Smart Manufacturing Learning System
Develop Vital IIoT & Industry 4.0 Skill Sets

990-SM10

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AUTOMATION
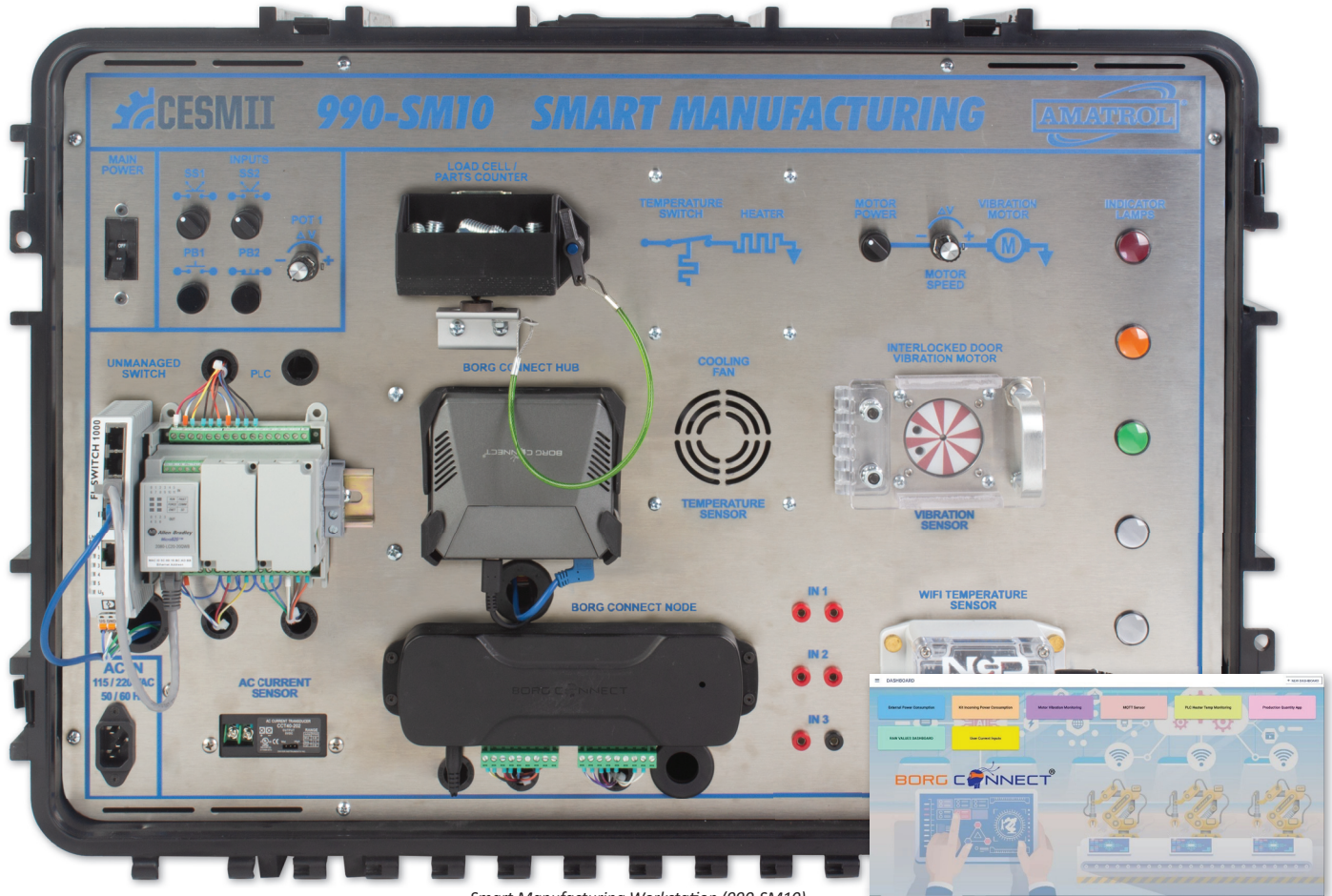
Smart Manufacturing Workstation (990-SM10)

BorgConnect Dashboard Software

Hand-On Skills:

- Intro to Smart Manufacturing
- Data Capture
- Function of I/O Layer
- Wired/Wireless Sensors to Edge to App
- PLC Operation
- Function of HMI/SCADA
- Edge and Cloud Solutions
- Cybersecurity
- Smart Manufacturing Platform
- Production Monitoring
- Energy Monitoring
- Asset Utilization
- Product and Process Quality
- Equipment Diagnostics

Amatrol's Smart Manufacturing Learning System (990-SM10) was developed in partnership with CESMII - The Smart Manufacturing Institute, to answer the call for hands-on learning in Smart Manufacturing and Industry 4.0 technologies. Combining hardware, industrial software products and solutions, and an in-depth exercises, this system has been designed to educate and equip learners at all levels of expertise, from the novice 'Citizen OT-IT Technologist' to the expert architect and implementer of smart manufacturing systems. This system covers smart manufacturing principles and technologies, starting with the most basic and continuing to the advanced. The 990-SM10 uses wired and wireless sensors, OPC Unified Architecture (OPC UA) and MQ Telemetry Transport (MQTT), a PLC, several types of edge gateways, and a variety of on-premise and cloud-based infrastructure and applications that facilitate both OT and IT-centric use case development and training.

The 990-SM10 is an ideal training system for equipping individuals at all skill levels with the practical, hands-on skills they need to begin or advance their Smart Manufacturing journey, teaching them how to envision, develop, and sustain practical solutions using real-world, best-in-class smart manufacturing capabilities and methodologies.

990-SM10's Activity & Installation Guide included with system. Curriculum currently under development.

AMATROL ®

Develop Real-World Smart Factory Skills

The Smart Manufacturing Learning System (990-SM10) includes industrial components found in typical manufacturing operations, and that users can access to develop hands-on skills. In addition, there are several additional sensors – including the Wireless Temperature/Humidity Sensor and the Current Transformer Sensor – that can be used to monitor external, real-world components and systems. This system also allows for user-supplied remote sensors for additional types of measurements and curriculum customization.

Real-World Industry Software for Monitoring Systems

Amatrol partnered with CESMII and their member organizations, including industrial suppliers Rockwell Automation, Phoenix Contact and 5G Technologies USA Ltd. to implement their monitoring, connectivity and control solutions into this one-of-a-kind system. Users will practice with both the PLC and BorgConnect Hub and Node for different options to collect and monitor data for process control, machine monitoring, and energy optimization purposes using solutions that are practical to implement for any manufacturer. Users will also have the option to use PLC programming software for developing I/O control skills and the CESMII Smart Manufacturing Innovation Platform (SMIP) to practice information modeling, platform development, application configuration and analytics skills.

Study Smart Manufacturing Concepts on a Portable, Ergonomic, Easy-to-Use System

The Smart Manufacturing Learning System features a stainless-steel panel design in a rugged, flameproof, and lockable ABS plastic case. It comes with roller wheels, a handle, and a pouch to store loose items, such as cables, loose components, and documentation – making it is easy to transport and store.

The Smart Manufacturing Institute Mission

Radically accelerate the development and adoption of advanced sensors, platforms, and models to enable Smart Manufacturing to become the driving sustainable engine that delivers real-time business insights and improvements in U.S. manufacturing. https://www.cesmii.org/