What is the CMI Module for Control and Monitoring of Heat Trace Systems (CMI-HTS)?

It is a Centralized, PLC / PC / Web based solution designed to provide Heat Trace System users with information about the Operating Status of Electric Heat Trace Circuits (HTCs) deployed at a given Site, and automatic control of their operation to maintain equipment temperature. This solution is designed to generate alerts for Operators when one or more of the HTCs at their Site, is not operating as designed to maintain temperature on customer equipment, or when the temperature on protected equipment is below customer defined set-points.

The CMI Module for Control and Monitoring of Heat Trace Systems (HTS) uses up to 3 RTD Probes per HTC to collect temperature information, at 5 minute intervals, from pipes or other equipment that it is protecting, and Current Transducers (CTs), to collect circuit load information (Amps) in real-time. This information is logged by a PLC which controls the operation of the HTC, turning it on when Probe temperature readings fall to Operator defined Set-points. It generates Alarms when temperature readings fall below defined Set-points or when circuit load readings (Amps) fall below Customer defined operating val-

CMI FEATURES

- Controls Equipment
- Monitors and Generates Alarms
- Logs Information
- Provides Continuous Real-Time Management Information
- Stores Operating and Alarm Information in Excel™ and CSV files

Centralized PC/Webpage Monitoring

Run-Time Circuit Status Monitoring Screen: 20 Circuit Wireless Solution.
Per Circuit Alarms for Amps Status, Temp Status, and GFI Status.

Run-Time Probe Status Monitoring Screen: 3 Probes per Circuit, 60 Probes Across 20 Circuits.
Probe information for each Circuit accessed from the Circuit Status Screen.

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ues. It also generates Ground Fault Interrupt (GFI) alarms when detected and will Trip an operating HTC into the “off position” when GFI values exceed user-defined limits.

What it does
The CMI-HTS Module delivers real-time monitoring information through a PC browser based Webpage, delivered from the PLC over an Ethernet connection. All heat trace and probe operating status information, with corresponding Alarms and Warnings, is synthesized into a Web page on the PC with an “at-a-glance” view of equipment status. To Acknowledge Active Alarms, and access detailed Alarm Information and Resolution Hints, operators use a Remote Operator Utility in the CMI Module to directly access the PLC from their PC.

How it works
All operating and alarm data logged by the PLC is stored on an SD Card and is exported as Excel and CSV files for documentation and analysis of the HTC System operation. CMI Modules provide 2 connections for PC access to the PLC for monitoring and control, and one connection for the Customer’s web server to provide browser based access to the monitoring webpage. A fourth connection is reserved by Dymocon for Service and Support of the CMI Module, and off-site backup of logged data.

The CMI Module for HTS, is designed to operate with RTD Probes and CTs connected to the PLC over a Wireless Mesh Network and / or a Wired network. CMI Modules are delivered “turnkey” to the Site, as a fully integrated wireless / wired solution. CMI Modules are a wireless (based on IEEE 802.15.4) and / or wired management solution that will help lower Plant Operating Costs, Capital Expenditures, and Lost / Down Time, while improving Risk Management and Productivity.

“With the Dymocon CMI Module, our Control Room can now monitor all heat trace lines, know when they’re on, and know whether they’re operating at Expect Amp levels, so we’re sure that idle lines will not freeze during the coldest winter weather.”

— Plant Manager
Power Plant, Massachusetts

"Other CMI Modules" table:

| CMI-LGL | for Monitoring Load and GFI on Heat Trace Lines |
| CMI-EVT | for Monitoring Equipment Vibration and Temperature |
| CMI-MRO | for Monitoring and Recording of Oven Operations |
| CMI-TMS | for Temperature Monitoring Systems (RTD) |
| CMI-HTS-R | for Control and Monitoring of Heat Trace Systems (WirelessHart) |
| CMI-CHC | for Wired Monitoring of Power on Heat Trace Circuits |

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