



SOFTWARE RELEASE NOTES

MCS-MICROMAG

Version 16.00A to 16.04G

11/21/2014

Updates from previous versions:

New Features:

1. Added a second defrost termination temperature SI and evap coil temp names.
2. Added separate reversing valve relays.
3. Updated relays to allow an "inverted" flag to reverse the output.
4. Added "Compressor 1-4" Relay Out names.
5. Implemented the pressure transducer accuracy improvements from the Magnum.
6. Added a warning setpoint type.
7. If the ignition safety setpoint is a warning setpoint type, only give an alarm for ignition fault.
8. Allowed users to adjust warning setpoint types from the keypad.
9. Added a bad RTC alarm when battery on RTC fails.
10. Added ability to inform MCS-Thermostat of the CO2 sensor value.
11. Added the ability for the MicroMag to prove air flow with the duct static pressure.
12. Added new Setpoint High Duct Pressure and implemented a Lockout whenever a lockout occurs.
13. Set time and date remotely from thermostat and update time and date from these settings.
14. Added dynamic naming of the Cooldown Temp setpoint name.
15. Add Morning Cool Down, when set point 103 (STPT_MORNING_WARMUP_TEMP) is set to SP_TIME_SETPOINT, STPT_MORNING_WARMUP_TEMP (103) will work as RTU_MORNING_WARMUP set point and STPT_MORNING_WARMUP_TIME (104) will work as RTU_MORNING_COOLDOWN set point.
16. New Names: RO and AO "O/A DAMPER" name and a SI "Fltr press" name.
17. Add a "Water Valve" heat option for both aux and emergency heat. Includes setpoint #128 "WtrVlvFreeze" to keep valve from freezing.

Any questions regarding this release, contact:

support@mcscontrols.com

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18. Allowed Phase Loss and Smoke Alarm to reset unit lockout on startup if the unit lockout was caused by the respective SI.
19. Used time to bypass safety test in the Freeze setpoint to bypass the freeze safety when the unit is not running.
20. Lock the percent wanted on the supply fan if the supply fan AO is manual to prevent blowing open ducts when switching back to auto.
21. Added "WtrVlvFreeze" (Setpoint index 127) to setpoint names.
22. Added SI pointers for ERW return, ambient, temp, and humid.
23. If both ERW Frost Calculation sensors exist, use calculated frost temp to determine ERW defrost temp setpoint.
24. Added setpoint 128 name to all CFGs, "ERW MIN DIFF".
25. Added a dead band for the economizer ambient enable setpoint. This activates only if the economizer was already on and the setpoint is an "enable" type.
26. Added Setpoint #19 (Economizer Ambient Enable) to the BMS writable setpoint list.
27. Added Setpoints 21 (HiCO2MinDmpr) and 32 (HI CO2 LEVEL) to the BMS writable setpoint list.
28. Added a generator digital input and setpoint when "generator switch SI" is activated the unit will be set as "Generator occupation mode" which override Occupied, Unoccupied and Override modes.
29. Add loading and unloading relay functionality to compressors (multi-stage scrolls)
30. Turn on auxiliary heat quicker when heat pumps are in defrost mode.
31. Added new name headers for Thermostat Run/Stop.
32. Add a Thermostat Run/Stop switch that can be set through the thermostat
33. Add compatibility to display text for Digital SIs values.

Bug Fixes:

1. Only allowed a compressor on in heat pump mode if it has a reversing valve.
2. Updated Names for defrost termination temperature sensors.
3. Fixed the checks for whether dehumid/cooling/heating were satisfied.
4. MCS-Thermostat alarm transmitting. Resolution: Message buffer size memory location was not initialized.
5. Ensured that alarm relay would stay on after original alarm shut off or during power cycle.
6. Reversed condition that causes a bad RTC alarm.
7. Fixed scaling of BMS setpoints being written. Previous scaling was assuming 1 decimal.
8. In BACnet, appended the BACnet Instance Number to the device object name.
9. Added a compressor in defrost status flag.

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10. Condenser Fan logic was not reversing when unit went from Heat Pump to Evap Fan Only and back to Heat Pump Resolution: Rewrote reversing valve position logic to continuously set the condenser fan logic direction.
11. BACnet AV "High Limit" and "Low Limit" properties were getting their value from the wrong setpoint. Resolution: Fixed index of BACnet AV pointers.
12. Fixed transposed setpoint names.
13. Fixed Writable SI AV names to be non-identical to the AI names.
14. Fixed writing present value to BACnet writable SIs with no decimal points.
15. Fixed writing present value to BACnet writable setpoints with no decimal points.
16. Fixed minimum value property of Network Run Stop and Network Occupation Mode BACnet AVs.
17. Fixed calculation of minimum and maximum values when determining whether a setpoint or SI is within range.
18. Changed name for BACnet writable SI's AV points. Old name was incompatible with some software.
19. Make economizer go to 0% rather than "Econ Min Damper Position" when economizer is off.
20. Fixed calculation of initial time that was preventing MicroMag from restoring a unit lockout condition.
21. Fixed "actual heat stages on" from being incremented improperly when a unit without a heat pump has auxiliary and emergency heat running.
22. Stopped Evaporator Fan from improperly coming on when a unit lockout was reset.
23. Fixed issue with Hood On Switch causing the mode enable SI to be set improperly when the switch turns back off.
24. Mod Gas/Direct Fire valve AO now checks whether the AUX HEAT MIN/MAX setpoint is active.
25. Stopped the Evaporator Fan from cycling when the run/stop switch is turned on or off.
26. Reset staging delay for cooling and heating when unit state changes modes.
27. Prevent capacity control from being locked while waiting for the next stage.
28. When "Holding in zone" while an extra stage is wanted, but not achieved, set wanted stages to actual stages.
29. Added a confirmation on the keypad when an SI is changed to Auto.
30. On the keypad, do not allow user to change the AO % value when setting the AO type to Auto.
31. Capacity control did not set adjust delay value to 0 automatically when a unit began staging. Resolution: When a unit is in post-staging delay, set the adjust delay value to its maximum.
32. ERW logic now looks for the difference in temperature between the ambient temperature and the return temperature compared to the setpoint #129.
33. Changed "Heatwheel" RO names to "ERW Enable".
34. When the ERW RO is on the Exhaust Fan RO will be turned on.

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35. Make Morning Warmup Temp and Time setpoint names dynamically change to "WARMUP" and "COOLDOWN" when appropriate.
36. Hot Water Valve was cycling excessively when within one degree of the water valve protect target. Resolution: Reversed how the zone was determined, Hot Water Valve Protect now turns on below setpoint and off at setpoint + 1 degree.
37. Triac Safety unload during rtu lock off points kept causing the digital scroll to go through the unload cycle. Resolution: Did not allow the digital scroll to perform a safety unload during a lockout unless it was already on.
38. Force all compressors in a suction group to shut off during certain compressor safeties.
39. Allow compressors on if previous compressor in suction group is in safety trip
40. Fix High Motor Temperature alarm
41. Capacity Control - Make ROC unload look at zone value rather than max roc to determine range.
42. Make Low Pressure switch alarm shut down whole suction group.
43. Force MicroMag to lock out when unit is controlled by forced mode and rtu_lockout is performed
44. Remove check for generator dehumidification in number of compressor stages available for heating.
45. When in generator mode the heat temperature was incrementing instead of decreasing. Resolution: Changed the operator from incrementing to decrementing.
46. Allow economizer to modulate properly when the rest of cooling stages are fixed stages.
47. Fix compressor state names when compressor is staging down from 100%.
48. Allow multistage compressors to stage down to minimum capacity before minimum run time is over.
49. Fix display of exhaust fan state on keypad.
50. Allow all multistage compressor stages during heat pump operations.
51. The ModGas heating stages had a fixed value of 40%; this has been replaced by a GAS_STAGE_PERCENTAGE Setpoint that allows the user to set the percentage value for the ModGas stages.
52. Prevent additional compressors to turn on before a multi-stage compressor finishes stepping up to maximum load.
53. Make MCS-Connect lockout reset requests ignore lockout per day count.
54. Add check to ensure that capacity desired for cooling/heating does not rise steadily while waiting for compressor to turn on.
55. When initial percent wanted is below minimum capacity and the desired percent wanted increases, allow the first stage of capacity to turn on.
56. When in evap fan only, set the adjust delay for cooling and heating mode to 0 to ensure they react quickly when cooling or heating mode is activated.
57. Improve support for units with both a common RO and common AO.

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- 58. Units without reversing valves will no longer randomly reverse their condenser capacity control direction.
- 59. Add and implement new function to activate stages of primary and emergency heat separately.
- 60. Allow compressors to stage up from minimum % rather than calculated % if option is selected in the configuration.
- 61. Added ability for primary and auxiliary heating to be used as supplementary reheat.
- 62. Fix check for whether next compressor stage uses minimum capacity.
- 63. MicroMag no longer thinks it is in supervisor mode when supervisor mode is disabled.
- 64. Prevent compressors that are on from registering in heating stages active when heat pump is not the primary heating stage.
- 65. Fixed how heating algorithm handles stages wanted and percent wanted.
- 66. Separate determine primary heating stage to allow separate determination of heating stages with or without heat pump.
- 67. Ensure reheat stages its supplementary heating stages properly.
- 68. Allow unit to leave dehumidification mode if air flow is not proved.
- 69. Ensured that capacity control function does not call for 0 stages when more than one stage is currently on.
- 70. New Humidity conversion formula with temperature compensation.
- 71. Rectified the temperature compensation for the Humidity conversion.
- 72. During supervisor mode the Run/Stop switch wasn't working. Resolution: Add supervisor mode to the test that checks for operable authority.
- 73. Prevent unloader-type compressors from controlling excessive relays.
- 74. Ensure unloader compressor type turns unloader relays on instead of off when compressor is off.
- 75. Prevent the increment of number of stages if the Auxiliary Heat is disabled.
- 76. Ensure that the MicroMag waits long enough to receive a message reply before resetting the transceiver and discarding the message.

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