

Guaranteed electricity for processing centres Data security with the CMS multi-channel measurement system



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The Bunting group was founded over 200 years ago as a tea trading company. Bunting's data processing system needs to work 24 hours a day to allow the company to react swiftly to customer requirements.

Aside from data security, safely operating processing centres require above all a redundant power supply. When building its new processing centre, the Bunting group paid particular attention to improving failure safety. Intelligent components such as the CMS sensors from ABB boost operational safety.

Redundant power supply

The Bunting group, based in northern Germany, is a trading company that employs over 14,000 people. The group's IT infrastructure is managed by Bunting Informations Technologie (BIT). The new processing centre has an entirely redundant power supply system. For lines A and B, air conditioning, server and power supply are housed in separate technology rooms with uninterrupted power supply (UPS). The rooms are sealed off for fire protection purposes, so that in the event of a fire any damage can be minimized as much as possible. Safe operation of the servers is ensured by two power supply units, which are allocated to the respective supply side via vertical power outlet strips A and B with three-phase feed.

“Generally speaking, IT has become so complicated now and so important, we simply cannot allow our processing centre to fail. That is why we place great value on secure power supply. The products from ABB help us here.”
Lars Ammermann, Director of System and Network Administration at BIT



The CMS multi-channel measurement system allows both AC and DC currents to be monitored.

Effective early warning

One of the special features in the power supply system at Bunting's processing centre can be found in the distribution cabinets: CMS-100PS-type sensors attached to the ABB circuit breakers. These constantly record the current in the phases L1, L2 and L3, and provide the information required to evenly utilize the three phases. The CMS multi-channel measurement system therefore acts as an early warning system for any kind of interruptions and contributes greatly to preventing them. It consists of:

- control unit and sensors with measurement ranges of 20 A, 40 A, 80 A and 160 A
- sensors of the CMS-100 PS series with a width of just 18 mm, meaning they require far less space than the analogue transformers normally used
- each sensor has a microprocessor that transfers the measurement data to the control unit
- a flat ribbon cable and four-pin insulation displacement connectors connect the sensors to the control unit
- RS485 Modbus RTU interface for remotely querying the measurement data

Using the CMS sensors for monitoring allows BIT to keep a constant overview of the utilization of the individual phases. This is supported by a specially programmed visualization

“The sensors in the CMS multi-channel measurement system from ABB help us save space and act as an early warning system. As part of the redundant power supply, it ensures that our processing centre can be operated safely around the clock.” Lars Ammermann, Director of System and Network Administration at BIT

system. When one of the 30 network and server cabinets in the Bunting processing centre is selected, the pending current loads of the three phases for the power outlet strips A and B are displayed for this cabinet. A green bar means normal operation. At 35 to 40 percent capacity utilization, the bar turns yellow. From 40 percent, a red bar indicates an imminent overload. The display based on the current values measured by CMS can also be used for expanding server capacity. This makes it easy to find areas with further potential, in order to take on additional consumers without overloading the circuit.