



INDUSTRIAL CONTROL

APPLICATION EXAMPLE

Mobile data collection in an industrial environment

Mobile, Internet-supported data collection and the corresponding communications tools are now essential elements in the manufacturing processes of many industrial firms. That's why HEITEC developed a system solution for one of its customers that enabled it to gather complex measurement data for its in-house liquid filter system manufacturing processes.

High standards were set for both the electronics and the mechanical aspects. First, the system had to function reliably even when exposed to major temperature fluctuations and strong impacts and vibrations. It also had to be unaffected by splashing water, dust or grease. Maintenance had to be as simple as possible, with due consideration for the technical requirements.

The entire complex system was integrated into a HeiPac Vario-Modul measuring 310 mm x 42HP x 4U (L x W x H), a standard element in HEITEC's portfolio. The HeiPac Vario-Modul is cost-effective, with an excellent compact, stable, full-metal casing that proved to be ideally suited for this application. In accordance with customer specifications, the front and side panels were produced

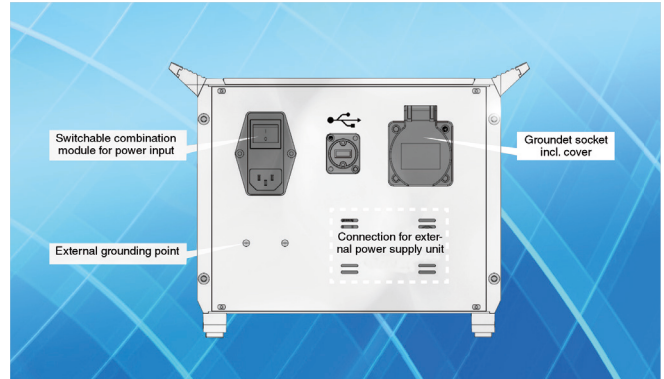
in the customer's corporate design and the side panels given new colors – no further adjustments to the standard product were needed. The front plate contains the connections for the four different measuring modules that are supplied internally with a voltage of 24V. The back contains a switchable combination module for power input and a covered, grounded socket to supply power to a laptop. There is also a USB port and an attachment for an external power supply for a laptop. A grounding terminal on the back also enables the entire system to be fully grounded.

The use of fans was avoided to protect the electronics, with their complicated wiring, against harmful external influences. To ensure proper heat regulation with high electromagnetic compatibility, the components were appropriately spaced on a full aluminum mounting plate to guarantee passive heat dissipation for the system. Standardized solutions were used for the hardware and software components where possible, to keep the cost of the entire system as low as possible.

Innovative chassis concept



Front panel of the mobile measurement data recording system, with the connections for the different measuring modules



Schematic rear view of mobile data logger

Technical Summary

- › Customer-specific system solution
- › Standard HEITEC chassis with colors adapted to suit customer's corporate design (RAL5005)
- › Internal power management (24V) for measurement components
- › L x W x H: 310 mm x 42HP x 4U
- › Power supply: 230V mains voltage
- › Highly effective EMC protection
- › Stable, compact, full-metal casing with integrated mounting plate (side panels and transverse sections made of aluminum extruded cross-section and corner frames of sturdy die-cast zinc)

Customer Benefits

- › Plug & Play system solution
- › Powerful system makes it easy to handle large data volumes
- › Good tightness to protect against harmful external influences, such as dust and dirt
- › High shock and vibration resistance
- › Good accessibility despite elaborate wiring ensures ease of maintenance
- › Optimized passive heat dissipation
- › Recorded data can be read out easily via laptop using a USB connection
- › Reasonably priced overall system

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