



# PERSEUS

## Platform features



Integrated LTE modem for backup connectivity and SMS/Call alerts



Variables can have multiple conditions and actions



Meters API – ability to work with other HWq devices



802.1X central security management



Local calendar based scheduler



Local custom scripts in Lua



Support for 3<sup>rd</sup> party sensors



WLD zone input for the sensing cable



Templates repository for 3<sup>rd</sup> party sensors

# Perseus

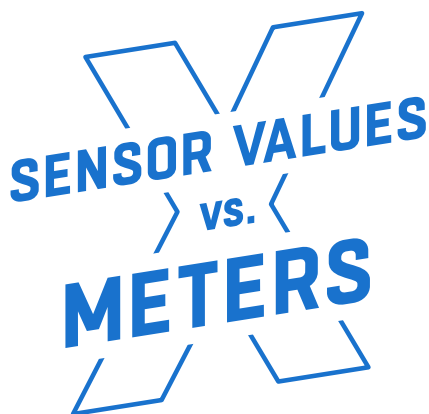
The Perseus platform is designed to read values from connected sensors and detectors. Perseus records these values, evaluates them, and performs calculations. Alarming can be based on these values, switched outputs, or processed calculations.

Sensor, detector, and digital output values are synchronized with the Open API of the Perseus device or with a remote portal (based on SensDesk Technology).

New to the Perseus family features include custom (Lua) scripts, local simple calculations, and virtual sensor values or conditions.

## PREVIOUS HWg DEVICES

Interface		Sensor values
1-Wire	HWg XML	°C
Dry Contact	MQTT	% RH
RS-485	SNMP	0/1
		X/0/1



## PERSEUS PLATFORM

Interface		Meters	Variables
1-Wire	HWg XML	Poseidon2	°C
Dry Contact	MQTT	STE2	%RH
RS-485	SNMP	HTemp	0/1
Modbus/RTU		Temp	X/0/1

**Interface** – represents the hardware or software interface through which data is read.

**Meters** – represent the physical meter (sensor). We use the term “Meter” to distinguish it from “sensor,” which may have been interpreted differently in older devices. Additionally, the meter can also be an external STE2 or Poseidon unit. Meters connected via SNMP can also include generic UPS units or electricity meters connected via Modbus/RTU. Therefore, the term “sensor” is no longer appropriate.

**Variables** – represent the actual measured values (e.g., 17.4 °C or 12.7 V). This is equivalent to “Values” in older HW group devices.

# Perseus Monitoring

*A core family of products designed for environmental monitoring in IT, pharmaceutical, food and other industries, including support for independent audits for quality management systems (ISO) and specific professional certifications.*

**Perseus Monitoring 150** and **155** is a complex 1U solution for a 19" rack monitoring system in data centers, AV installations, telecommunications, etc. Integrated LTE modem in the 145 and 155 units provides backup connectivity and SMS / Call alerts. Perseus Monitoring 140 and 145 differ from 150 and 155 by the amount of available interfaces in a smaller casing.

**Perseus Monitoring 145** and **155** uses LAN as the primary connection and LTE as a backup connection when LAN is unavailable. The device connects external physical sensors (°C, %RH, A, V, ...), DI (Digital Inputs), WLD (Water Leak Detection) zone, DO (Digital Outputs) and 3<sup>rd</sup> party meters via LAN or RS-485 (Modbus/RTU). All sensor data is analyzed and processed by the Perseus device. There is a limit of 100 meters / 1000 values (variables).

A unique feature of the Perseus family is the ability to connect other HWG devices connected via LAN as external meters. Local conditions, Lua scripting, and calendar help with measured data processing. Physical RS-485 supports Modbus/RTU meters (R/W), it allows to connect 3<sup>rd</sup> party devices. Many devices from other vendors such as electricity meters, UPS or GenSet can be connected to Perseus and the SensDesk Technology-based Portal this way. Perseus Monitoring 155 has one physical port (1 zone) for connection of WLD sensing cable. 4 DO (Relay Outputs) can be controlled by Perseus local alarms, conditions and Lua scripting.

For email alerting, we recommend to use Portal - it's faster and more reliable in case of LAN / LTE connectivity combination.

Typical applications include remote rack / server room monitoring and alerting. Several alerting options are supported by Perseus (Email, SMS, Call, SNMP trap, Output switching, etc.), allowing flexible alert setup.

Mobile App can be used to display the status of all connected meters via LAN directly or via SensDesk.com Portal.



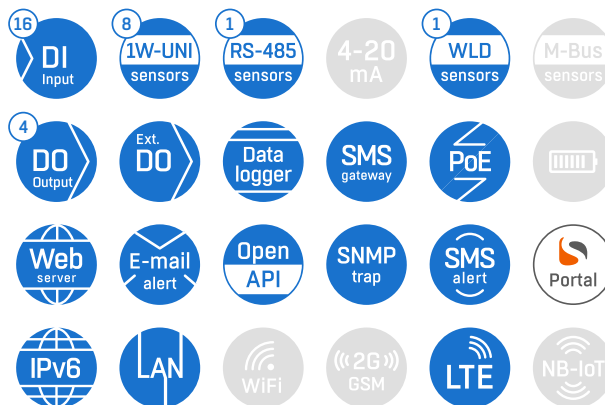
	Perseus Monitoring 155	Perseus Monitoring 150	Perseus Monitoring 145	Perseus Monitoring 140
LTE connectivity	✓	-	✓	-
RJ11 ports	8	8	4	4
RS-485 ports (Modbus/RTU)	1	1	1	1
External power for RS-485 sensors	1	1	1	1
DI Inputs	16	16	4	4
DO Outputs (low voltage)	4	4	2	2
WLD zones	1	1	1	1

## Perseus Monitoring 155



*Top-of-the-line LAN and LTE solution for any remote monitoring scenario.*

Perseus Monitoring 155 supports up to 100 meters with 1000 variables, connected via 8 1W-UNI (RJ11) ports, 16 DI (Digital Inputs), RS-485 (Modbus/RTU) and one WLD (Water Leak Detection) zone. Perseus can read values from other network devices over HWg XML, SNMP, MQTT and Modbus/TCP. Perseus Monitoring 155 can control 4 DO (relay outputs), and any other device supporting OpenAPI with local alarms, conditions and



actions, and LUA scripts.

Internal LTE modem provides connectivity backup, as well as SMS and Call alerts.

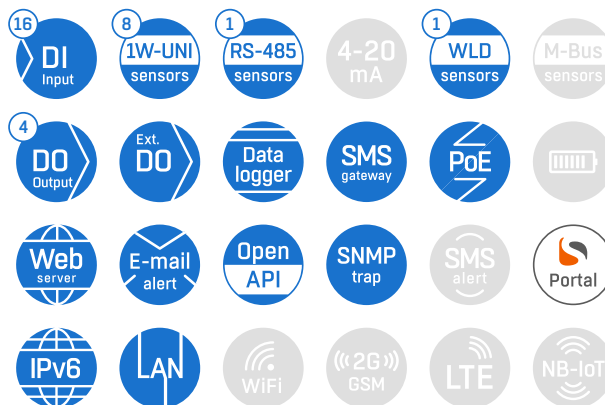
Protocols	HTTP, HTTPs, IPv6, MQTT, SMTP, SNMPv1, SNMPv3, SNMP traps, Modbus/RTU, Modbus/TCP, XML, NetGSM, HWg-PUSH, Radius
Portal	SensDesk Technology <b>(optional)</b>

## Perseus Monitoring 150



*Top-of-the-line LAN solution for any remote monitoring scenario.*

Perseus Monitoring 150 supports up to 100 meters with 1000 variables, connected via 8 1W-UNI (RJ11) ports, 16 DI (Digital Inputs), RS-485 (Modbus/RTU) and one WLD (Water Leak Detection) zone. Perseus can read values from other network devices over HWg XML, SNMP, MQTT and Modbus/TCP. Perseus Monitoring 150 can control 4 DO (relay outputs), and any other device supporting OpenAPI with local alarms, conditions and



actions, and LUA scripts.

External SMS-GW device can be used for SMS / Call alerting.

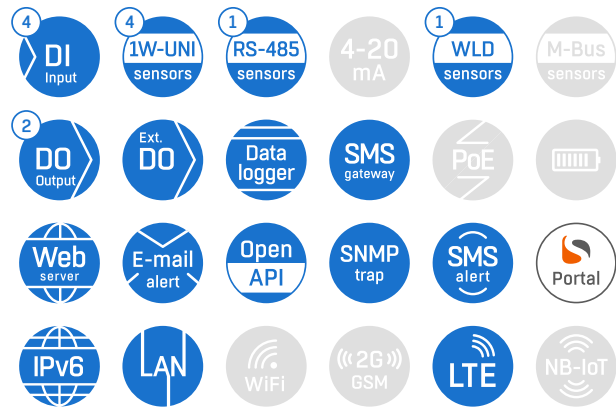
Protocols	HTTP, HTTPs, IPv6, MQTT, SMTP, SNMPv1, SNMPv3, SNMP traps, Modbus/RTU, Modbus/TCP, XML, NetGSM, HWg-PUSH, Radius
Portal	SensDesk Technology <b>(optional)</b>

## Perseus Monitoring 145



*Middle-sized LAN and LTE solution for remote environment monitoring.*

Perseus Monitoring 145 supports up to 100 meters with 1000 variables, connected via 4 1W-UNI (RJ11) ports, 4 DI (Digital Inputs), RS-485 (Modbus/RTU) and one WLD (Water Leak Detection) zone. Perseus can read values from other network devices over HWg XML, SNMP, MQTT and Modbus/TCP. Perseus Monitoring 145 can control 2 DO (relay outputs), and any other device supporting OpenAPI with local alarms, conditions and



actions, and LUA scripts.

Internal LTE modem provides connectivity backup, as well as SMS and Call alerts.

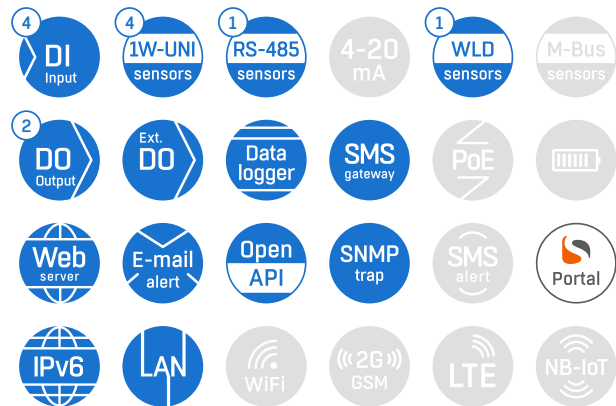
Protocols	HTTP, HTTPS, IPv6, MQTT, SMTP, SNMPv1, SNMPv3, SNMP traps, Modbus/RTU, Modbus/TCP, XML, NetGSM, HWg-PUSH, Radius
Portal	SensDesk Technology ( <b>optional</b> )

## Perseus Monitoring 140



*Middle-sized LAN solution for remote environment monitoring.*

Perseus Monitoring 140 supports up to 100 meters with 1000 variables, connected via 4 1W-UNI (RJ11) ports, 4 DI (Digital Inputs), RS-485 (Modbus/RTU) and one WLD (Water Leak Detection) zone. Perseus can read values from other network devices over HWg XML, SNMP, MQTT and Modbus/TCP. Perseus Monitoring 140 can control 2 DO (relay outputs), and any other device supporting OpenAPI with local alarms, conditions and



actions, and LUA scripts.

Protocols	HTTP, HTTPS, IPv6, MQTT, SMTP, SNMPv1, SNMPv3, SNMP traps, Modbus/RTU, Modbus/TCP, XML, NetGSM, HWg-PUSH, Radius
Portal	SensDesk Technology ( <b>optional</b> )



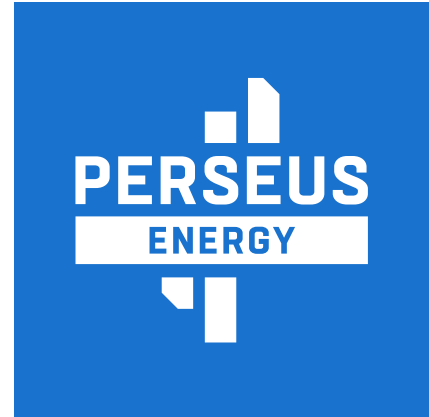
# Perseus Energy

*A family of products designed primarily to measure energy consumption and savings, and to develop methods to improve the efficiency of heating and cooling systems, including the generation of independent reports for grant schemes.*

**Perseus Energy 240** is the most affordable LAN monitoring device designed to connect HW group's and third-party TCP or Modbus/RTU sensors. Perseus Energy 240 does not have RJ11 ports for physical sensors. A unique feature of the Perseus family is the ability to connect other HWg devices via LAN as external meters. Physical RS-485 supports generic Modbus/RTU meters (R/W). External sensors (meters) and defined variables can be connected to the SensDesk Technology-based portal.

**Perseus Energy 285** is the most powerful device in the Energy family, featuring DI inputs with SO counters, DO outputs (230V), RJ11 ports, RS-485 (Modbus/RTU), an M-Bus master interface, and a WLD zone input. Perseus Energy 285 combines LAN and LTE connectivity. Perseus Energy 285 is dedicated to the complex monitoring of external physical sensors and energy meters. You can connect electricity, water, gas, and heat meters. Thanks to LTE connectivity, the Perseus Energy 285 offers backup connectivity and built-in SMS and call alerts. All sensor data is analyzed and processed by the Perseus device. Sensor data can be synchronized with Open API (Modbus/TCP, MQTT, SNMP) or with a user account on the portal (e.g., SensDesk.com). Local conditions, Lua scripting, and a calendar help with measured data processing. Many devices from other vendors, such as electricity meters, UPS, or GenSet, can be connected to Perseus via Modbus/RTU. Data from the Perseus unit is delivered to the SensDesk Technology-based portal. For email alerting, we recommend using the portal – it's faster and more reliable in case of LAN/LTE connectivity combination, and with LAN only, the portal can send a device disconnected alert in case of Internet or power outage. Typical applications include communal and public site monitoring and alerting. Multiple alerting options are supported by Perseus (email, SMS, call, SNMP trap, output switching, etc.), allowing for flexible alert setup.

HWg Monitor Mobile App can be used to display the status of all connected meters via LAN directly or via SensDesk Portal.



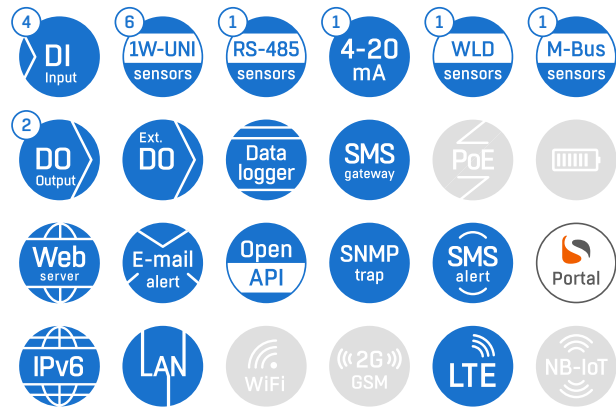
	Perseus Energy 285	Perseus Energy 240
LTE connectivity	✓	-
RJ11 ports	6	0
M-Bus master	1	0
RS-485 ports	1	1
External power for RS-485 sensors	1	1
DI Inputs	4	0
DO Outputs	2	0
WLD zones	1	0

## Perseus Energy 285



*DIN rail LAN and LTE solution for remote energy monitoring and control applications with M-Bus Master.*

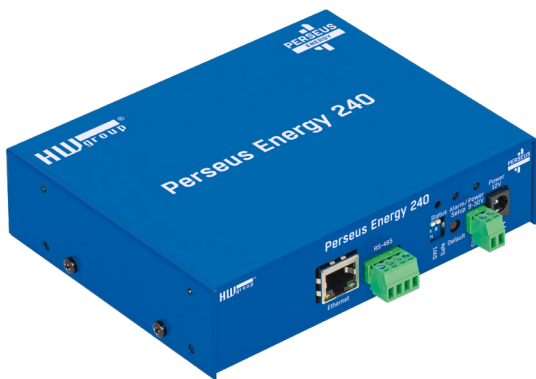
Perseus Energy 285 supports up to 100 meters with 1000 variables, connected via 6 1W-UNI (RJ11) ports, 4 DI (Digital Inputs) with SO pulse counters, RS-485 (Modbus/RTU), one WLD (Water Leak Detection) zone and one AI (Analog Input) for any industrial sensor with 4-20 mA (powered) or 0-20 mA (non-powered). Perseus can read values from other network devices over HWg XML, SNMP, MQTT, Modbus/TCP, additionally



reading the data from M-Bus supporting meters, such as electricity, gas, water and other. Perseus Energy 285 can control 2 DO (relay outputs), and any other device supporting OpenAPI with local alarms, conditions and actions, and LUA scripts.

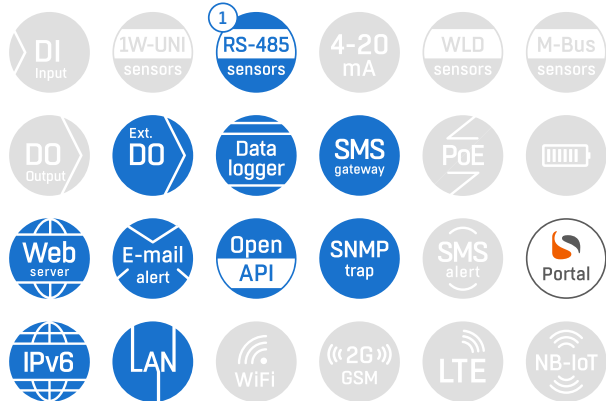
Protocols	HTTP, HTTPS, IPv6, MQTT, SMTP, SNMPv1, SNMPv3, SNMP traps, Modbus/RTU, Modbus/TCP, XML, NetGSM, HWg-PUSH, Radius, M-Bus
Portal	SensDesk Technology ( <b>optional</b> )

## Perseus Energy 240



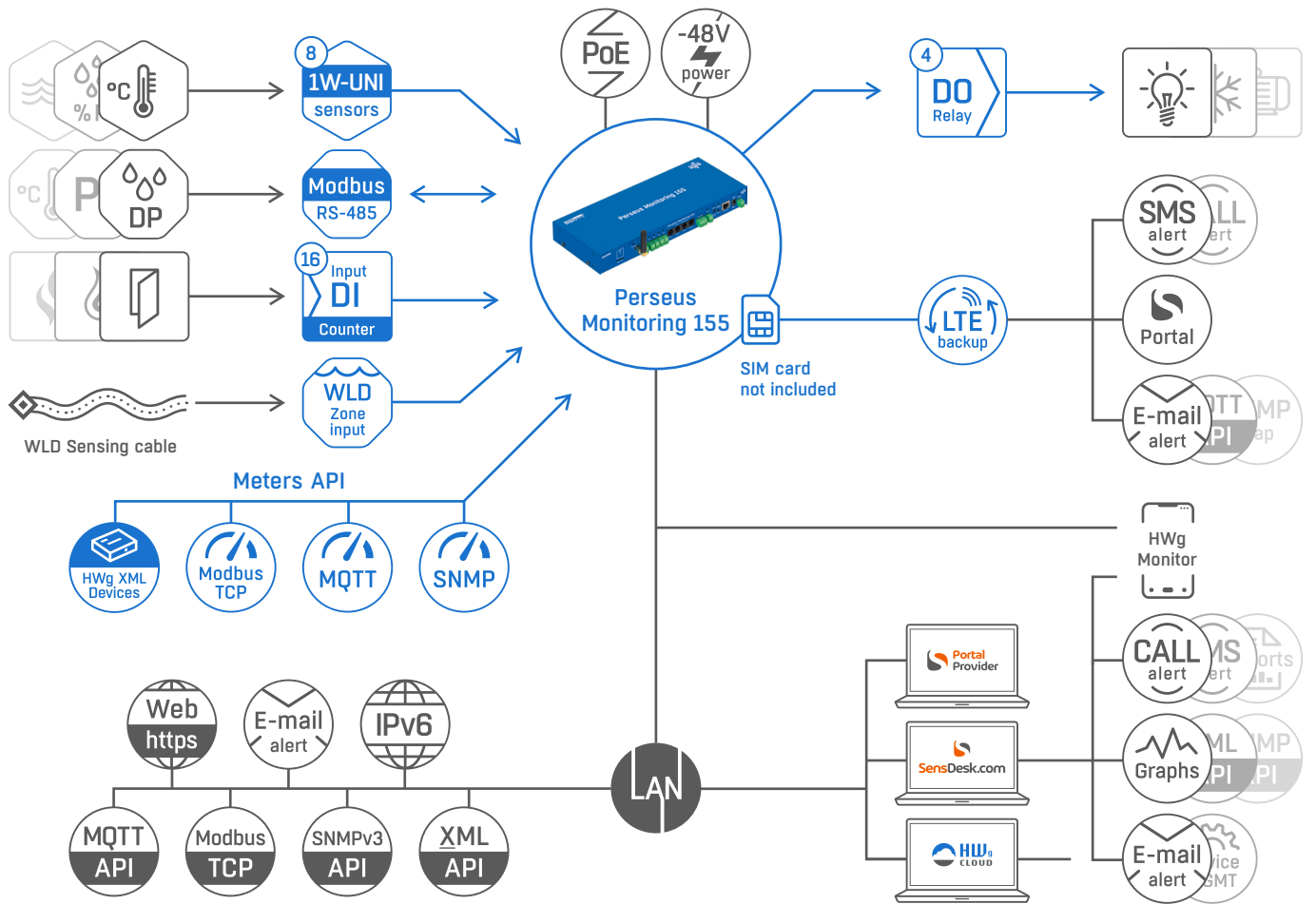
*Entry-level LAN solution for connecting third party sensors to the SensDesk Technology-based Portal.*

Perseus Energy 240 supports up to 100 meters with 1000 variables, connected via RS-485 (Modbus/RTU). As well as other Perseus units, it can read values from other network devices over HWg XML, SNMP, MQTT and Modbus/TCP. It can control other devices supporting OpenAPI with local alarms, conditions and actions, and LUA scripts. This unit is perfect for connecting third party RS-485 (Modbus/



RTU) sensors at the existing remote monitoring site and sending the data to any of the SensDesk Technology-based Portals.

Protocols	HTTP, HTTPS, IPv6, MQTT, SMTP, SNMPv1, SNMPv3, SNMP traps, Modbus/RTU, Modbus/TCP, XML, NetGSM, HWg-PUSH, Radius
Portal	SensDesk Technology ( <b>optional</b> )



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