

*Thermostats and Controllers for Marvair Wall Mount Air Conditioners and Heat Pumps*

**Controllers**

► **MPC-10 PLC Controller**

MPC10 HVAC Controller – 2-Stage A/C Units .....	K/40119-2
MPC10 HVAC Controller – 5-Stage A/C Units .....	K/40119-5
Additional Humidity & Dry Bulb Sensor (1 Included, Up to 4 Max) .....	70676
Dry Bulb Sensor .....	70916

The Marvair MPC-10 is an HVAC system controller designed to control up to ten PLC-equipped air conditioners, that can be either single or dual compressor, for equipment enclosures. In addition to the control of the air conditioners, the MPC-10 provides alarms remotely, through BACnet or Modbus, and locally using a built-in Human Machine Interface (HMI). The controller is factory programmed with standard industry set points, but can be configured on site or remotely. Settings are retained indefinitely in the event of a power loss.



**Control 2-Stage or 5-Stage A/C Units**

The Marvair MPC-10 HVAC controller can control up to:

- Six 2-Stage A/C units using CAT5/6 ethernet connections
- Ten 2-Stage A/C units using RS485 (3-Wire) connections
- Four 5-Stage A/C units using an CAT5/6 ethernet connection

**Ease of Control and Configuration**

The MPC-10 comes standard with a approximately 4-inch color touchscreen HMI which provides a user-friendly interface. From the main screen of the HMI the user can see room conditions, HVAC status for each unit, and change cooling/heating set points. The statuses that can be displayed for each unit are as follows: Cooling, Heating, Blower, Fault, and T-Stat status. The Alarm screen displays a description of the alarm, the time/date at which it occurred, and the current status of the alarm. The alarms will be maintained until the fault is fixed and the alarm is cleared.

► <b>CommStat 10 Controller for Redundant HVAC Systems</b> .....	K/40167
Additional Humidity & Dry Bulb Sensor (1 Included, Up to 4 Max) .....	70676
Dry Bulb Sensor .....	70916

The Marvair CommStat 10 HVAC controller is designed for controlling up to 10 non-PLC air conditioners or heat pumps in industrial and/or telecommunication applications. The CommStat 10 can control both single stage and 2-Stage Marvair air conditioners or heat pumps.

In addition to the control of the air conditioners or heat pumps, the CommStat 10 controller features built-in network communication and has multiple configurable outputs for remote alarms or notification.

The CommStat 10 System Controller installs with ease and is factory programmed with standard industry set points, but can be configured on site. Settings are retained indefinitely in the event of a power loss.



**Features:**

- HVAC Controller with User Friendly HMI Interface
  - *Balanced Use of Conditioning Equipment*
  - *Sequence the Operation of 10 Air Conditioners or Heat Pumps*
  - *Ensures Maximum Efficiency*
  - *Independent Economizer Control with Remote Access*
- Remote Unit Notification of Alarms and Lockouts
 

• High Pressure Alarm/Lockout	• Smoke
• Low Pressure Alarm/Lockout	• Low Voltage Loss
• Low Temperature	• Dirty Filter
• High Temperature Stage 1	• Emergency Ventilation
• High Temperature Stage 2	
- Summed Unit Notification Dry Contact Alarm Outputs
 

• Notification of HVAC Unit Failure	• High Temperature Stage 1
• High/Low Pressure Lockout	• High Temperature Stage 2
• Low Temperature	• Smoke
- Native Support for Network Protocols:
 

• BACnet IP	• MODBUS TCP
• BACnet MS/TP	• MODBUS RTU (RS 485)

**Benefits:**

- Dehumidification Control
- Continuous Visibility of HVAC Systems via Remote Access
- Ease in Wiring Due to Inter-Unit Communication Using RJ-11 Cables
- Unit Controllers are Daisy-Chained with a Single Lead to the CommStat 10
- Flexible Platform for Customization
- Built-in Webserver for Remote Access

➤ **MAR8000 Thermostat/Controller**

MAR8000 with Temperature, Humidity and vent Control, BACnet ready with Ethernet port .....P/N 51738  
 MAR8000 Optional CO2 Sensor .....P/N 70954

The MAR8000 thermostat/controller is a standalone, self-programming HVAC controller designed to optimize performance of Marvair heat pumps and air conditioners. It can function as an independent controller or used in conjunction with a BACnet network. With built-in temperature and humidity sensors, motion sensing and an optional CO2 detection sensor, the MAR8000 can control:

- 1 Heating stage / 1 Cooling stage
- 2 Heating stages / 2 Cooling stages
- 3 Heating stages / 2 Cooling stages
- Hot gas dehumidification operation
- An economizer cycle, and
- Marvair's various ventilation options including the Marvair GreenWheel® and/or GreenCube Energy Recovery Ventilator.



**Features include:**

- *Interface:* Touch screen LCD interface.
- *Aesthetics:* Up to ten selectable screen colors.
- *Flexible:* Configurable economizer/scheduler, supports upload of custom standby screen and Lua scripts.
- *Conformity:* Conforms to ASHRAE specifications for Green Building Standards and applicable safety, EMC and radio standards.
- *Protocols:* Wired BACnet MS/TP or wireless BACnet IP, Modbus RTU, wireless Zigbee Pro, BACnet/IP and email notification via Wi-Fi (requires optional Wi-Fi module).
- *Peripherals:* Easy to install Zigbee Pro, CO2 sensor or Wi-Fi plug-in modules.
- *Optional Sensors:* CO2
- *Standard Sensors:* Motion, temperature, relative humidity.
- *Integration:* Wireless connection to Multi-Purpose Manager (MPM).
- *Automatic Demand Response:* Load shedding application for demand response.
- Generate automatic energy savings
- Interchange between °C/°F
- 22 selectable languages

➤ **CoolLinks PLC-Based Telecom HVAC Controller** .....P/N 70933-OSC

The Marvair PLC-based CoolLinks controller sequences the operation of 48VDC Free Cooling WAC/DAC or dual voltage Marvair A/C units to ensure the most energy-efficient conditioning of the shelter space and the most balanced use of the conditioning equipment. The CoolLinks system determines the need to cool or heat the shelter based on an indoor temperature sensor and outside temperature/humidity sensor connected directly to the controller. When cooling or heating is required, the controller selects the unit that was not running in the previous cooling/heating cycle. This lead/lag operation ensures that each unit receives equal runtime and therefore extends the operating life of the units. In the event that one of the units is unavailable, for example, scheduled maintenance, the system will automatically select the active unit.



Similarly, if the internal shelter temperature continues to rise/fall, the system will run both units.

➤ **CommStat 4 Telecom HVAC Controller** .....P/N S/07846

The CommStat 4 HVAC controller is designed specifically for controlling two redundant air conditioners or heat pumps with 2-Stage compressors. The CommStat 4 has seven outputs for remote alarms or notification. Status LED's indicate HEAT, COOL, POWER and the LEAD unit. When a fault is detected, an alarm LED flashes and the LCD screen displays the fault.



➤ **Thermostats for Single Stage Air Conditioners**

*Digital, Seven Day Programmable Thermostat* ..... P/N 50123  
1 stage heat, 1 stage cool. Fan switch: Auto & On. Auto-changeover. Keypad lockout. Non-volatile program memory. Title 24 compliant.

➤ **Thermostats for 2-Stage Heat Pumps and Air Conditioners**

*Digital, 7 Day, 5-2 and 5-1-1 Day Programmable Thermostat* ..... P/N 50107  
Two stage heat/Two stage cool. Manual or auto changeover. Fan: Auto & On. Permanent retention of setting on power loss. Field adjustable temperature calibration. Adjustable max. setpoint for heating and min. adjustable setpoints for cooling. Adjustable temperature differential. Keypad lockout. Status LED. °F or °C selectable. Title 24 compliant.

➤ **Thermostats for 2-Stage Heat Pumps**

*Digital, 7 Day, 2 Occupied & 2 Unoccupied Periods for Each Day of the Week Programmable Thermostat* ..... P/N 50248  
Three stage heat/Three stage cool. Manual or auto changeover. Fan: Auto & On. Ten year retention of programming settings and 48 hour clock and day settings on power loss. Adjustable max. setpoint for heating and min. adjustable setpoints for cooling. Adjustable temperature differential. Keypad lockout. Status LED. °F or °C selectable. Optional remote sensors for outdoor air, supply air and humidity. Title 24 compliant.

➤ **Humidity Controller**

*Digital Humidity Controller* ..... P/N 51731  
To be used with units with Hot Gas or electric reheat. Programmable dehumidistat, ventilation control. Permanent memory retention of set points. Humidity sensor can be field calibrated. High & low dehumidification set points. Outdoor temperature and humidity sensor included. °F or °C selectable.

➤ **Thermostat Guards**

*Clear Thermostat Guard with Keylock & Clear Plastic Cover & Base* ..... P/N 50092  
For use with 50123, 50186 and 50107 thermostats.

*Clear Thermostat Guard with Keylock & Clear Plastic Cover & Base* ..... P/N 50119  
For use with 50248 thermostat.