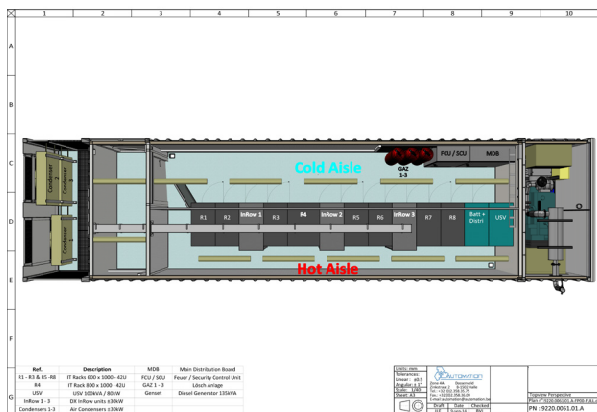


Cabling a Containerised Data Centre with Automation NV



Automation NV, located in Halle, Belgium, builds customised data centres housed in containers. Based upon the requirements of an especially demanding customer, Nexans designed and supported implementation of an integrated data cabling solution.



Originally an electrical power company, Automation NV has grown into a competence centre which delivers low voltage electrical power and data centre facilities solutions. A unique combination of electrical power knowledge and telecom experience has resulted in an installed base of some 600 Prefabricated Modular Containerised Data Centres (PMCDC) in the EMEA region.

"Relying on our experience with 'traditional' data centres, we started building containerised versions in 1997," explains Frank Vanlocke – Projects & Services Director business unit Datacenter Facilities (DCF). "PMCDCs offer a variety of benefits for specific situations, for example when clients need to expand their data centre and there's no time or budget to develop a new build. Another example is to be found in extreme environments where it is almost impossible to build a fixed data centre".

ALL-IN-ONE SOLUTION

"Recently, we carried out a project for a major governmental research agency. This comprised more than 20,000 employees, spread across more than 60 entities in Germany. They required vast amounts of data for their research, generated huge amounts of data internally and had to store all information produced for later use. A PMCDC was the ideal solution for them, as they needed a data centre extension, but had no more space in the existing buildings. Obtaining permission and building a new facility would have taken too long", says Frank, who was involved in the project from customer contact, price calculation and quotation to design, engineering and handover.

The main design criteria for PMCDCs are the number of racks and the total IT-load in kW, two parameters which determine the size of the PMCDC. On top of these two basic criteria, certain industries or applications require specific measures. If higher Tier levels are required for enhanced reliability, more space is needed. On the other hand, harsh environmental conditions demand specific measures adapted to the region. Due to temperature, a cooling solution for a customer in Africa will be completely different to that of a customer in Iceland. This also depends on the region: adiabatic cooling, which uses natural phenomena to regulate temperature, is impossible in Singapore due to the high relative humidity. In dusty environments (like deserts) specific filtering and integration of an airlock could be required. So, even though there are some standard concepts, customisation is necessary for each customer, according to requirements and environmental circumstances.

Even though certain design considerations need to be taken into account, a vast benefit of PMCDCs is the fast execution time. In this case the 'All-in-One' containerised solution for a total IT-load of 50kW spread over 8 racks, fitted out with all facility equipment - IT-racks, UPS, access control and intrusion systems, fire detection and automatic suppression, cooling and even a back-up diesel generator - was ready in just twelve weeks. A more traditional data centre would have taken four to six times longer.

Challenges

- Of a total 12 week realization time there are only four weeks for the complete internal fit-out
- Data cabling had to be done at factory
- Need for technical support

Solutions

- LANmark-6 pre-term bundle of 12 F1/UTP cables
- LANmark-OF pre-term bundle of 12 OM3 fibre cables
- On-site audit, technical support & training

Benefits

- Quick and clean installation using pre-term
- No cable over length with customized pre-term
- Patch panels and cables fitted within 1 week

SPEEDY PRE-TERM COPPER AND FIBRE SOLUTIONS

In most cases, data cabling is carried out once the PMCDC is delivered at the customer site. In this particular project, however, the client asked Automation to incorporate all data cabling at their factory. Out of the twelve weeks building time, only four were available for fitting out the inside of the PMCDC - and Automation were looking for a way to do this in-house, instead of in the field." As this was the first time we also had to provide the data cabling in our All-in-One PMCDC solution, the process was entirely new for us," says Frank. The team wanted to bring in external expertise, so Nexans created a design based on the customer's data cabling requirements. Pre-terminated LANmark copper and fibre assemblies were delivered 'ready to mount'. Following a brief hands on training, Automation executed the installation of components in the data racks according to Nexans guidelines.

"We worked very closely with Automation's Technical Director Patrick Collet and several Project Managers," says Guy Vranken, Sales Manager Nexans Cabling Solutions Belgium. "We were delighted they picked our pre-terminated solutions, largely for their ease of use, and because we could provide support in the areas of design and making sure installation would be as quick and easy as possible. Our long experience in data centres played an important role here. In a containerised solution, pre-terminated cable runs to the racks tend to be slightly shorter than in a traditional data centre, and there's less room to store excess cable length."

ON-SITE AUDITING

"Our activities ranged from design support to creating an elaborate bill of materials and auditing the project on site, training, checking that installation went smoothly and in accordance with correct procedures. We're happy that Automation can benefit from our experience to support their own market positioning as data centre experts. Both parties' skills overlap very neatly and all phases of the project went according to plan."

"We were a bit hesitant at first, but we knew we could always rely on Nexans for extra input and guidance. Now, we've mastered the process! As soon as we receive another request to provide integrated data cabling, we will definitely work with Nexans again. The collaboration went very smoothly, the service received from Nexans was excellent and our customer was very satisfied with the result", says Frank.

About Nexans

Nexans brings energy to life through an extensive range of cables and cabling solutions that deliver increased performance for our worldwide customers. Nexans' teams are committed to a partnership approach that supports customers in four main business areas: Power transmission and distribution (submarine and land), Energy resources (Oil & Gas, Mining and Renewables), Transportation (Road, Rail, Air, Sea) and Building (Commercial, Residential and Data Centers). Nexans' strategy is founded on continuous innovation in products, solutions and services, employee development, customer training and the introduction of safe, low -environmental- impact industrial processes.

In 2013, Nexans became the first cable player to create a Foundation to introduce sustained initiatives for access to energy for disadvantaged communities worldwide. We have an industrial presence in 40 countries and commercial activities worldwide, employing close to 26,000 people and generating sales in 2013 of nearly 6.7 billion euros. Nexans is listed on NYSE Euronext Paris, compartment A.

For more information, please consult: www.nexans.com

In the field of LAN Cabling Systems, Nexans Cabling Solutions offer a complete range of products and value added services providing improved reliability and reduced cost of ownership for Network Managers, together with faster installation times for installers.

In addition to LANmark brand cabling systems, Nexans also specialises in LANsense Intelligent Infrastructure Management (IIM) products including Environmental Monitoring and Access Control (EMAC) devices. Nexans offers an unrivalled choice of LAN infrastructure solutions to a global customer based through an extensive network of regional offices and Key Account Management team.



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