



MCS-8 Plant Manager Overview



◆ MCS Plant Manager Overview

- Based upon Loop Control Software-same control functions
- Supports up to 4 individual loops
- Control each loop independently
- Communications via the RS485 port to MCS-8 Controllers
- Provide Run/Stop and staging capacity
- Provide alarm status of MCS-8's on the network

◆ MCS Plant Manager Overview

- Supports up to 4 individual loops
- Supports up to 8 pumps or fans per loop
- Supports 16 cooling/ice making and heating stages per loop
- Supports 1 VFD for pumps or fans per loop with unique control sensor
- Supports 1 VFD for heating stages per loop
- Supports 1 VFD for cooling stages per loop

◆ MCS Plant Manager Overview

- Supports control of loops on: peak load schedules, on or off all day or based on daily schedule
- Supports 2 daily schedules per loop
- Supports separate run/stop and run override per loop
- Supports individual setpoints per loop
- Supports individual state names (status) per loop

◆ MCS Plant Manager Overview

- Supports up to 48 Relay Outputs
- Supports up to 48 Sensors Inputs
- Supports up to 6 Analog Outputs
- Supports 120 Setpoints
- Supports storage of last 60 alarms
- Supports 144 History Samples for all inputs & outputs

◆ MCS Plant Manager Options (Specified by Loop)

- Individual setpoints for each loop
- Individual loops controlled on:
 - Run/Stop indicator
 - Run/Stop indicator plus temperature
- Low Ambient control:
 - None
 - Loop off
 - Run only pumps
 - Enable loop to run
- Loop override indicator

◆ MCS Plant Manager Options (Specified by Loop)

- Control of primary and backup pumps or fans with rotation
- Schedule:
 - Run loop on a day schedule
 - Always on,
 - Always off,
 - On - Off schedule
 - Do not run on peak demand hours
- Separate Control Zones with ROC control logic for cooling and heating

◆ MCS Plant Manager Communications

- Plant Manager will communicate to MCS-8's on the network based upon loop information
- Standard Class 55 messages are used for communications
- Each loop can contain a starting MCS-8 network address and the number of MCS-8's
- Based upon the control information for that loop, the number of steps (recips) or capacity (screws) will be determined

◆ MCS Plant Manager Communications

- Since Standard Class 55 messages are used for communications:
 - All versions of chiller software are compatible and will accept instructions from the Plant Mgr
 - If the Alarm RO is on, this will be communicated to the Plant Manager
 - No special software is required, only that the individual systems be configured to accept network input

◆ MCS Plant Manager Alarms

LOST MCS-8 #x

- This alarm indicates that MCS-8 at address x is not communicating

ALARMonMCS-8#x

- This alarm indicates that MCS-8 at address x has encountered an alarm

◆ MCS Plant Manager Sample Application

- Four loop system
- Loop 1 controlling process pumps on supply temperature and run indicator, no cooling or heating stages
- Loop 2 controls 2 chiller pumps
- Loop 3 controls network with 1 MCS-8
- Loop 4 controls network with 1 MCS-8