Universal Monitor D0-1
AT A GLANCE

Order Catalog
PN- WEB ONLY



Simple Monitoring Device for your business

- Monitoring / alerting / data collecting / analyzing / diagnosing
- Universal application at low cost
- Monitoring up to 128 Modbus RTU / TCP devices
- Web based software included
- Do-it-yourself - easy configuration
- Individual Dashboard creation
- Includes MODBUS addresses of Selec products
- Individual alert or event settings with email notifications
- Extract filters for data to Excel or cvs files
- Realtime clock with 30 days battery backup
- Dual power input
- 5GB internal data storage / 128GB external
- Compact design, with DIN rail adapter (optional)
- WiFi and Bluetooth connection (optional)
- Custom features or functions on request
- German engineered, assembled in Mexico



shown with
optional antenna

General Information

The following section contains essential information about the development and application of the DO-1 universal monitor, the main alarm functions and the additional options considered.



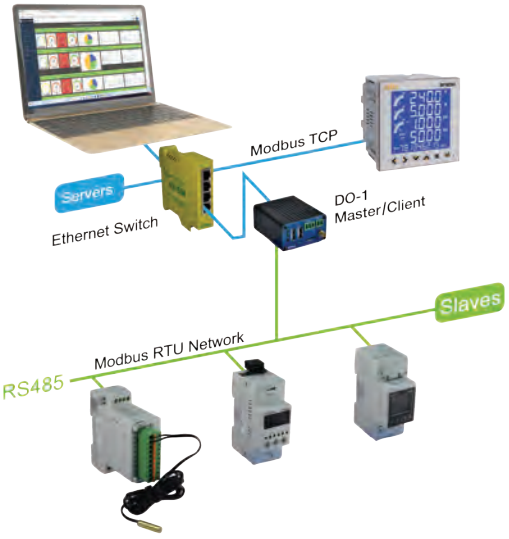
Use and advantages of DO-1

DO-1 was developed to help companies monitor their buildings, plants and machines in a simple and cost-effective way. By using DO-1, companies can monitor, alarm and evaluate their buildings, plants and machines themselves without having to resort to expensive and complex systems.

DO-1 does not require any special technical requirements or IT specialists to be installed and operated. DO-1 is easy to install and operate, making it an ideal solution for small and medium-sized businesses.

In addition, DO-1 offers the ability to connect a variety of sensors and data logging devices that allow companies to monitor and analyze their buildings, facilities and machinery in a variety of ways. For example, DO-1 also allows companies to collect a variety of data, including energy consumption, current, voltage, temperature, humidity, motion, and noise levels.

The special benefit: There are no monthly or annual license fees for DO-1. This makes DO-1 a cost-effective solution for companies that want to monitor their buildings, plants, and machines easily and economically.



Communication protocol

When selecting a communication protocol for industrial applications, various factors must be taken into account. One major challenge is the large number of protocols used by different manufacturers, which are often not compatible.

Key selection criteria:
1. Use of a simple, universal, stable and interference-resistant communication protocol that is already being used successfully in industry
2. Widely used by almost all manufacturers for the myriad of PLCs, VFDs, HMIs, meters and sensors available on the market
3. Compatibility problems should be avoided and the integration of devices from different manufacturers should be facilitated.

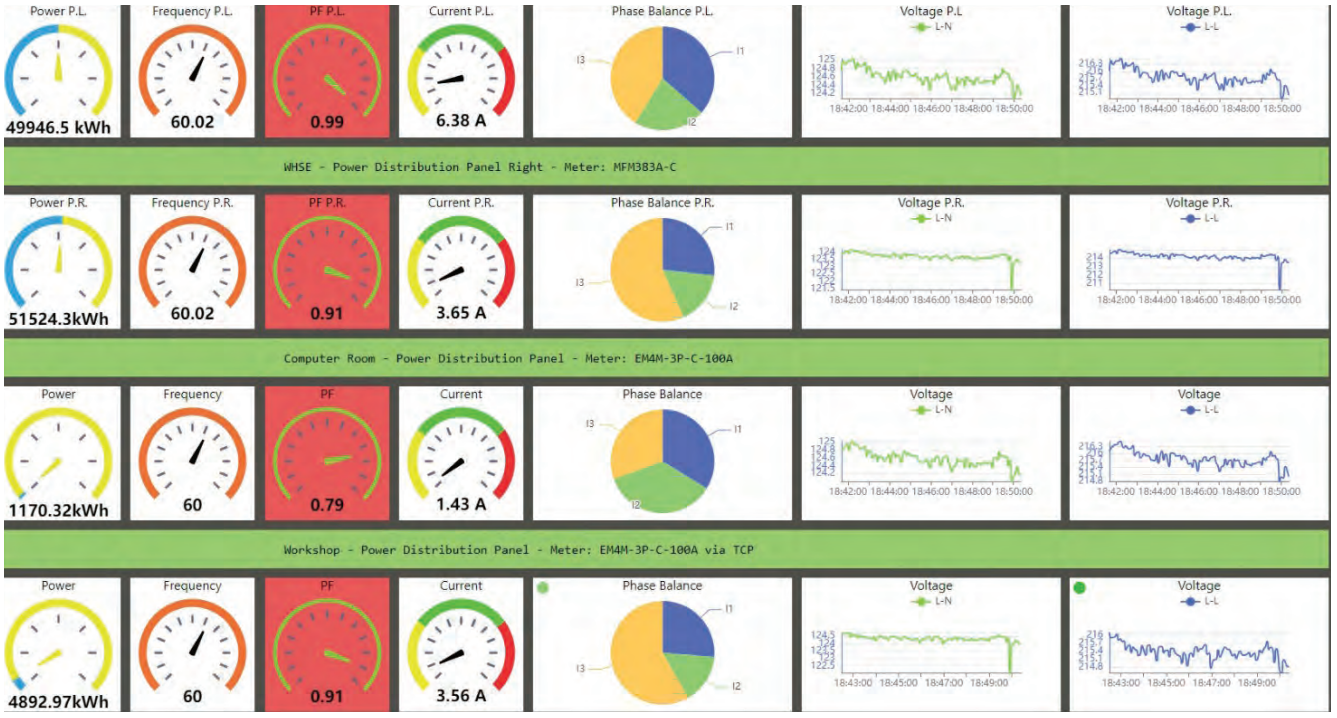
For this reason, **Modbus RTU** was chosen for the development of the DO-1. Sensors and devices can be connected in series in a network, which is very popular for industrial control networks. The **Modbus RTU** communication protocol provides reliable and efficient communication over a 2-wire serial connection (RS485). This connection is easy to set up and maintain, making it a suitable option for use with sensors and data acquisition devices.

The figure shows an example for a **Modbus RTU/TCP** network.

Modbus TCP is an Ethernet extension of Modbus. If a local Ethernet network (LAN) already exists, the **Modbus TCP** communication protocol can be used to connect sensors and data acquisition devices that have an Ethernet port. If sensors and data acquisition devices only have a 2-wire serial connection, they can still be connected using a suitable RS485 serial converter. This allows seamless integration into an existing network and provides greater installation flexibility.

Display and data logging

The dashboard for displaying measurement data is easily customizable and user-friendly. It can be displayed on different devices such as desktops, laptops or tablets in the network (LAN), which allows flexible use.
Instead of having to learn and operate a complex analysis program, the measurement data can simply be transferred to Microsoft Excel or another spreadsheet program for evaluation. These powerful spreadsheet programs are widely available today and are easy to use.



Alert functions

Alerts help to ensure the safety, efficiency and reliability of the monitored systems/devices by providing early warning of errors or malfunctions and enabling a rapid response. This function is therefore essential to quickly detect and visualize possible errors or malfunctions.

1. Early failure detection: To become aware of possible faults or malfunctions in the monitored equipment at an early stage. This allows action to be taken before problems worsen or lead to failures.
2. Quick response time: By creating alarms in the monitoring center, the responsible persons receive immediate notifications of any problems that occur. This allows them to react quickly to determine the cause of the problem and initiate appropriate measures to restore the operation of the equipment.
3. Efficient error identification: Alerts help to specifically identify errors or malfunctions in the monitored devices. By monitoring specific parameters or patterns, alarms can be triggered as soon as deviations from normal operating conditions are detected. This facilitates fault diagnosis and shortens the time to rectification.
4. Reduction of downtime: Timely detection of faults and rapid intervention can minimize downtime. Alarms allow potential problems to be addressed proactively before they lead to major disruptions or outages.
5. Improvement of the overall performance: By continuously monitoring and creating alarms, the overall performance of the monitored system can be improved. By identifying trends or recurring problems, appropriate action can be taken to increase equipment reliability, efficiency and longevity.

If the corresponding values are exceeded or not reached, an alarm is triggered, which leads to the automatic sending of an e-mail. This e-mail can contain a short message or a report about the situation. It can be specified in advance whether the alarm status should be reset automatically when the measured value is back within the tolerance range, or whether a manual reset is required. In this way, the user can adapt the settings to his specific requirements.

Additional Options

Beyond the basic version, the product offers a range of additional options to meet individual needs and requirements. These advanced features enable customized use and provide a higher level of flexibility and performance. These additional options ensure that the product meets individual requirements and provides a comprehensive solution for various business needs.

WLAN/WiFi • Bluetooth • Remote Access

Altech Corp.® MEXICO

Modbus MEMBER