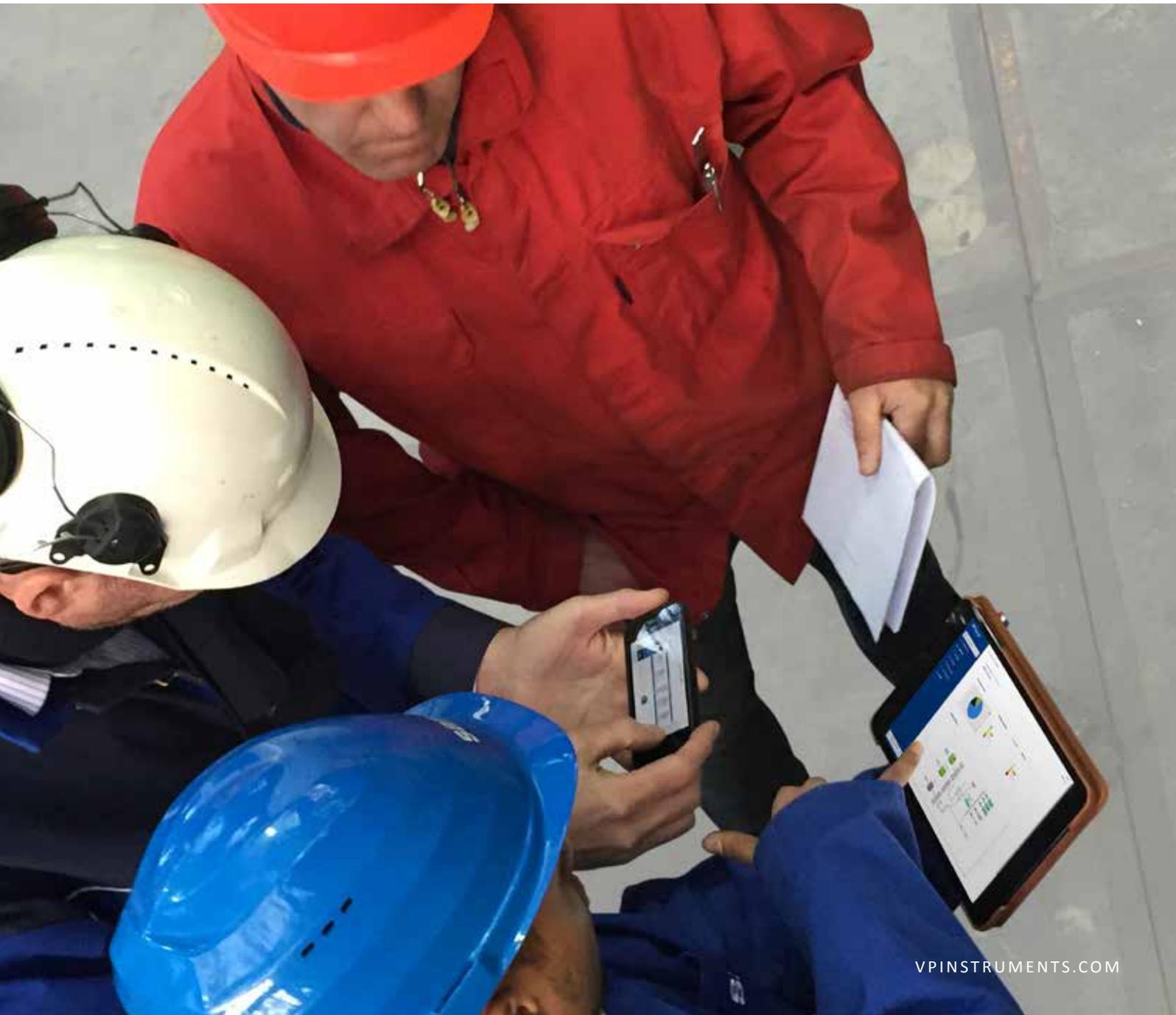

VPVISION

Real time energy monitoring





'The VPVision system is easy to understand and we have been able to customize it to meet our monitoring needs.'

- California Steel Industries



CALIFORNIA STEEL INDUSTRIES, INC.



'The VPVision system helps us to keep our compressed air system running at optimum efficiency.'

- Bolletje's Bakery



VPVISION

- > Complete energy monitoring
- > Fast return on investment
- > Easy to use
- > Web based
- > Cloud ready, VPN
- > Flexible, Scalable
- > Supports your ISO 50001 Energy Management System

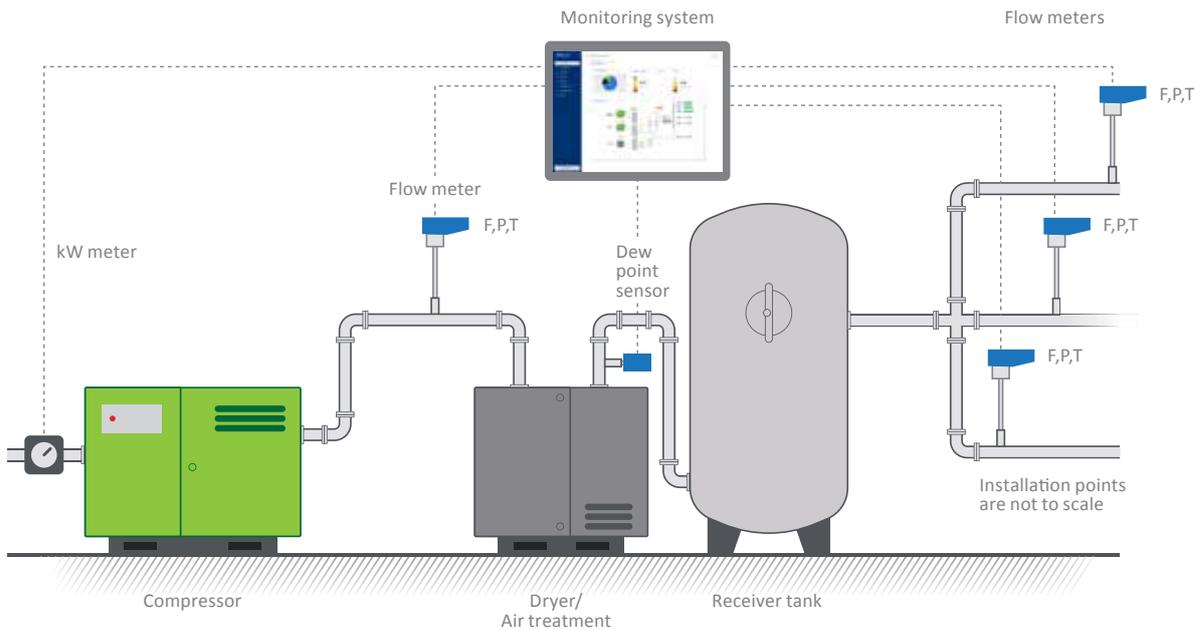
Your factory deserves real time energy monitoring

VPVision is the complete real time energy monitoring solution for all utilities within your company. By monitoring your consumption, you can manage your supply and demand side. Take factual and well-founded decisions on your costs and investments. Reveal the true costs of all your utilities, including compressed air, technical gases, steam, vacuum, natural gas, electricity, wastewater, heating fuels etc.



For energy monitoring and more

VPVision offers you the complete monitoring solution for energy flows and environmental registrations. VPVision is extremely flexible and adaptable, it fits small, large and growing companies. You can customize VPVision yourself: add channels, change dashboards, and create reports yourself.



1+2/3

Highlights

- > Complete energy monitoring for all your utilities
- > On-premise data storage, safe and secure on the industrial rugged VPVision Edge device
- > Complete web-based Energy Management software with customizable screens
- > Accessible via Ethernet and/or 3G/4G via the built-in VPN router
- > Visualize your measurement data in easy dashboards, including KPI's, charts, graphs, consumption overviews, P&IDs, and more
- > Automated PDF reports with e-mail function and alarm messages: no need to look at the system itself anymore
- > Easy to use interface
- > Flexible & Scalable: Start small and extend over time, limitless in sensors
- > Supports your ISO 50001 Energy Management System

Virtual channels enable you to combine sensor signals and create another virtual sensor. For example, you can combine two flow meters to calculate the sum of or the difference between them, to allocate costs to specific areas inside your plant.

Applications

- > Performance and efficiency measurements of utilities and capital machinery
- > Optimize maintenance schedules by immediately detecting issues or misuse
- > Costs allocation towards machines/production lines/departments
- > Benchmark between machines/production lines/departments
- > Establish your energy base line and set critical energy performance indicators (KPI's)
- > Quantify energy savings activities
- > Monitor and optimize your control systems
- > Correct sizing of equipment

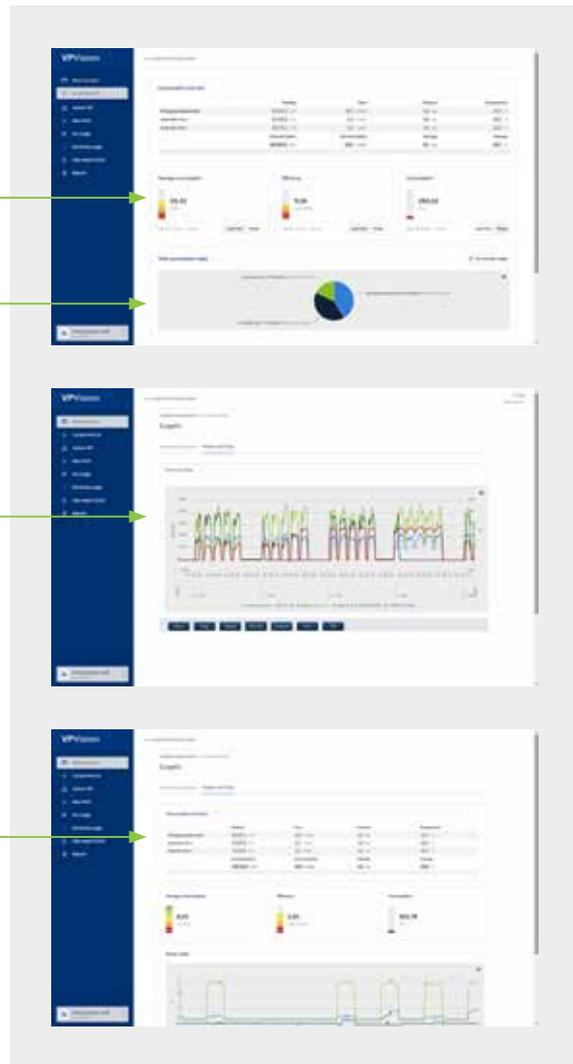
Dashboard examples

Define and monitor your own KPI's.
With clear color indication the current status is immediately visible.

Understand your main consumers to give direction where to start with your energy savings initiatives.

Combine sensor data in one graph for a more granular analysis to debottleneck problems or to discover savings potentials.

VPVision provides the necessary data to get approval for your improvement projects and/or for energy rebate programs. And even better, with the data before and after your project, you register the actual changes.



"VPVision is very easy to use. It provides us a real time view via a web interface, without the need to install any software. It provides us a lot of information in a simple way."

Samsung Poland

Total peace of mind with automated Reports & Alarms

Create your own reports and have it in your mailbox weekly or monthly. The reports are fully customizable, and different types of reports can be made for different roles. Track your KPI's, consumption overviews, load/onload hours of your compressors, performance trends compared to the last report and much more.

Furthermore, on any measurement channel you can program an alarm and decide how you are notified in case of an event: in the VPVision software, in the reports and/or by email.

The image displays three screenshots of the VPVision REPORT software interface, each showing a different section of a report. The reports are titled 'VPVision REPORT' and include various data tables and charts.

Report 1: Overview Air Usage

PARAMETER	CURRENT PERIOD	LAST PERIOD	DELTA	YTD	UNIT
Production 1 (Standard)	10770	10786	16	10781	m³/h
Production 2 (Standard)	10815	10817	2	10816	m³/h
Production 3 (Standard)	10815	10815	0	10815	m³/h
Production 4 (Standard)	10815	10815	0	10815	m³/h
Production 5 (Standard)	10815	10815	0	10815	m³/h
Production 6 (Standard)	10815	10815	0	10815	m³/h
Total	10800	10800	0	10800	m³/h

AIR DISTRIBUTION

- Production 1: 10770 m³/h
- Production 2: 10815 m³/h
- Production 3: 10815 m³/h
- Production 4: 10815 m³/h
- Production 5: 10815 m³/h
- Production 6: 10815 m³/h
- Total: 10800 m³/h

ELECTRICITY USAGE

PARAMETER	CURRENT PERIOD	LAST PERIOD	DELTA	YTD	UNIT
Compressor 1 (Standard)	10770	10786	16	10781	kWh
Compressor 2 (Standard)	10815	10817	2	10816	kWh
Compressor 3 (Standard)	10815	10815	0	10815	kWh
Compressor 4 (Standard)	10815	10815	0	10815	kWh
Compressor 5 (Standard)	10815	10815	0	10815	kWh
Compressor 6 (Standard)	10815	10815	0	10815	kWh
Total	10800	10800	0	10800	kWh

KPI'S

PARAMETER	CURRENT PERIOD	LAST PERIOD	DELTA	UNIT	STATUS
Compressor 1	10770	10786	16	m³/h	OK
Compressor 2	10815	10817	2	m³/h	OK
Compressor 3	10815	10815	0	m³/h	OK
Compressor 4	10815	10815	0	m³/h	OK
Compressor 5	10815	10815	0	m³/h	OK
Compressor 6	10815	10815	0	m³/h	OK
Total	10800	10800	0	m³/h	OK

Report 2: Dryer Temperature

PARAMETER	MIN	MAX	AVERAGE
Drying Temperature (Standard)	0.00	10.00	5.00
Drying Temperature (Standard)	0.00	10.00	5.00

WATER USAGE

PARAMETER	CURRENT PERIOD	LAST PERIOD	DELTA	YTD	UNIT
Water 1 (Standard)	10770	10786	16	10781	l
Water 2 (Standard)	10815	10817	2	10816	l
Water 3 (Standard)	10815	10815	0	10815	l
Water 4 (Standard)	10815	10815	0	10815	l
Water 5 (Standard)	10815	10815	0	10815	l
Water 6 (Standard)	10815	10815	0	10815	l
Total	10800	10800	0	10800	l

SUMMARY

PARAMETER	MIN	MAX	AVERAGE
Summary 1	0.00	10.00	5.00
Summary 2	0.00	10.00	5.00

COMPRESSOR 1

- Capacity: 1.0 m³
- Running: 10.0 m³
- Total consumption: 10.0 m³
- Total costs: 10.0 Euro

Report 3: Compressor 2

- Capacity: 2.0 m³
- Running: 10.0 m³
- Total consumption: 10.0 m³
- Total costs: 10.0 Euro

COMPRESSOR 3

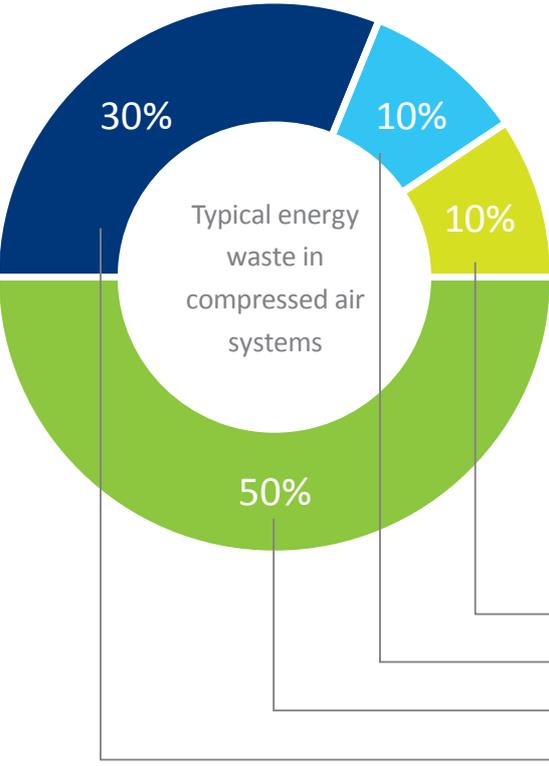
- Capacity: 3.0 m³
- Running: 10.0 m³
- Total consumption: 10.0 m³
- Total costs: 10.0 Euro

"VPVision is a really powerful tool to keep our compressed air flow consumption at the lowest possible level. It helps us to prevent leakage and to optimize our compressed air supply."

Kikkoman Europe

Unleash your savings potential

Energy is expensive. Electricity, gas and water are often a company's biggest bills. They are commonly used and often wasted. Compressed air is a notoriously expensive utility, as it is nearly 10 times more expensive than electricity. Peak loads on your electricity consumption can result in high penalties. Other necessities, such as wastewater, are becoming heavily taxed. These are all good reasons to monitor your energy consumption and look for potential savings.



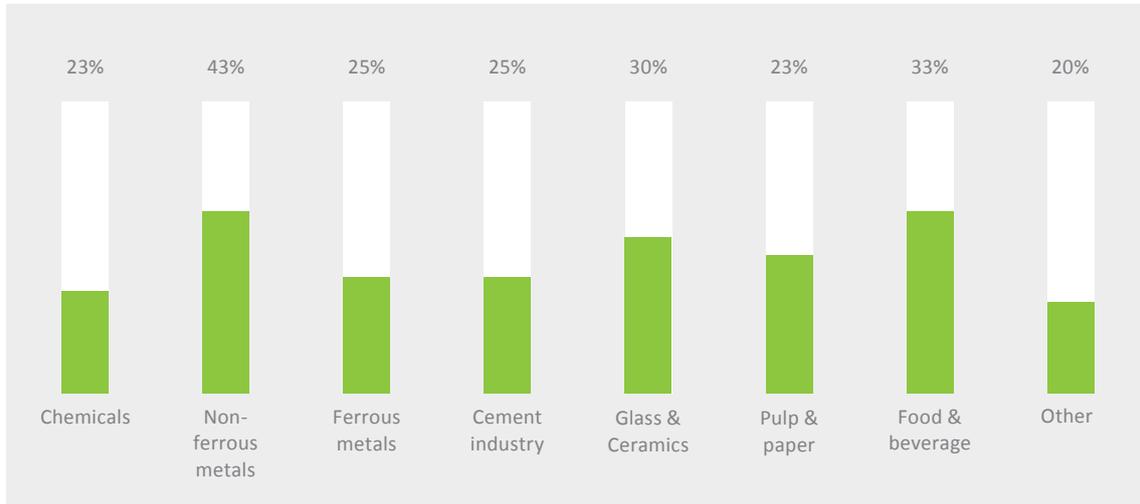
As an example, let's take a closer look at one of your utilities: compressed air. Only 50% of the generated compressed air is effectively used. The other 50% is often wasted. A monitoring system will help reduce this waste of energy and money, and maintain your consumption at the lowest possible level.

- Artificial demand
- Inappropriate use
- Production
- Leaks



Average savings potential per industry

Energy savings potentials are enormous. Most companies have not yet gotten serious about energy savings. Even in industrialized countries the savings potential is between 10% and 40%. In developing countries the potential could be as high as 50%.



Complete the cycle



Energy management is a continuous process

Create awareness through permanent monitoring. VPVision is the perfect tool.

Step 1

Prepare yourself and your team. Involve your management and set the goals you want to achieve.

Step 2

Define the current state of energy flows and systems. Gather data and identify opportunities.

Step 3

Analyze the results and plan the actions to improve efficiency.

Step 4

Implement the actions. Execute the plan; drive towards the goal.

Why permanent monitoring?

A one off energy audit will render a one-time only reduction of energy costs. After a certain period of time, your costs will increase. Whereas 24/7 monitoring enables you to track any changes in your system, to take action immediately, and thereby to keep energy costs at a minimum.



Technology

VPVision is a subscription based energy monitoring solution, which is pre-installed on a dedicated industrial hardware platform. VPVision collects all data, once per second, and stores it securely in an SQL database. The data is made available real-time via a built-in web server, which can be accessed from any pc, tablet or smartphone.

Brand Neutral

VPVision is brand neutral and connects with any 4..20 mA sensor and Modbus RTU and TCP devices. It seamlessly integrates with VPInstruments' products as they are pre-configured in VPVision for your convenience; including our VPFlowScope flow meters, dew points sensors and power meters.

Default hardware connections

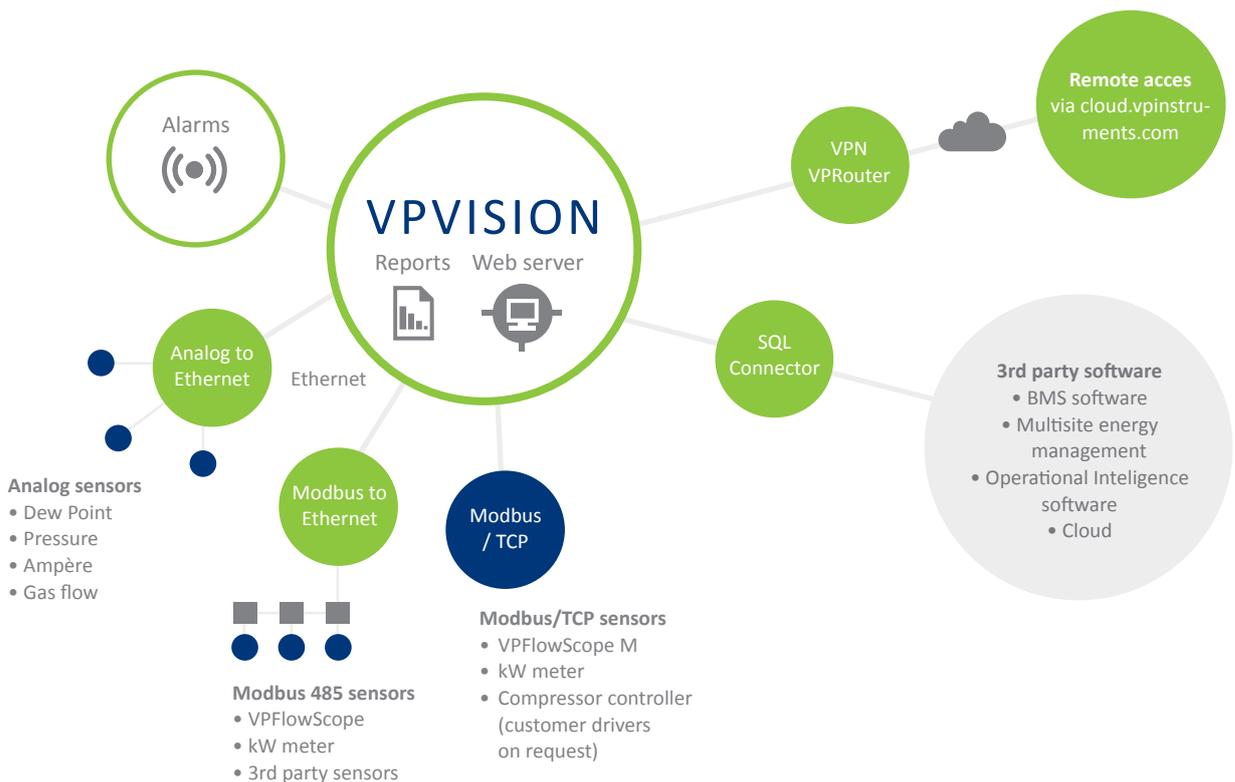
The VPVision hardware has 8 analog and 8 Modbus inputs built-in for direct connection and can power 8 sensors. You can extend VPVision with additional I/O modules or just

simply connect a multitude of sensors through Ethernet.

Cloud ready

VPVision is cloud enabled, via a built-in VP(n) Router. Prevent costly on-site visits and perform remote audits and system checks. With a valid subscription, the system is updated automatically and you continuously benefit from the latest features.

The SQL connector module can be used to link VPVision data to third party software, for example a building management system.

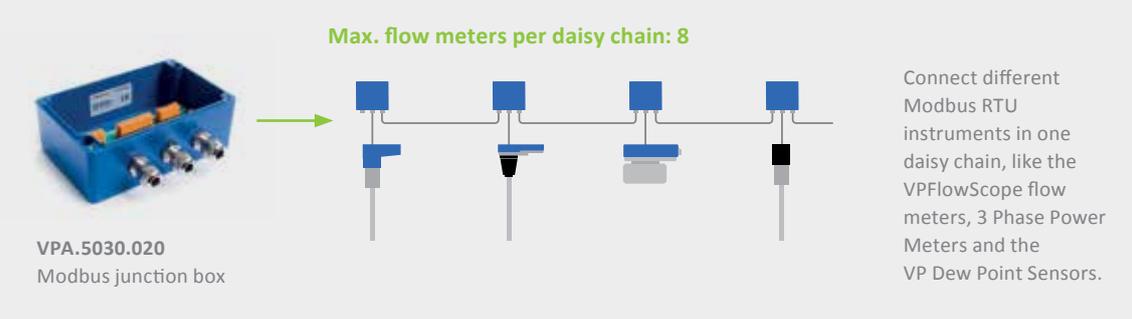


Complete your monitoring project

Start up and commissioning

VPIstruments offers both distributors and end users a start-up and commissioning service. After all electric installation work has been completed, we can send one of our engineers to configure the entire system.

Easy daisy chain connection with the Modbus junction boxes

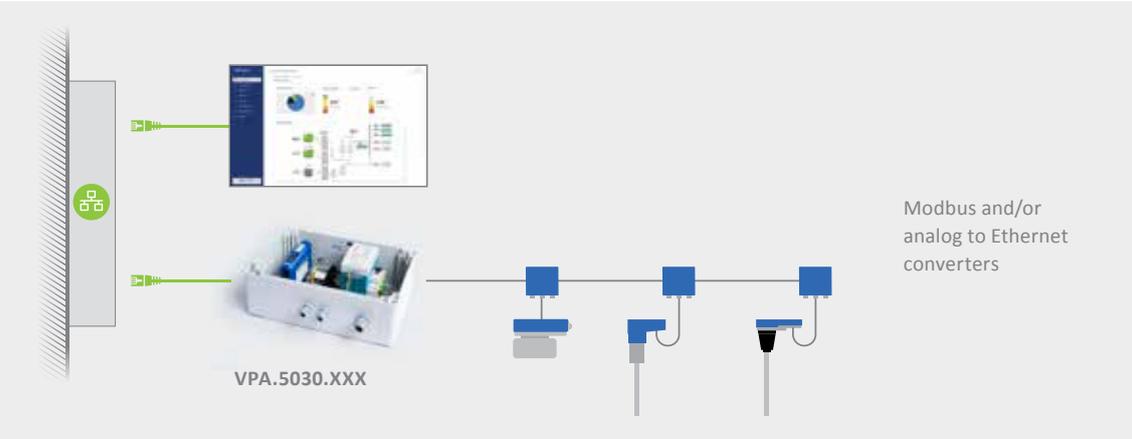


Max. flow meters per daisy chain: 8

VPA.5030.020
Modbus junction box

Connect different Modbus RTU instruments in one daisy chain, like the VPFlowScope flow meters, 3 Phase Power Meters and the VP Dew Point Sensors.

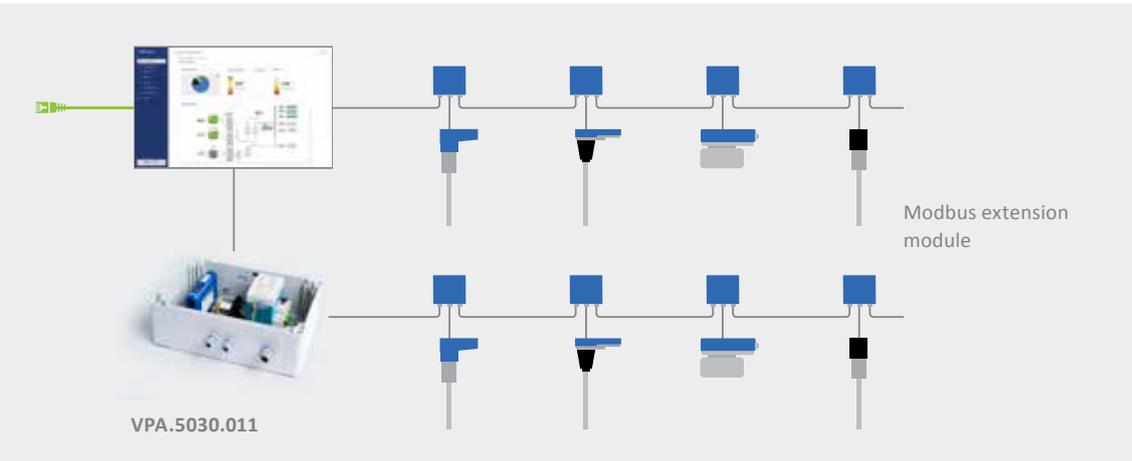
Bridge large distances with Ethernet converters (analog and/or Modbus)



VPA.5030.XXX

Modbus and/or analog to Ethernet converters

Extend direct hardwired connection of up to 8 Modbus devices



VPA.5030.011

Modbus extension module



easy insight into energy flows™

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