



SOFTWARE RELEASE NOTES

MCS-MAGNUM Version 17.18A 09/23/2015

Updates from previous versions: New Features:

1. Added support for RO8 and SI16 boards
2. Added new #defines and variables declaration to communicate with the MCS-Thermostat
3. Initialized all arrays, structures and variable used to communicate with the MCS-Thermostat
4. Added Implementation for MCS-Thermostat communication
5. Added capability to set an alarm flag and transmit the last lockout alarm to the MCS-Thermostat
6. Added capability to change status to override by receiving a command from MCS-Thermostat
7. Added capability to transmit the Time and Date to the MCS-Thermostat and be adjusted from the MCS-Thermostat
8. Added new conversion for humidity sensor AI_H100
9. Removed code for stat fan switch, this feature is not available in the new Thermostat
10. Extended the amount of time that the Magnum waits for the thermostat to replay
11. Used #define for the Thermostat address, also a checking for the Thermostat receive address in the message respond function was added.
12. Enabled code for humidity conversion with temperature compensation for future use.
13. Added 4 new SP fields for user logic.
14. In order to make it user friendly and continue to improve we decided to add detailed definitions for SP operant controls. This feature is implemented and will be released in MCS-Connect 17.03.00 Beta for testing.
15. Change: Magnum RTU was sending to the thermostat the Targets Setpoint for cooling, heating and dehumidification, instead of using the Enable setpoint targets
16. New feature Turbocor logic for HVAC and RTU: Added definition for first stage/compressor.
17. New feature Turbocor Logic for HVAC (stpscrew.c): Cleaned up - removed commented lines of Turbocor related code.
18. New feature Turbocor Logic for HVAC (stpscrew.c): Removed functions that are no longer needed - Original logic was set to unload running cmp(s) to (surge + 800) RPMs or psi ratio. New logic will unload based on steps turned ON and a STP value.
19. New feature Turbocor Logic for HVAC (stpscrew.c): Removed functions that are no longer needed Balancing valve control and unload running compressors. New code supports a common balancing valve and staging valves at the same time.

Any questions regarding this release, contact:
support@mcscontrols.com

Micro Control Systems, Inc. 5580 Enterprise Parkway Fort Myers, Florida 33905
(239)694-0089 FAX: (239)694-0031 www.mcscontrols.com

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20. Rapid Start added timer test to ensure that system does not get stuck in the RS-STARTING COMP state
21. New Feature - Future RTU Rapid Start: Couldn't compile RTU code. Added needed definitions for future implementation of Rapid Start logic.
22. Modified Rapid Start logic to run after a power up, lockout/Reset, Disable condition and Temp cycle. The control temperature must be above the control zone (STP1+SPT2) plus STP's 247 night setback.
23. HVAC Turbocor: Added logic to open EXV during CMP Startup. Previous logic was keeping EXV close during the startup of the first stage of capacity.
24. Changes made to Rapid Start logic in HVAC; corrected timing issues when turning on compressors

Bug Fixes:

1. Allowed communication with old RO10 revision d software.
2. Improved existent structures to communicate with the MCS-Thermostat
3. No alarm is displayed when the Magnum loses communication with the Thermostat, by changing the argument of the function to UNUSED it fixed this bug.
4. When the Thermostat lost Communication the temperature and humidity wasn't displaying -99.9 because the value for those sensors were retrieved from a temporal variable, not from the message structure.
5. RTU: Prevented excessive EXV unloading
6. Extended time Magnum will wait for RO & SI boards if they haven't replied.
7. RTU: Prevented excessive EXV/CMP loading or unloading
8. RTU: Magnum RTU was sending and receiving the Targets Setpoint for Cooling (Setpoint # 1), heat (Setpoint # 9) and Dehumidification (Setpoint # 106), instead of sending the Enable setpoint targets when communicating with the Thermostat.
9. When a lockout reset is received from the thermostat, the lockout reset counter wasn't incrementing, allowing the user to do unlimited numbers of lockout reset from the thermostat.
10. Supply fan, damper and dehumidification bits were set by the wrong source
11. Corrected problem with new option to control EXV on condenser level.
12. Prevented buffer overflow causing valid watchdog alarms to report as watchdog #0
13. CENT v17: Corrected problem with unit showing Run/stop switch is off but the chiller is running. The relay on the magnum is closed and the vane is closed. It was found that the Surge protection logic was overwriting the chiller disable algo.
14. HVAC Turbocor: In CHL_CHILLER_OFF_UNLOADING we must set variable steps% to min. CMPs in start-up stage were not allowing the unit to unload until they were RUNNING.
15. HVAC Turbocor: If a CMP state is WAIT PSI RATI and the unit goes unloading OFF the CMP will never go into the OFF Ready state.
16. HVAC: Fix - Turbocor - When no steps are wanted on, ensure that SP_TURBO_STAGE1 is used rather than the setpoint before it.
17. HVAC: Fix - Prevent Turbocor from going into the Pump Down state when it is not the last comp in a suction group
18. HVAC Turbocor: When staging off the second compressor, the first compressors AO is set to stage 2 max%. It should be set back to stage 1 max%.

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