

Industrial Monitor Devices



Modern industrial production relies on reliable electrical control and accurate monitoring to ensure efficiency, safety, and stable operation. Devices such as the NIO Relay Interface, LogBox data loggers, Power Controllers, and FieldLogger systems help improve protection, simplify monitoring, and support better operational performance through practical, easy-to-integrate technology.

In a typical factory packaging line, the NIO Relay Interface would be used in the electrical control panel to protect automation systems from voltage spikes and short circuits. As a sudden voltage surge could damage PLC outputs or connected equipment, installing the NIO interface relay between the PLC and machine components provides electrical isolation and safe switching. It protects sensitive electronics while maintaining reliable signal transmission. Its mechanical life of 10 million cycles ensures long-term operation with minimal maintenance. There are different voltage models from which to choose, to match common industrial control voltages.

Monitoring process data is equally important. The LogBox-DA data logger records both digital and analogue signals. In a water treatment plant, it can track pump cycles through its digital input while measuring flow transmitter output through its analogue channel. Storage readings can later be downloaded for analysis. Adjustable logging intervals and a high protection rating allow for reliable operation in harsh environments.

Whereas in a food processing facility, engineers needing to monitor two oven temperatures during production, would utilise the LogBox-AA which features two universal analogue inputs, and a multi-sensor measurement system. Storage readings can also be downloaded for analysis thus allowing technicians to verify temperature stability and maintain product quality.

Power control is also critical. Where electrical energy is supplied to high-power loads such as ovens or furnaces, the 60–200 Amp Power Controller can be used to regulate the amount of electrical power delivered to high-power equipment. For example in plastics extrusion, the heating elements require stable temperatures. The controller receives a signal from a temperature controller and adjusts power using phase-angle or pulse-train control, thereby improving heating accuracy, reducing energy waste, and extending heater life. Built-in ultra-fast fuses provide additional protection against overloads or short circuits.

For larger monitoring systems, the FieldLogger offers advanced data collection and management. With eight universal analogue inputs and digital I/O channels, it can monitor variables such as temperature, humidity, and pressure simultaneously. In a pharmaceutical warehouse, sensors connected to the FieldLogger would continuously track storage conditions to meet strict quality standards. The device can record up to 100 channels of data and store large datasets internally or on an SD card. The Ethernet connectivity allows engineers to access real-time information through a web interface, receive email alerts when limits are exceeded, or download data remotely using FTP. It also supports virtual channel calculations and Modbus communication for integration into SCADA or plant monitoring systems.

Together, these devices provide reliable protection, monitoring, and control that help industries operate safely and efficiently while reducing downtime and improving decision-making.

Call us for more information on industrial monitoring and ampere power control devices.

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