



M mitec
INSTRUMENT

Measuring technology for industrial IT



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Mitec creates knowledge from measuring data

Do you need to track what's happening in your process or field project? Regardless of whether it happens far below the surface or above ground. Whether it happens all the time or just now and then. Quickly or slowly. In Sweden or somewhere else.

Mitec has the solution. Straightforward, robust measuring systems that take care of your measuring and monitoring. With measuring equipment that's easy to install and use, and a system that includes everything from sensor to Internet. Standard solutions that build on simplicity, security and flexibility. So you can quickly and easily get a clear overview and always have up-to-date information.

There's no reason that you should become a computer expert, or that you should invest in expensive IT-projects with servers and security solutions. Ideally, you should just focus on your work and on managing your project or your process. IT is a tool, not an end in itself.

Our business idea is to help you use measuring data to gain better information about your equipment or process. You'll be able to make better decisions. And you'll be able to add value to your products and services.

We help you and your customers create knowledge from measuring data.



100 meters underground and 500 km from work

A customer wants to measure groundwater levels so as to register sensitive changes. Another wants to keep an eye on pH in various waterways to prevent possible environmental disasters. A third customer wants to keep track of chemical levels at his customer's tanks throughout Europe.

Their offices are nowhere near what they're monitoring.

Key trends can still be followed from their office, via Internet, or even on their own network. With graphs to provide overview, statistics and log files for detailed analysis and immediate SMS alarms when something important happens. So it doesn't actually matter where they're based. Or where their measuring sensors are either for that matter.

Measuring data is collected automatically from measuring stations in the field. Using GSM, GPRS, telephone or radio as appropriate. The system is wireless so geography isn't an issue so long as there's coverage. Reliable communication is something we're good at.

Low-power solutions are our speciality. You can count on very little travelling to change batteries. Which means you can settle down at your desk and do something else instead.



A complete solution – End-to-end

There have long been discussions about M2M (machine-to-machine) and wireless Internet without it completely taking off. Now it is available for real in a proven system for wireless measuring and monitoring.

Mitec's SatelliLite60 measuring system is a complete concept that includes everything from sensor to Internet. It can be installed on a freestanding basis directly in the field, or integrated into another system.

Either way, we take responsibility that it works for you.

Measuring stations and software are developed and produced by Mitec. The unique Internet measuring service it-sensors.com is also developed by Mitec and runs on our servers. Sensors and communication equipment are added as needed. This means that you get an "off-the-shelf" system that can quite easily be adapted to your application.

Some systems involve hundreds of measuring stations, others

just one or two. It doesn't make a huge difference; the system is essentially the same regardless of its function.

A central measuring server on your premises, or on ours if you choose to use our Internet measuring service, handles data collection. The server automatically checks all connected measuring stations and downloads measuring data – using GSM, GPRS, landline or radio as appropriate.

The measuring server stores measuring data and presents it locally. Or sends it on to other systems. Good analysis tools are available if needed, and you can set up alarms via SMS and e-mail to responsible personnel.

The fact that we understand the entire process from sensor to Internet is rather unique to Mitec. On top of that, our low-power solutions are probably the stingiest around. If you use batteries you can count on spending very little time changing them, at most a couple of times per year even during winter. As we said, a complete solution. End-to-end.

Unlimited applications

Outdoor

Rain, snow and nowhere to go. Here you want to measure surface water level, flow in waterways or possibly pH or conductivity. Batteries are something you don't want to change more than a couple of times per year.

Mitec's remote monitoring system is very durable and is available in different physical designs that work just as well for power companies as for road builders or city councils.



On machines

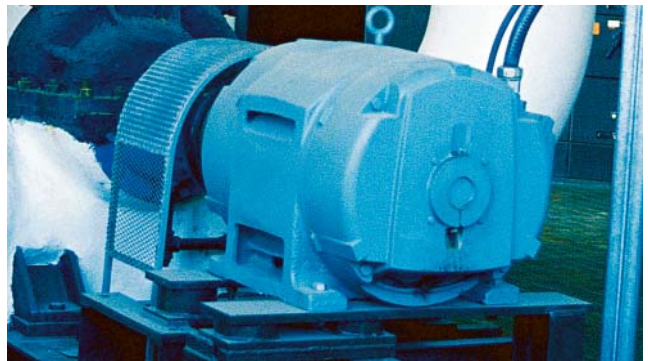
Preventative maintenance of machines and other equipment is a profitable business. Measuring data can let you know how your machine is working. The supplier can, from his office, make plans to deal with the problem before it's too late. Travelling is rationalised and customers get added value into the bargain.

Mitec's remote monitoring system is used independently or integrated in the machine itself for collecting and presenting history for everyone involved.

In the process industry

Sometimes it's necessary to access measuring data from outside industrial automation systems. External monitoring of raw material consumption is one example, remote monitoring of critical aspects of a customer's process is another.

Mitec's measuring service it-sensors.com is popular in applications where information is to be shared by different people in different places: suppliers, customers and transport contractors. The system is confidential and can be overviewed easily – a good planning tool. Emergency call-outs can be prevented using automatic SMS-alarms.





Indoors

Indoor climate is an area where many people tend to form their own opinions. But facts are needed in order to make correct decisions, and the only way to get hold of the facts is to measure.

Measuring equipment is needed that's universal and easy to use, and that provides the right information without any fuss. Here you can depend on Mitec's many years of experience. Gather the facts then make the changes needed for a healthy and comfortable environment.



Underground

Important environmental parameters such as groundwater level and pH are often located deep under the ground when a tunnel, road, railway or other infrastructure is built. Here it's critical that operating security is high and maintenance requirements are low.

Mitec's battery-operated solutions suit perfectly and simplify both installation and maintenance. Mitec has a patented solution for measuring in wells. We have a number of communication solutions and are used to dealing with practical problems such as rain, ice, vandals and rats.



Energy and process

Electricity prices continue to rise and reducing electricity consumption is therefore essential for most property owners.

Mitec's unique electricity-measurement kit is used by electricians, consultants and maintenance technicians when mapping electricity consumption, sharing loads and changing equipment. The repayment period for measuring equipment is often only a few months.



Create a service from your product

Today it's becoming increasingly difficult to compete with traditional product and component sales. And increasingly strategic to change track and transform product sales into services.

The idea behind Mitec's measuring and information system is that you can use it to guarantee your customers a function instead of merely selling a product. In this way you open up completely new business opportunities.

If you want, you can sell power instead of turbines; torque instead of motors. Or perhaps production time, or a guaranteed supply of raw material in stock at the customer. Anything that can be measured and processed can become a function, a service. The condition is that you can constantly collect information about your product's performance and function.

Regardless of where your products are located and how they are used, data flows in related to temperatures, flows, levels and more. Directly to your measuring server, intranet or extranet, so that anyone who needs the information can access it easily. Diagrams and other analysis make it easier to plan service jobs and provide a solid base for decision-making. Production and logistics can be optimised.

It's not enough to simply have a good product; it can all too easily be replaced. What are becoming more important are soft values such as delivery assurance, technical customer service, service, education and consultation. The ultimate outcome is of course to release customers completely by delivering and guaranteeing a function instead of a product.

Remote monitoring minimises costs and enables everyone to share information and decision-making data. An optimal result.



GSM, GPRS, 3G

The same thing applies between machines as between people: effective communication isn't something you can take for granted. For it to succeed, it should be simple, quick and reliable. Without any misunderstandings.

We've worked hard with communication for over 20 years and gathered a lot of experience about the best ways of doing things. That knowledge is built into our equipment and software and not least, into how we approach our customers' problems. Often what's most important is not which technology is used (technologies are constantly changing as we all know) but rather that the right solution is used in the right place.

We use GSM, GPRS, tele and radio. When you look at the solution as a whole, GSM often still proves to have the most practical

combination of function, availability, reliability and cost-effectiveness.

With GPRS, which is an extended version of GSM, it's possible to handle data faster. 3G is the new system that uses Internet's communication methods and provides a fast, wireless Internet. The infrastructure is under development and in many applications will open new possibilities.

GSM/GPRS with voice and data traffic and SMS is established, well developed and works extremely well for professional data traffic with measuring, monitoring and alarm. All radio communication is sensitive, but problems can be handled through smart technical solutions in the equipment. Such as ours.



Web-based operations monitoring

It-sensors.com is a web service (ASP) from Mitec that makes it possible to measure and monitor practically any type of process without having your own servers or software.

All you need to do is to install a fixed or portable Mitec measuring station and we take care of the rest.

You can see graphs, statistics and other information on your private it-sensors site, which is accessed with a personal password.

Using the administration tool you can yourself manage your user's rights, review statistics and add pictures. You can also imbed presentations directly in your own website, something that brings your customer closer and makes communication easier.

It-sensors.com is ideal for measurements in geographically spread locations. Present a single measuring site or build your own private measuring network with many measuring sites. You can easily access your measuring data from wherever you wish via Internet.

You'll have your application up and running quickly with no special computers or software, and with a low operating cost, as for a telephone subscription.

Mitec has the solution. End-to-end.

it-sensorscom



Mitec measuring server

Measuring data from GSM-measuring stations can be managed in two ways:

- Via it-sensors.com – Mitec's measuring service on Internet where we take care of your measurement for you
- Using your own measuring server with Mitec Monitor software

Mitec Monitor is an extremely well-proven and reliable Windows program that runs your data collection for you while you do something else.

Using Mitec Monitor you can run your own measuring server with anywhere from a single measuring station up to a thousand different stations. The program automatically collects measuring data from stations at a pre-set interval, exports to your operator system, and sends trend alarms via SMS and e-mail.

Mitec Monitor has advanced analysis tools and can automatically publish measuring data and statistics on your website.





SATELLITE60-SS
GSM OUTDOOR MEASURING STATION



DMP 331
UNIVERSAL PRESSURE SENSOR FOR INDUSTRY AND
WATER/WASTEWATER



SATELLITE60-P2
COMPACT GSM MEASURING STATION

Practical measuring technology for field use

How should measuring stations be installed in the field? Dug down in a well, light and compact for indoor installation, or in a robust case for portable applications? Or perhaps as a circuit board for integration in your system.

Different standard enclosures are available in plastic, metal, stainless steel and aluminium.

All the measuring stations in a system don't have to be the same. We have standard measuring stations but they can easily be varied with different accessories; no two projects are ever the same.

A wide range of measuring sensors for pressure, level, flow, pH, temperature and a variety of other purposes can be used with Mitec's measuring system. We have carefully selected a number of the best on the market with a focus on environmental and industrial measurements. We only use industrial sensors, which makes the system reliable and highly durable.

Our GSM measuring stations use unique low-power technology that mean the entire system, including sensors, can be powered from normal torch batteries with a replacement period of around a half year.

Antennas, batteries, power supply, lightning protection and heating are components that are needed sometimes; we help out with the selection. The market is flooded with components but we know which are good and which work best together.

Portable data loggers

Mitec supplies all components needed in a modern, portable measuring system. We have measuring sensors, data loggers, communication equipment, software and accessories.

We have made sure that our products are so easy to use and so flexible that you can focus your energy on your work rather than on your tools.

Mitec has developed and marketed data loggers since 1984 when we introduced one of the first modern data loggers on the market.

Mitec's loggers have been recognized for their reliability and accuracy and for being intuitive and easy to use.

AT40 is our classic eight-channel data logger with universal inputs. One instrument – all functions! All inputs can be used for all signals. Measuring data is transferred directly or via modem to PC for analysis in one of our analysis programs or in Microsoft Excel.

Mitec SatelLite is our series of one and two channel data loggers. SatelLite complements our multi-channel data loggers at a very reasonable price.

A classic in the property business for many years has been Mitec's electricity measuring case, which is used for analysing electricity consumption and reducing energy costs.



MITEC AT40g
COMPACT DATA LOGGER WITH 8 UNIVERSAL INPUTS



SATELLITE60-TH/E
HUMIDITY AND TEMPERATURE DATA LOGGER



Mitec Instrument AB

Mitec is an innovative technology company, which has since 1982 developed and manufactured instruments and systems for measurement, analysis and remote monitoring within climate, environment, industry and process applications.

Our focus is on equipment and systems for collection and presentation of measuring data. Often from geographically-spread measuring sites in the field.

Mitec's system is used for monitoring of environmental parameters including level, flow and pH within industrial applications, machine monitoring and raw material consumption. We have a long tradition of measurement in indoor climate, work environment and energy.

We deliver all components and systems from sensor to Internet.

Complete measuring stations with inbuilt communication as well as presentation of measuring data on Internet or on own measuring server.

In Sweden, we've been recognised for over 20 years for our accurate and reliable data loggers and software. Our business concept now, as it always has been, is to help our customers create knowledge from measuring data. We work with you to create the best and most cost-effective solution.

Mitec is based in Säffle, Värmland, where one of Sweden's leading clusters within the measurement and control industry is located. We put our effort into knowledge and smart solutions.

We'd be pleased if you'd join us.

Mitec references

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ARLA
ASTRA PHARMASUTICAL AB
ATLAS COPCO ABEM AB
AUTOLIV
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BARSEBÄCK KRAFT
BILLERUD AB
BPA
BOFORS AB
BOSTADS AB POSEIDON
BOLIDEN MINERAL AB
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CARRIER AB
CABBY CARAVAN AB
CASCO NOBEL AB
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CELERO SUPPORT
CHALMERS
CLOETTA CHOKLAD AB
DAFGÅRDS AB
DANFOSS
DUNLOP
DYNO NOBEL
EDET AB
EKA CHEMICALS AB
ELFA AB
ELECTROLUX MOTOR
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ESAB
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FINDUS AB
FMC FORET
FORTF
FORTUM
FIGHTER AB
FM MATTSON
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INDUSTRIHÄLSAN
IFÖ CERAMICS AB
IGGESUND PAPERBOARD AB
INU CONTROL AB
IVL
JM BYGG
KOMMUNHÄLSAN
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KRONFÅGEL AB
KTH
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OPEL RÜSSELHEIM
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PERMOBIL AB
PERSTORP COMPONENTS
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PREEM GAS
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TELENOR
TERACOM
TYLÖ AB
VOLCO CAR COORP
VOLVO BUSSAR
VOLVO AERO
VOLVO LASTVAGNAR
VATTENFALL AB
WASABRÖD
YIT AB
ÅF INSTALLATION AB

Mitec is a Swedish company that develops and manufactures products and systems for measurement and remote monitoring. Since 1982 we've been delivering complete solutions for measurement, portable data acquisition and wireless, Internet-based monitoring.



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