirror_mod.use_y = False
            mirror_mod.use_z = True

    #selection at the end -add back the deselected mirro
    mirror_ob.select= 1
    modifier_ob.select=1
    bpy.context.scene.objects.active = modifier_ob
    print("Selected" + str(modifier_ob)) # modifier ob is th
            mirror_ob.select = 0
```

Software

HW group units are not only dependent on the portal, you can get other software too or use your own.

Our devices are not only compatible with dozens of SNMP monitorings solutions, we can also provide you with our own HWg-Push protocol documentation and you can integrate our devices into your own portal.

HWg-PDMS

Windows application for collecting data from sensors and inputs over LAN and GSM. Export of data in the background.

Data processing and analysis with export to MS Excel. Data are collected by e-mail (e.g. from GSM/GPRS devices), LAN or Portal. Periodic or manual data export. Supported values: kWh, W, A, V, °C/°F, Cos Fi, Lx, %RH.

License type:
Freeware – max. 3 sensors
HWg-PDMS 8 – (up to 8 sensors)
HWg-PDMS 20 – (up to 20 sensors)
HWg-PDMS 200 – (up to 200 sensors)
HWg-PDMS unlimited

HWg-Trigger
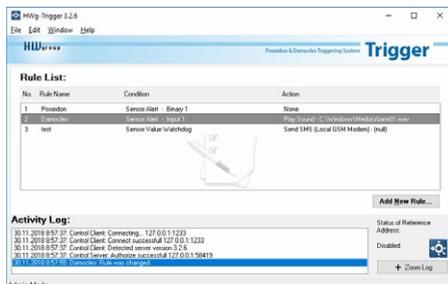
IFTT application for Windows. Values from HW group sensors can trigger different actions.

For example: Display a pop-up window, play a sound, start an application, start a service, shut down the PC. Device Watchdog function, sms alerts.

License type:
30-day trial version free of charge
Unrestricted commercial version

HWg-SDK

HWg-SDK is a package of programming examples and APIs for most of HW group products. Various programming languages, Unix, Windows and other programming platforms.

Supported programming languages: C++, Active X, VB, C#, .NET, Borland C++, Microsoft C++, Borland Delphi, JAVA, PHP, AJAX, and more.

Sensors and detectors

HW group offers hundreds of precise sensors and detectors for every application. Our units are also comatible with third party sensors. We do multiple levels of quality and precision testing on all our products to make sure you can rely on our data.
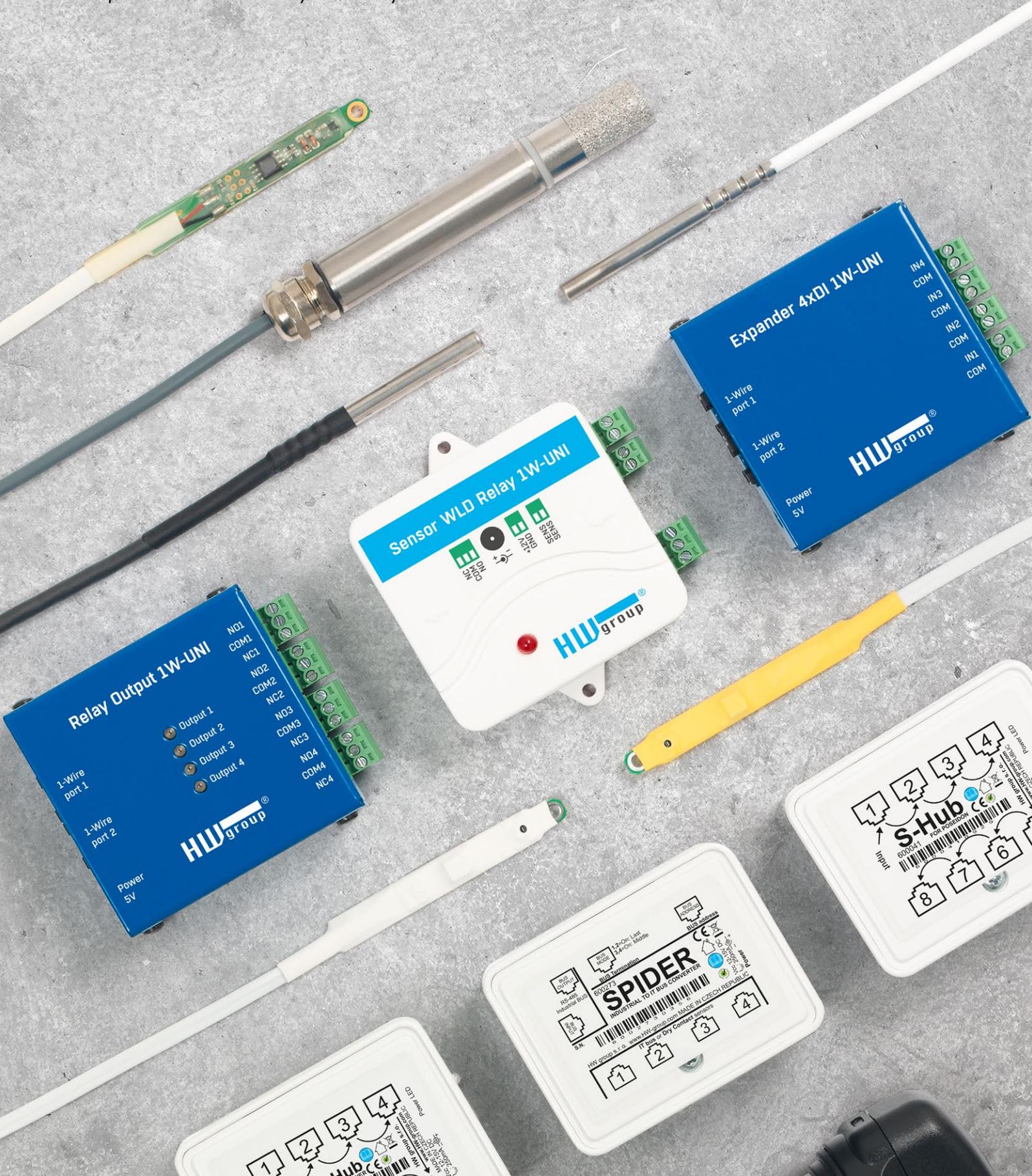
New sensors

We have designed new sensors, these unique sensors to protect comfortable conditions in your working and living environments. Different combinations of values for every home, office or public installation.

1-Wire
Compatibility: Ares, HWg-STE, NB 2x1Wire, Poseidon2, SD 2x1-Wire, STE2

Temp HomeBox
Temperature range: -30 to +70 °C

HTemp HomeBox
Temperature range: -30 to +70 °C
Humidity range: 0 to 100 % RH

1-Wire UNI
Compatibility: Ares, NB 2x1Wire, Poseidon2, SD 2x1-Wire, STE2 r2

Sensor CO$_2$ 1W-UNI
Temperature range: 0 to +50 °C
Humidity range: 0 to 95 % RH
CO$_2$ range: 300 to 40 000 ppm

Sensor THPVoc 1W-UNI
Temperature range: -30 to +70 °C
Humidity range: 0 to 100 % RH
Atmosopheric range: 30 000 to 110 000 Pa
Air quality range: 0 to 60 000 ppb

Sensor name	Temperature	Relative humidity	Atmospheric pressure	VOC	CO$_2$	Sensors values	Max. length of the 1-Wire bus
Temp HomeBox	✔	✘	✘	✘	✘	1	60 m
HTemp HomeBox	✔	✔	✘	✘	✘	2	60 m
Sensor CO$_2$ 1W-UNI	✔	✔	✘	✘	✔	3	30 m
Sensor THPVoc 1W-UNI	✔	✔	✔	✔	✘	4	30 m

1-Wire UNI

Compatibility: Ares, NB-2x1Wire, Poseidon2, SD-2x1Wire, STE2 r2

Sensor 0-20 mA 1W-UNI
8-point calibration table,
accuracy: ±2 %

Sensor 4-20 mA 1W-UNI
8-point calibration table,
accuracy: ±2 %

Light 1Wire-UNI
Illuminance: 0–100 %
accuracy: ±10 %

Sensor WLD Relay 1W-UNI
Up to 85 meters of water detection
cable

Sensor 230 V AC 1W-UNI
Voltage range: 0–250 V AC
accuracy: 5 %

Sensor 60V 1W-UNI v2
Voltage range: 0–60 V DC
accuracy: 2 %

30A Current Probe 1W-UNI 2
Current range: 0–30 A DC
accuracy: 2 %

30A DC Current Probe 1W-UNI
Current range: 0–30 A DC
accuracy: 2 %

100A DC Current Probe 1W-UNI
Current range: 0–100 A DC
accuracy: 2 %

Temp-1W-UNI Pt100 Frost
Temperature range: -190 to 150 °C,
Converter 2xPt100 1W-UNI

Temp-1W-UNI Pt100 Cable
Temperature range: -50 to 200 °C,
Converter 2xPt100 1W-UNI

Converter 2x Pt100 1W-UNI
Temperature range: -200 to 850 °C,
8-point calibration table

Expander 4xDI 1W-UNI

4× digital inputs on 3 m cable

Expander 4xDI 1W-UNI Industrial

4× digital inputs on 3 m cable

Flood detector 1W-UNI 3 m

1D water detection, can be fully submerged

Relay Output 1W-UNI

4× relay output, supported only by HWg-Ares 12/14 and Ares 12 LTE

Relay Output 1W-UNI Industrial

4× relay output, supported only by HWg-Ares 12/14 and Ares 12 LTE

1Wire Hub Power

8× 1-Wire or 1-Wire UNI bus expander

UPS 12 V and 5 V

Status info, capacity: 1,3 Ah

UPS 12 V

Status info, capacity: 1,3 Ah

M-Bus Compatibility: HWg-PWR 3/12/25

M-Count 2C

2× pulse input (S0) / M-Bus output

Meter 1f DHZ 5/63-M-BUS

1× 230 V, 63 A

Meter 3f ED 310.DB HWG

3× 230 V / 400 V, 63 A

1-Wire

Compatibility: Ares, HWg-STE, NB-2x1Wire, Poseidon2, SD-2x1Wire, STE2

HTemp-1Wire Outdoor 3 m
Temperature range: -30 to 85 °C, humidity range: 0–100 % RH

HTemp-1Wire 3 m
Temperature range: -30 to 80 °C, humidity range: 0–100 % RH

HTemp-1Wire-Box2
Temperature range: -10 to 80 °C, humidity range: 0-100 % RH

Temp-1Wire Rack19
Temperature range: -10 °C to 80 °C. 2 RJ12 connectors

HTemp-1Wire Rack19
Temperature range: -10 to 80 °C, humidity range: 0-100 % RH

Temp-1Wire IP67
Temperature range: -10 to 80 °C, IP67 rating, available in 1m, 3m, 10 m

Temp-1Wire-Flat 3 m
Temperature range: -30 to 60 °C, IP67 rating

Temp-1Wire 3 m calibrated
Temperature range: -10 °C to 80 °C, accuracy: 0.3 °C

Humid-1Wire
Humidity range: 0-100 % RH, accuracy: 5 % RH, available in 1 m, 3 m, 10 m

1Wire Hub Power
8× 1-Wire or 1-Wire UNI bus expander

Temp 1Wire Pt1000
Temperature range: -50 to 200 °C, IP67 rating

Temp 1Wire Pt1000 Frost
Temperature range: -200 to 160 °C, IP67 rating

RS-485   Compatibility: Poseidon2 4002

HTemp-485 T3411

Temperature range: -30 to 80 °C,
humidity range: 0–100 % RH,
dew point range: -60 to 80 DP °C

HTemp-485 T3419

Temperature range: -30 to 105 °C,
humidity range: 0–100 % RH,
dew point range: -60 to 80 DP °C

HTemp-485 Box2

Temperature range: -10 to 70 °C,
humidity range: 0–100 % RH

Temp-485-Pt100 Box2

Temperature range: -30 to 70 °C,
IP65 rating

Temp-485-Pt100 Cable3

Temperature range: -10 to 70 °C,
IP23 rating

Temp-485-Pt100 Frost2

Temperature range: -190 to 150 °C,
IP53 rating

Temp-485 Box2

Temperature range: -10 to 70 °C,
IP23 rating

Spider
4× DI contacts or 4× 1-Wire to
RS-485 bus

Poseidon S-Hub
8× sensors over RJ45

Accessories

Probe Pt100 TR125 2 m

Temperature range: -190 to 150 °C,
IP67 rating

Probe Pt100 TG8 2 m

Temperature range: -50 to 200 °C,
IP67 rating

Digital Input

Compatibility: Ares, Damocles2, NB-2xIn, Poseidon2, SD-2xIn, STE2

Door Contact MK4

3 m connection wiring

Flood Detector LD-12

Spot flood detection

Sensor WLD Relay 1W-UNI

Up to 85 meters of water detection cable

Power Detector

110/230 V voltage,
relay output (max. 50 V/130 V)

PowerEgg2

110/230 V single phase, max. load 8A

Gas Leak Detector

2 optional reactions

Vibration Detector SS14

IP23 rating

Motion PIR Detector

Recommended installation height: 2.5 m

Optical Smoke Detector FDR26

Covered space: 40 m², max. height 7 m

AirFlow Detector 5101

Wind speed: 1 to 10 m/s,
IP67 rating

Access

The SH4 is an ultimate access system that works with any electromagnetic lock and any RFID reader. It will work in your datacenter as well as in your office or even your home. Whether you have one door or several hundred racks, the SH4 system provides a cost effective way to manage access to your technology.

There are many locks and RFID readers on the market. The SH4 already supports the most common models and others can be added upon request. The SH4 features a relay output that can be programmed to mark a door open in a rack row or to trigger an alarm in case of a breach.

HWg-SH4

Any RS-232/Wiegand RFiD reader and lock compatible

Main control unit for access control systems, compatible with any RS-232/Wiegand RFID reader and lock.

HWg-SH4 supports 2 independent locks (modules) and 2 RFID readers. The system can be extended over a LAN with up to 16 HWg-SH4e or HWg-SH4s units. HWg-SH4 can work online as well as offline. The HWG-DCD2 central database and control SW is included free of charge.

Protocols	HTTP, SNMPv1, SNMP traps, Modbus/TCP, XML, NetGSM
Software	HWg-DCD2, HWg-DCD2 mobile

HWg-SH4e

Expansion unit for the HW group access control system.

HWg-SH4e is an expansion to the HWg-SH4 main control unit. This unit controls 2 additional door locks. Requires a master SH4 control unit.

HWg-SH4s

Expansion unit for the HW group access control system.

HWg-SH4s is an expansion to the HWg-SH4 main control unit. This unit controls 1 additional door lock. Requires a master SH4 control unit.

Examples of 3rd party compatible equipment

Electronic locking swinghandle with reader

The H3-EM electronic locking swinghandle can easily accommodate a variety of rack sizes and configurations with its simple, single-hole panel preparation.
• HID SE® card reader that accepts 125 kHz Prox, HID 13.56 MHz iCLASS® and MIFARE® cards
• Efficient gear motor design for low power consumption
• Fits industry standard panel preps
• Integrated sensors for lock and latch status, monitoring and alarm functions
• Biometric fingerprint option

Electronic locking swinghandle

The H3-EM electronic locking swinghandle can easily accommodate a variety of rack sizes and configurations with its simple, single-hole panel preparation.
• Efficient gear motor design for low power consumption
• Fits industry standard panel preps
• Integrated sensors for lock and latch status, monitoring and alarm functions
• Biometric fingerprint option

RFID reader

• EM4100 (125 kHz) compatible RFID reader, with keypad
• Wiegand interface
• RJ45 jack for simple installation
• IP67

RFID reader

• 125 kHz and 13.56 MHz RFID reader
• Weather resistant
• Read UID of 125 kHz EM compatible and 13.56 MHz ISO 14443A MIFARE, DESFire®, Ultralight® and FeliCa format cards

Electronic rotary latch

• Lightweight, extended housing for added security and tamper resistance
• Accommodates existing control systems
• Integrated connector and snap-on manual override bracket simplify installation

Electronic slide bolts

• Works with a variety of door-mounted mechanical latches
• Electronic signal permits electronic monitoring, remote monitoring, audit trails, alarms

HWg-DCD2
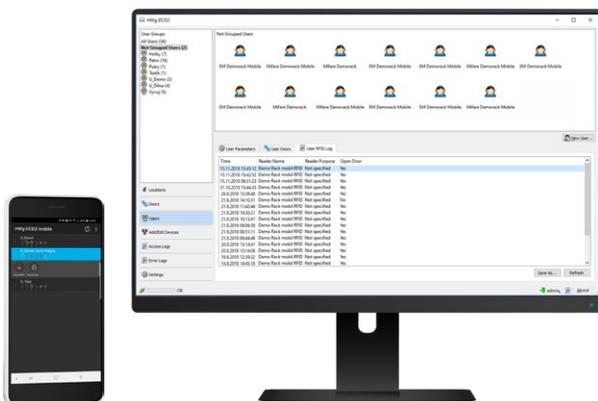
Free Windows application for access management and central database.

Allows doors to be opened remotely with a RFID chip, a SMS message, or on operator's command. Door management takes advantage of a central database with event logging, entry alerting, etc. Access permissions can be differentiated by users or sites and categorized into groups. In addition to data centers, the system is suitable for all premises where access to individual boxes, sections etc. must be controlled and authorized.

• License: the software is **FREE OF CHARGE**

Using the SH4 system for access control

The SH4 system can be used with any electromagnetic lock and any RFID reader. It is not only optimal for new projects but can also be retrofitted to existing installations. This page will show you how you can use and expand the system.

Standard cabinet

Front door contact

Rear door contact

Front door lock

Rear door lock

Side door contact

RFID reader with keypad

Programmable relay output

RS 232 Wiegand

HWg SH4

Users DB

Ethernet IP

ONLINE mode

OFFLINE mode

HWg DCD2

WEB access

RFID CARD online / offline mode

DIN key
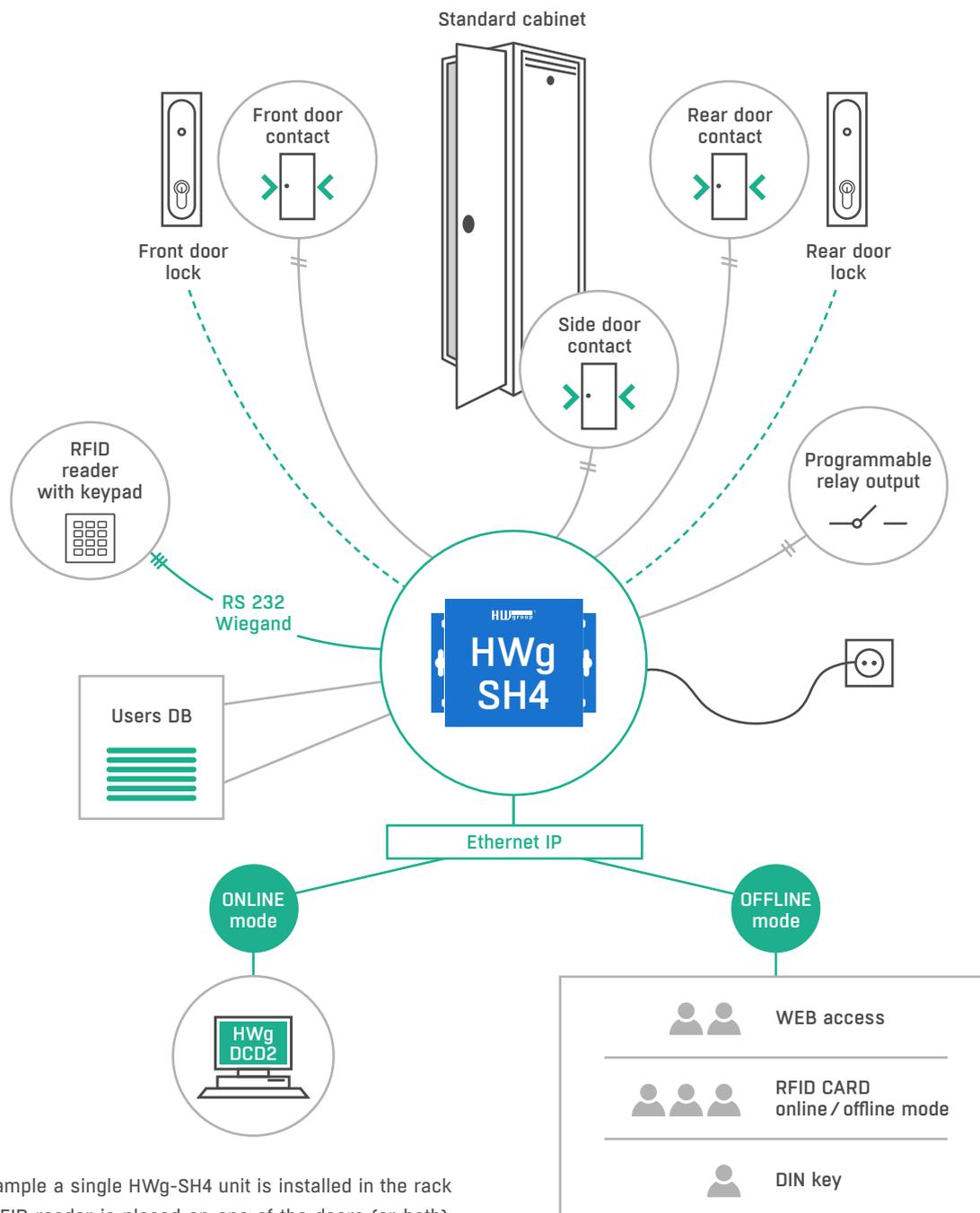
In this example a single HWg-SH4 unit is installed in the rack and the RFID reader is placed on one of the doors (or both). The device can be used in online or offline mode.

In *offline mode* the SH4 can work as a standalone device that holds an internal database of cards and users. You just need the Ethernet port to setup the unit and the device will follow the access rules without the need for LAN connection.

In *online mode* the device is connected with a server running the HWg-DCD software. This server manages all the access rules. The relevant part of the entire user database is loaded in each SH4 so that you can still access your technology even if your network connectivity fails.

Standard cabinet

Standard cabinet   Standard cabinet   Standard cabinet

Standard cabinet   Parking gate   Door
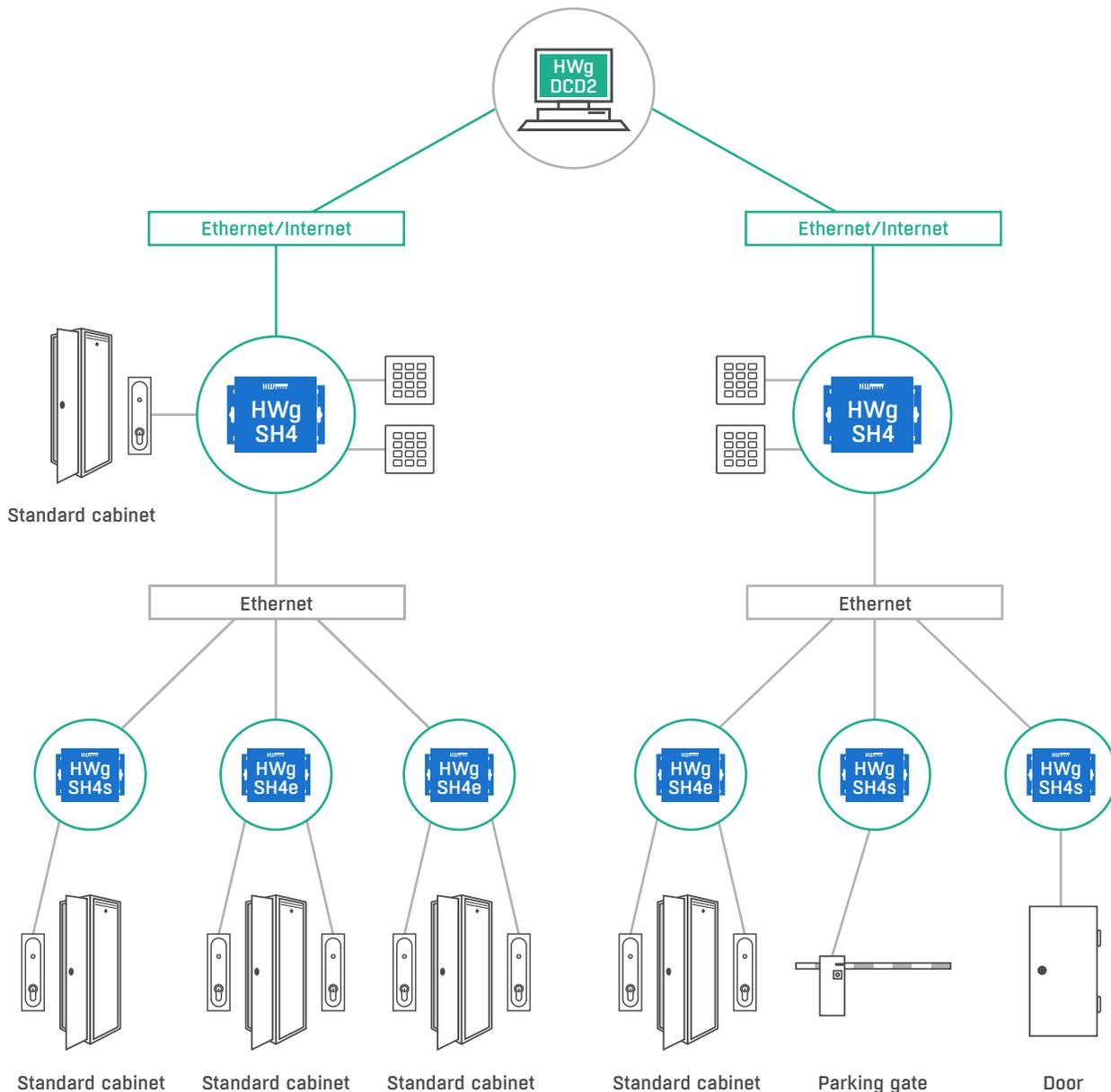
You can expand your system with the SH4e and SH4s units. These door unlockers are controlled from a supervising SH4 unit and its RFID keypad. They are connected over IP and can expand your system to unlock more points from a single RFID keypad. This significantly lowers the implementations costs. You can install a keypad RFID reader and use it to select the door, or you can setup the access rules so that each door with access right swill open automatically. With keypad 2FA is also supported.

Features:
• Easy installation and management
• Scalable from one lock to hundreds
• Complex free management SW
• Online / offline mode
• SNMP for easy integration in your monitoring system
• SMS alarming in case of an unauthorized entry attempt

Benefits
• Security and unauthorized access prevention
• Complex log history with detailed information
• Provides information about visitor location
• Access rights can be granted and revoked instantly
• Early alarming to security management
• Evidence in case of a security issue

Usage
• Datacenters and racks
• Offices and residential buildings
• Technological rooms
• Commercial spaces
• Gates and parking lots
• Schools and public spaces

IP serial

IP Serial devices convert a full (9-pin) RS-232/485 serial port to Ethernet and vice versa. The serial port of the device can be connected to a PC over a LAN and accessed in Windows as a Virtual Serial Port (VSP). Digital inputs and outputs of the device can be controlled over the Web or using Modbus/TCP or NVT/Telnet. Two IP Serial devices can connect to each other (Box-2-Box mode) in order to tunnel serial communication and I/O, or up to 8 devices can be connected to transfer I/O signals.

Typical applications include:
• Connecting RS-232 devices to a LAN – barcode / RFID scanners, serial printers, displays
• Remote control of power supplies, gates, horns and other equipment over RS-232 and RS-485
• Connecting buttons / switches to a SW application

PortStore5

Serial port RS-232/485 · Web server · DIGITAL input · RELAY output · Buffer data logger · PoE

PortStore5 is a RS-232 and RS-485 serial port to Ethernet converter with internal memory.

The RS-232 port of PortStore5 can be simultaneously used for data capture (CDR/SMDR, PBX call accounting) and for remote access (virtual serial port). With the freeware PS Eye application, data from the PortStore5 can be saved as txt files for further processing.

Serial port RS-232	1× full serial port (9 pin: RxD, TxD, GND, CTS, RTS, DSR, DTR, RI, CD)
Serial port RS-485	Max. 115.200 Bd

I/O Controller 2

Serial port RS-232/485 · Web server · DIGITAL input 8 · RELAY output 8 · Buffer data logger · PoE

I/O Controller2 converts a serial port, digital inputs and digital outputs to Ethernet.

Two units can connect to each other over a LAN (Box-2-Box mode); 8 digital inputs and 8 digital (open collector) outputs can be controlled over the Web or using Modbus/TCP. With the freeware HW VSP3 application, up to 100 remote serial ports can be connected to a single PC.

Serial port RS-232	1× full serial port (9 pin: RxD, TxD, GND, CTS, RTS, DSR, DTR, RI, CD)
Serial port RS-485	Max. 115.200 Bd

IP Relay HWg-ER02b

Serial port RS-232/485
Web server
2 *DIGITAL input*
2 *RELAY output*
Buffer data logger
PoE

IP Relay HWg-ER02b connects a full RS-232/485 serial port as well as two digital (binary) inputs and two digital outputs to the Ethernet.

IP Relay HWg-ER02b connects a full RS-232/485 serial port as well as two digital (binary) inputs and two digital outputs to the Ethernet. The digital inputs and outputs can be controlled over the Web or via Modbus/TCP. IP Relay is fully certified to control 110/230V and fits on a DIN rail.

	Web interface	Digital input	Relay output	Modbus / TCP	Logger	NVT	Telnet
I/O Controller 2	✔	✔	✔	✔		✔	✔
PortStore5	✔			✔	✔	✔	✔
IP Relay HWg-ER02b	✔	✔	✔	✔		✔	✔

HW VSP3 Virtual serial port

HW VSP3 – Single
Software driver that adds a virtual serial port (e.g. COM5) to the operating system and redirects the data from this port via a TCP/IP network to another hardware interface, which is specified by its IP address and port. HW VSP3 supports NT services, Windows 8, Windows 10 and Windows Server 2016.

HW VSP3 – Multi
Supports up to 254 remote serial ports. Works with HW group products only.

Hercules
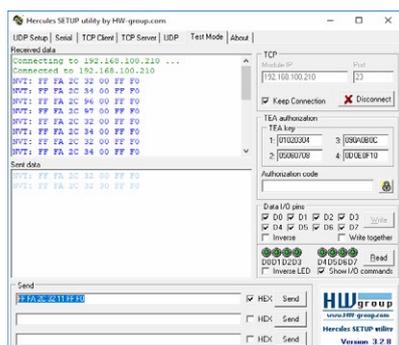
Debugging and testing tool for products with a serial port (PortBox, I/O Controller, IP Relay, PortStore).

Includes: UDP setup, Serial (RS-232 terminal), TCP client (telnet), TCP Server, UDP (UDP terminal) and Test (test mode with I/O functions support).

Protocols

HW group monitoring and control units have been designed from the beginning to use the Ethernet. The expanding Internet of Things (IoT) market needs devices that are able to communicate over multiple platforms used in public and private networks. Innovations in our units respond to this need.

RS-485

A bus for industrial environments. Sensors can be up to 1000 m away. ASCII-based communication.

1-Wire

Digital bus from the Dallas Semiconductors company. Each sensor has its own unique ID. 60m total length per each active RJ11 port.

M-Bus

M-Bus is designed for data transfer in the area of measurements, HVAC control, as well as gas, water and electricity metering.

HTTPs

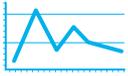HTTPs is a secure (encrypted) version of the HTTP communication protocol that is used to display WWW pages.

IPv6

Successor of IPv4. The protocol extends the address field from 32 to 128 bits. Integrated security and mobility functions.

MQTT

MQTT is a simple way of transferring small volumes of data over a standard TCP/IP network.

SMTP

SMTP (Simple Mail Transfer Protocol) is used to transfer electronic mail (e-mail) messages.

SNMP

Simple protocol for exchanging basic system information. Most well-known 3rd party SNMP SW: Nagios, PRTG, Cacti, CapTemp, Zabbix, SolarWinds.

SNTP

Protocol for synchronizing a device's internal clock with a time server over the Internet. Allows all devices in a network to use the same and accurate time.

GPRS

A service for connecting mobile devices to the Internet via the GSM mobile network.

netGSM

The netGSM function allows to share one GSM modem connected to one of the devices with other devices in the same network.

HWg-Push

is a protocol for active communication from a device (IP sensor) to a central server. This protocol is used for Sensdesk.com.

TLS

TLS protocol provides for secure communication over the Internet (for WWW, e-mail and other types of data transfer).

Modbus/TCP

is an extension of Modbus RTU protocol. Supported in 3rd party SCADA SW e.g. Wonderware-In Touch, Citect, Siemens-WinCC.

XML

Used to exchange structured data with applications and as a format of configuration files. Available files are XML setup and XML values.

	Ethernet / web interface	PoE (Power over Ethernet)	Wi-Fi	GSM / LTE	NB-IoT	RJ11 sensors (1-Wire / 1-Wire UNI)	RS-485	M-Bus	WLD sensing cable (2D)	DI (Digital Input)	AI (Analog input 4-20 mA)	DO (Digital Output)	VDO (Virtual Digital Output)	Telco power –48 V	Data Logger in the device	PushLog 256 kB (offline log for SensDesk)	SensDesk (HWg-PUSH)	HTTP	HTTPs	E-mail alerts / reports notification	SMS + Call (Ring) notification	SNMP v1	SNMP v3	SNMP trap	XML API	Modbus / TCP	MQTT (IoT)	IPv6
Poseidon2 4002	✓	(r)				16	26			12		4	8	(r)	✓	✓	✓	✓	✓	5	5*	✓	✓	5	✓	✓	✓	✓
Poseidon2 3468	✓	(r)				8				4		2	8	✓	✓	✓	✓	✓	✓	5	5*	✓	✓	5	✓	✓	✓	✓
Poseidon2 3268	✓	(r)				8				4		2	8	✓	✓	✓	✓	✓	✓	5	5*	✓	✓	5	✓	✓	✓	✓
Poseidon2 3266	✓	(r)				8				4				(r)	✓	✓	✓	✓	✓	5	5*	✓	✓	5	✓	✓	✓	✓
Damocles2 2404	✓	(r)								24		4	8	✓	✓	✓	✓	✓	✓	5	5*	✓	✓	5	✓	✓	✓	✓
Damocles2 1208	✓	(r)								12		8	8	(r)	✓	✓	✓	✓	✓	5	5*	✓	✓	5	✓	✓	✓	✓
Damocles2 MINI	✓	(r)								4		2	8	(r)	✓	✓	✓	✓	✓	5	5*	✓	✓	5	✓	✓	✓	✓
STE2 r2	✓	(r)	✓			5				2					✓	✓	✓	✓	✓	2	2*	✓			✓			
Ares 12 GMS / LTE				✓		14				2					✓	✓	✓			5	5				✓			
Ares 10 GMS / LTE				✓		6				2					✓	✓	✓			5	5				✓			
WLD2	✓		✓						4				4		✓		✓	✓	✓	4	4	✓		4	✓			
HWg-PWR25	✓							25		8					✓		✓	✓		3	1*	✓		1	✓	✓	✓	
IP WatchDog2 Industrial	✓	(r)										2	8		✓		✓	✓		2	1*	✓		1	✓			
IP WatchDog2 Lite	✓	(r)										2	8		✓		✓	✓		2	1*	✓		1	✓			
SMS-GW3 GSM / LTE	✓	(r)		✓													✓	✓							✓			

SensDesk

+ 3rd party portals

	Ethernet / web interface	PoE (Power over Ethernet)	Wi-Fi	GSM / LTE	NB-IoT	RJ11 sensors (1-Wire / 1-Wire UNI)	RS-485	M-Bus	WLD sensing cable (2D)	DI (Digital Input)	AI (Analog input 4-20 mA)	DO (Digital Output)	VDO (Virtual Digital Output)	Telco power –48 V	Data Logger in the device	PushLog 256 kB (offline log for SensDesk)	SensDesk (HWg-PUSH)	HTTP	HTTPs	E-mail alerts / reports notification	SMS + Call (Ring) notification	SNMP v1	SNMP v3	SNMP trap	XML API	Modbus / TCP	MQTT (IoT)	IPv6
SD-2x1Wire	✓	✓	✓			4										✓	[✓]	[✓]	[✓]	[✓]	[✓]	[✓]	[✓]	[✓]	[✓]			
SD-WLD	✓	✓	✓						1							✓	[✓]	[✓]	[✓]	[✓]	[✓]	[✓]	[✓]	[✓]	[✓]			
SD-2xIn	✓	✓	✓							2						✓	[✓]	[✓]	[✓]	[✓]	[✓]	[✓]	[✓]	[✓]	[✓]			
SD-2xOut	✓	✓	✓									2				✓	[✓]	[✓]	[✓]	[✓]	[✓]	[✓]	[✓]	[✓]	[✓]			
SD-4-20mA	✓	✓	✓								1					✓	[✓]	[✓]	[✓]	[✓]	[✓]	[✓]	[✓]	[✓]	[✓]			
NB-2x1Wire					✓	4										✓	[✓]	[✓]	[✓]	[✓]	[✓]	[✓]	[✓]	[✓]	[✓]			
NB-WLD					✓				1							✓	[✓]	[✓]	[✓]	[✓]	[✓]	[✓]	[✓]	[✓]	[✓]			
NB-2xIn					✓					2						✓	[✓]	[✓]	[✓]	[✓]	[✓]	[✓]	[✓]	[✓]	[✓]			
NB-2xOut					✓							2				✓	[✓]	[✓]	[✓]	[✓]	[✓]	[✓]	[✓]	[✓]	[✓]			

✓ – available

(r) – available on request

[✓] – available through SensDesk.com and 3rd party portals

* – to send Alert SMS & Calls you will need HWg-SMS-GW3 (LTE) device on LAN or connect the device to the SensDesk.com service via Internet.

2003–2021

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YEARS

WITH YOU

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