yantram

IOTtech Smart PRODUCTS

YANTRAM INDUSTRIAL MACHINE AUTOMATION

IOTTECH SMART PRODUCTS
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YANTRAM INDUSTRIAL MACHINE AUTOMATION

Machine controllers are becoming more sophisticated as businesses aim for higher levels of automation, increased productivity, and cutting-edge production methods. Machine controllers are becoming smarter and more capable of all machine control, adaptive control, and real-time data analytics as a result of developments in technologies like the Industrial Internet of Things (IIoT) and artificial intelligence, which expands their application and influence in industrial operations.

Manufacturing: - Industrial machine control, computer numerical control (CNC) equipment, and automated assembly lines have all changed the manufacturing industry. It increases overall productivity or the safety and security of the equipment, enables quicker and more exact output, and decreases manual operation.

Logistics and warehousing: - Automation is essential to the operations of logistics and warehousing. Automated systems are used to control warehouse sorting machines, packaging warehouse climate control systems, and all forms of electric or lighting equipment such as fans, ACs, etc.

Agriculture: - Automation is revolutionizing the agricultural industry with technology like smart farming, smart submersible controllers, temperature control cultivation, and harvesting systems. These developments boost productivity, cut down on physical work, and maximize resource use.

Energy and utilities: - Power generation, distribution, and monitoring all use automation. Wi-Fi, automated control systems, and smart grids increase energy efficiency, maximize electricity production, and provide improved grid management.

YANTRAM INDUSTRIAL MACHINE CONTROLLERS (IMC)

- Use your mobile app to command all three-phase or single-phase industrial machine through controller.
- Display of voltage, current (up to 100 Amp), and sequence of three-phase electricity on mobile app.
- Ease of operation as Controller allows the machine to be controlled manually or automatically through device.
- 3-Phase sequence checking mechanism to guard against burning or damage to the machine.
- A proper mechanism for verifying the 3-phase supply.
- Verify whether there is 3-phase electricity on the property.
- Load and running duration are viewable on smartphones.
- Scheduling the machine / machines for production or service delivery.
- Two timers are available, one for turning the machine on and the other for turning it off.
- **Scheduler (duration):** Auto-control based on scheduled duration and time to start.
- Simple wired/wireless registration.
- Simple control transfer to others via QR code scanning.
- Voice commands through a smartphone app.

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- The smartphone app's history of machine operation.
- Customized solution for Industrial machine controller according to the requirement.

Customized Additional Facilities with Industrial Machine Controllers

Processing Power and Performance: Industrial machine controllers require sufficient processing power to handle complex machines, real-time control, and data processing. The processor should be capable of handling multiple tasks simultaneously without compromising performance.

Input/Output (I/O) Interfaces: Machine controllers must have various I/O interfaces to interact with sensors, CT coil, and other peripherals. Common types of I/O include digital inputs and outputs and communication interfaces like WI- FI.

Real-Time Operating System (RTOS): Many industrial applications require real-time control, where timing precision is crucial. RTOS ensures that tasks are executed with minimal delay and predictable response times.

Communication Protocols: Support for standard industrial communication protocols is essential for seamless integration with other devices and systems.

Programming Language and Software Support: Machine controllers are typically programmed using specialized software or languages like ladder logic, function block diagrams, structured text, C/C++, or even high-level languages like Python, depending on the controller type.

Safety Features: Industrial machines must adhere to safety standards. The controller should have built-in safety features like emergency stop functions, phase unbalance, voltage fluctuation, heavy load, low voltage, etc.

Scalability and Expandability: The controller should be scalable to meet the requirements of various machine sizes and complexities. It should also support expandability for adding new features or accommodating future upgrades.

Environmental Considerations: Industrial environments can be harsh, so the controller should be designed to withstand temperature variations, humidity, dust, and other environmental factors.

Diagnostic and Monitoring Capabilities: Machine controllers should provide diagnostic information and monitoring capabilities to aid in troubleshooting and maintenance.

Data Logging and Connectivity: For advanced applications, data logging capabilities and connectivity to cloud or on-premises systems may be necessary for data analysis, predictive maintenance, and Wi-Fi monitoring.

User Interface: Depending on the application, the controller might have a built-in display and interface for users to interact with the machine directly.