BENNING
World Class Power Solutions

Excellent Technology, Efficiency and Quality



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MCU 3000

Monitoring Control Unit

- Maximises availability and cost-effectiveness
- Smart, location-independent and intuitive controls

MCU 3000
Always “in touch”

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Figure 1: The MCU 3000 Slimline Controller in a 19” rack

Figure 2: Online access to a UPS system via web browser and mobile phone

Always ‘on’ with Always ‘in touch’

For decades, BENNING has been developing smart power supply solutions that are precisely tailored to the requirements of operators. They ensure a reliable energy supply for mission-critical processes in a wide range of business areas, such as:

- **Telecommunications, IT and data technology**
- **Process automation / Industry**
- **Gas, oil & petrochemical industry**
- **Infrastructure**
- **Power generation and distribution**

Continuous and cost-efficient operation of power supply systems requires analysing and maintaining them with the help of powerful control and monitoring systems. BENNING has developed the MCU 3000 (Monitoring Control Unit) remote monitoring system for this purpose.

The controller monitors the entire power supply system and controls the power management, among other things. At the same time, it significantly reduces the time required for installation or maintenance, thanks to automatable event-controlled processes. Proactive services are triggered early, before major damage can occur.

Key benefits

- **Location-independent remote control and monitoring**
  - **Continuous, data-supported analysis**
  - **Recognises anomalies and causes at an early stage and reacts proactively before an error can occur**
  - **Automatic triggering of individual processes through event-driven reactions**
  - **Controlled battery management optimises the service life and ensures the operational readiness of the battery system**
  - **Supports all common protocols and interfaces and can be configured via web browser**
- **Intuitive and reliable operation**
  - **Excellent interface design with clear signalling**
- **Reduction of maintenance, service, installation and training times**
- **Safety for critical processes**
- **Lower total cost of ownership (TCO)**
- **Smart connectivity**

Easy and safe operation reduces service and maintenance times



Figure 3: The Slimline Controller has a 1.8" display on the front, a USB 2.0 interface (e.g. for connecting a WLAN stick) and an Ethernet port. The high-contrast, bright display of the MCU also serves as a signalling unit. If a malfunction occurs, it will be colored completely bright red and is therefore clearly visible from a distance.

Figure 4: As an option, the MCU 3000 can be installed in the cabinet door of the power supply system. This version has a 10' touch display. The start screen consists of a clear single line with the most important measured values and system statistics. Swipe gestures can also be used, just like on a smartphone or tablet.

Keep it simple

Given the increasing range of functions of power supply systems, operating and display concepts that enable simple and safe use through targeted interactions between humans and machines are necessary.
The user friendly interface design of the MCU 3000 is intuitive, object-orientated and uncluttered. Only the information required to perform the task at hand is displayed on the screen. The operation of the power supply becomes safer and more efficient. The time required for service and maintenance processes is significantly reduced.

Detect anomalies at an early stage and react proactively
The MCU provides all events, fault and system messages in a logbook for analysis.
Actions or service processes are automatically triggered by events via individually adjustable limit values, filters and prioritisation. In addition, a hysteresis range can be defined for alarms and messages.
All alarms must be acknowledged or cancelled. This ensures that the alarm is assessed.



Figure 5: The MCU provides information about errors, short circuits and earth faults. Signals from protection devices are incorporated and integrated to recognise fault locations or fault directions. A clear line colouring and corresponding markers in the circuit diagram indicate the location of the fault. This allows service technicians to localise and rectify faults more quickly.
In addition, internal or external service staff can be scheduled more specifically depending on the type of fault indicated.

Smart connectivity

- Supports all common communication protocols and interfaces, e.g: DNP 3, Profibus and MODBUS, TCP/IP, SNMP, e-mail*1, modem, Ethernet and USB
- RS-232 for serial communication and modem
- RS-485 for MODBUS (MODBUS can also be addressed via network)
- USB 2.0 interface
- Configurable via web browser and mobile devices
- Integration of external error messages (e.g. fire protection systems, alarm systems, etc.)

*1 customised configuration on request



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