

# MC140RAC

## Remote Appliance Controller



The MC140RAC is a general purpose controller designed for OEM Utility Demand Response and sub-metering applications. Particular attention was given to high reliability and maximum flexibility in communications. The MC140 measures approximately 4 1/4 X 4 1/4 X 1 3/4 inches yet includes a highly impressive array of both functional and installer friendly features. It is designed to control up to 2 each HVAC loads or single high power load such as Water Heater, Pool Pump or similar deferrable load.

Recognizing that there are no universal standards for communications in modern AMR and AMI systems, the MC140RAC maintains flexibility by the use of multiple USNAP compatible communications ports for up to three internal communications modules. This flexibility allows the product to communicate over a wide selection of languages with minimal effort and even allows multiple communications within a single device. The MC140RAC is capable of performing "Network Translation" allowing it to function as a bridge from one means of communications to another. Communications currently supported include RDS Radio, Zigbee and a number of proprietary network specific protocols. The communications capability is growing rapidly with the proliferation of USNAP modules. Currently the MC140 is planned to support Wi-Fi, Zwave, Flexnet and other popular communications. Others will be added per customer requirements.



The MC140RAC has advanced HVAC control algorithms with Adaptive Controls as well as Distributed Intelligence giving support for Broadcast methodology. Direct Control is incorporated for instant response to commands. These modes of operation are concurrent supporting advanced controls as anticipated in future networks. To augment these controls the MC140RAC supports "Load Sensing" and "Load Calling". Several data counters and timers are available for in depth information on normal appliance behavior as well as behavior while under control.

Local Override and Power Measurement are optionally available offering customer interaction and data on the load under control including the measurement of voltage, current, Power Factor, VA, KW and WH sub-metering for the load. Peak values for maximum and minimum voltages are stored and reported on demand. The load can also be made sensitive to supply voltage for local brown out load reduction.

### MC140RAC Features Include :

- Singular or Repeating Direct Load Control
- Response to TOU or RTP pricing
- Adaptive Algorithms for HVAC controls
- Local and Remote Network Overrides
- Time of Day schedules for autonomous control
- Integral Wiring Compartment
- Molded in Conduit Fitting
- Meter Seal Compatibility

- Distributed Intelligent Controls
- Load Sensing on a per Relay Basis
- Optional Power Monitoring and Measurement
- Multiple Communications Modules
- Optional Local Override Button
- High Impact Polycarbonate Housing
- LED State Indicators
- Agency Approvals for USA and Canada

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