

# ABB's ruggedized UPS protects industrial applications

with the beneficial concept of modularity



— 01 Inovyn site at Jemeppe-sur-Sambre Inovyn Manufacturing, Belgium

As only the best will do, Inovyn opted for ABB's industrial and modular UPS product: The PowerLine DPA 20-120 kVA UPS has been specially designed to ensure consistent power supplies in challenging environments (excessive dust, corrosion, humidity, heat, etc.) and boasts a service life of 15 years.

### The challenge

This level of PVC production requires a precision system. "Our factory has a very high number of DCS I/O operations," explains Pierre Henveaux, Electrical engineer and Head of the HV and LV Electrical Sector. "The DCS – Distributed Control System – is a system that controls the plant: it starts the motors, opens and closes the valves, etc. In short, it controls all the equipment. Jemeppe has the highest number of I/O operations when compared with all the other factories in Europe. It's just not an option for the system to go offline and for us not to know what's going on!"

PVC is produced in batches and the DCS must be as efficient as possible, especially as the number of I/O operations will only increase as technology advances. "Our standards are very high, especially as

The Inovyn site at Jemeppe-sur-Sambre Inovyn Manufacturing Belgium produces 475,000 tonnes of PVC per year – the equivalent of 50 semitrailers per day. Around 500 people work round-the-clock shifts to maintain the company's position as the largest producer of PVC in Europe.

we are a Seveso factory. One of our top requirements is for uninterruptible electricity supplies. If we lose control for two milliseconds, all is lost: the data does not get through and the system goes into safe mode. If we lose a DCS for longer than 40 milliseconds, it's a catastrophe!" Inovyn has its own electricity production system, which produces one-eighth the power of a nuclear reactor, but even this is not immune to micro-outages.

### The partnership

The link between Inovyn and ABB is nothing new. "We have been working together since 2000," says Simon Lamsens, sales engineer at ABB. "We have built up a relationship of trust." Pierre Henveaux adds: "ABB is a serious and competitive player. We are very happy with the equipment, which is top of the range, and with the service too. Our interpersonal relationships make it easy to convey our requirements. Here, we needed UPS systems that were durable and very robust. ABB heard us." Simon Lamsens explains what was on offer when the conversation took place: "UPS systems are mainly developed for data centers, and we have very reliable ones for ours."



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01 “We needed UPS systems that were durable. ABB heard us.” Pierre Henveaux, Electrical engineer and Head of the HV and LV Electrical Sector

“But here we are not a data center!” says Anthony Kinif, a technician at Inovyn, with a smile. Anthony is in charge of commissioning and maintaining the UPS. “Here we have dust, corrosive substances, etc.” It was this requirement that led ABB’s teams to come up with a new device. “It’s clear that industrial environments now also operate within the Internet of Things and devices can send their status to the DCS.” This market is now growing exponentially, but its needs are different from those of data centers. “We therefore had to use the technology that was available for data centers and adapt it to the extreme conditions found in industrial applications.” This is how the PowerLine DPA UPS was born.

#### **The solution**

“We developed the PowerLine DPA UPS based on what had been designed for data centers,” explains Simon Lamsens. “ABB uses modular technology. We were among the first who developed this technology. At ABB, one module is one UPS. Each module contains all the equipment and software necessary to operate an entire system. One module’s operation is not affected by any faults found in other parts of the UPS. If one module goes down, the other remaining modules take up the slack.” Inovyn has factored in four PowerLine DPA units. Pierre Henveaux proudly shows off the serial numbers of “his” UPS machines. “We have numbers 4 and 5! We wanted equipment that was top-of-the-range and

robust. Only ABB was able to supply this. Furthermore, our special relationship meant we felt we were being listened to.” On top of the equipment quality, Inovyn found this system to be the most robust as each module is enclosed in a solid housing protected by powerful filters. Simon Lamsens explains the product: “Here you have filters, condensers, fans, etc. These make up a whole system that enables the UPS to last ten to fifteen.”

#### **The advantages**

“ABB was the only company to listen to our requirements and bring us a solution,” says a happy Pierre Henveaux. Simon Lamsens: “We’re talking about two electrical networks. The first supplies the batteries, which in turn output a constant supply. The modular system ensures that both of the circuits located in the same unit operate in parallel. If one component fails, the other one takes up the slack.” Inovyn opted for two units of four modules. “The probability of there being a problem with both units is very low.” The battery system is selected by the controller. “You can see that everything is built to last. The boards have been ruggedized, the components are extra-large and the filtration systems are hyper-efficient. The cherry on the cake is that everything is made in Switzerland, with the degree of quality that comes with that. I expect to have no trouble for at least fifteen years!”



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01 Pierre Heneaux, Electrical engineer and Head of the HV and LV Electrical Sector, Jemeppe-sur-Sambre and Simon Lamsens, UPS Sales Engineer ABB in front of the PowerLine DPA

### **The future**

“We are currently using an older-generation DCS, but we plan to move to a more efficient system over the next eight years.” By choosing a PowerLine UPS, Pierre Heneaux is already preparing for the future. “These UPSs are suited to our needs and will be able to maintain top-quality power supplies even when the new hardware arrives.” This vision of the future will be applied to our expansion plans: “We will also install two new UPS systems in our new production line, which is to start operating in 2019.”

### **Inovyn**

Inovyn is 100% owned by the INEOS group, a company with an annual turnover of 40 billion and around 18,600 employees. INEOS is present in 22 countries with 105 production facilities. Of the 18 different sectors it is active in, PVC is its main focus. With a strong presence in Belgium for historical reasons thanks to its partnership with Solvay, Inovyn has three production sites in this country. The one at Jemeppe-sur-Sambre began operating in 1871 as the flagship of the Solvay group. After moving from sodium hydroxide synthesis in 1897 to sulfuric acid in 1928, the site has been producing PVC since 1949. Today it is the largest PVC factory in Europe with an output of 475,000 metric tons/year. The group has started an expansion project that will increase production to 625,000 metric tons/year. “Would you like an example? The PVC in every credit card in Europe comes from here!”

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