

INDUSTRY 4.0 TRAINING SYSTEM

MODEL: MCTR12



FEATURES

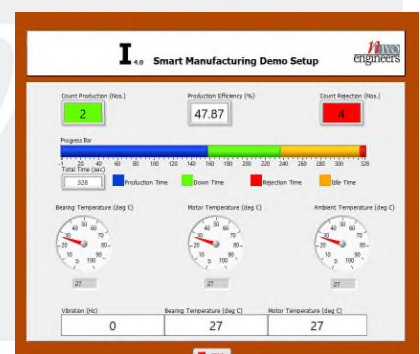
- Robust and modular construction
- Demonstrates various Mechatronics schemes
- Introduces trainee to Industry 4.0 basics

DESCRIPTION

This training system is designed for students to get familiarize with real life to factory automation system and basic concept of Industry 4.0. This is a small electro-pneumatically operated manufacturing plant/factory that has various modules namely material handling, inspection, drilling, welding and sorting. Control of the system is through a PLC. A basic i4.0 software is supplied with this kit that covers the aspects of Quality, Production and Maintenance reports.

Optionally the system can be integrated with an advanced I4.0 software/hardware that has cloud connectivity and demonstrates,

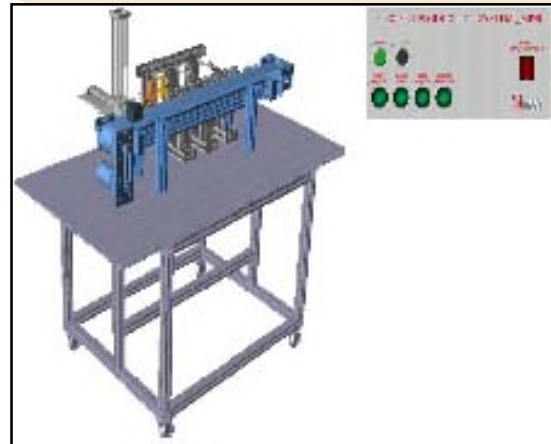
- Real time data & Real time analytics
 - OEE for each machine
 - Machine Utilization – Patterns of Machine Status, start time, Stop time, Total time & reasons (Machine wise & date wise)
 - Downtime analysis
 - Production tracking
 - Monitoring cycle time
- Maintenance
 - Running hours-based maintenance
 - MTTR & MTBF
 - Loss Analysis –plant and machine level data



- Alert and Alarm Generation
 - Daily production SMS
 - Alerts for lower rate of production
 - Maintenance alerts

In order to demonstrate various capabilities of I 4.0 and to familiarize trainees with concepts of I 4.0, various faults in the production plant can be simulated.

- Drill machine fault
- Welding machine fault
- Excess vibration in the motor
- High temperature of motor
- High temperature of bearing



INSTRUCTION MANUAL

Self explanatory operating manuals are provided with each system. Detailed theory as well as practical exercises are also included in the manual.

COMPONENTS

DC motor operated Conveyor	Magazine module
Photo interrupt type proximity sensor	Inductive proximity sensor
Capacitive proximity sensor	Reed switches
Drill machine with electro-pneumatic operation	Welding simulator with electro-pneumatic operation
Pneumatic cylinders	5/2 single solenoid valve
Fault creation box	RTD type temperature sensor
PLC	Control panel
Structure	Basic i4.0 software/ Advanced I4.0 software solution with cloud connectivity

OPTIONAL ADDITIONAL

- Silent compressor
- Camera for Visual inspection
- Hardware to interface software with physical system
- Window Computer
- Standalone software

SERVICES REQUIRED

1. Electric supply
2. Pneumatic supply

MODEL

MCTR12-A: Basic software with Camera	MCTR12-B: Basic software without Camera
MCTR12-C: Advance software solution with Camera	MCTR12-D: Advance software solution without Camera

WEIGHT

- 100 kg

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1. Since research and development is an on-going activity, the specifications mentioned herein are subject to change without notice
2. Photographs are indicative only.