



SOFTWARE RELEASE NOTES

MCS-MAGNUM

Version 17.37

08/26/2018

Updates from previous versions: 17.36AA

New Features:

1. Added Nitromag firmware transmit functionality over rs485 & ethernet
2. Added Magnum alarm functions to Nitromag
3. Added JGW's new FSH2 code, FHS1 improvements and new EXV controls states.
4. Finished implementing EXV_FAST_II_APPROACH_CONTROL.
5. CPM Started to work on option to keep running chillers at a 100% when starting next. If the unit is setup for a fixed lead the loading and unloading worked, but if the unit is set to rotate lead the loading works but the unloading doesn't.
6. All firmware versions - Add new operator for SI user logic - High Range and Low range operators. This new operator will find the highest of lowest sensor value across a consecutive range of SI, AO or RO.

Bug Fixes:

1. Alarm pop up is not displaying in MCS-connect Graphics after generating a SI out of range or circuit sensor fault alarm.
2. Turbocor firmware. (Implemented changes requested by Eng. Ala'a Abu Shawish- See email below) After checking the new software we figure out that there is still an issue with compressor shutdown during the normal shutdown or the safety shutdown. When compressor starts to shut down we agreed before to open the staging valve 100% until the compressor stop [RPM=0] but currently I've noticed the compressor speed start slow down until the differential pressure falls below 3.5psi then the EXD close suddenly & the staging valve open at this same time. What we need to open the staging valve at the start of compressor shutdown procedure then keep the EXV open until the RPM equal 0 because closing the EXV cause bearing alarm for the compressor.
3. While testing a unit that was setup for old superheat control. I found that the EXV was getting stuck in Startup.
4. While testing a unit that was setup for old superheat control I found that the EXV was getting stuck in Startup.
5. Reported by BCL and D2 "In testing this same issue reported by Bret. I used the attached config and tested the old superheat logic that worked correctly. I then did nothing but switch over the control type from "Suct Spht" to "Evap Appr" and reloaded the config back in and it didn't work. The EXV gets stuck at the starting percentage and no matter the state open or close it won't move. The adjust delay for the EXV is starting around 185 and counting down to about -67 when my EXV delay is set to 60."
6. CPM: Corrected problem with CPM shutting down a fully loaded chiller because it thinks it has reached the max Pumps allowed ON.



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7. CPM (Med): Reported by D2 "Isolation valves located on CPM with flow switches on chiller. CPM will open valve and wait for flow to make on chiller based on setpoint #112. If flow isn't made by the time specified in that setpoint the CPM will lockout that chiller. The problem is the CPM will instantly come out of lockout by itself and try to start the chiller again because the chiller is reporting steps available since the chiller itself wasn't locked out. The same issue occurs when the CPM doesn't receive an isolation valve proof."
8. CPM (Med): Reported by D2 "When using fixed staging on the CPM and a non lead chiller has steps removed due to a disable switch for example the lead chiller is also having steps of capacity removed and shutting down a compressor unnecessarily"
9. EXV Approach control: As per BWW->Changed the CHL_EXV_LOW_SUPERHEAT control logic, in EXV stage control and fast control 1&2, to use suction superheat instead of Evap Approach.
10. EXV.c (High): While testing a unit that was setup for old superheat control I found that the EXV was getting stuck in Startup.
11. CPM: Reported by D2 "No Isolation valve proof needs to also lock the chiller out like you did with the no water flow. It currently just locks out for like 1 second then resets and tries again much like the no flow was doing"
12. CPM: Reported by D2->"I had all 3 chillers each running at 4/4 with #1 being the lead chiller. I removed isolation valve proof from chiller #3 and it shut down as it should but also chiller #1 shut down completely. Soon as I turned off the proof for #3 this was the state of the CPM."
13. HVAC-Turbocor: Reported by Zaid BSL-> Alarm pop up is not displaying in MCS-connect Graphics after generating a SI out of range or circuit sensor fault alarm. Alarm RO must be turn ON after a unit control sensor fault.
14. EXV fast control 1 & 2. As per BWW add MOP checks in EXV fast control 1 & 2. Original logic was set to ignore the MOP state.
15. EXV bump open logic: While testing the MCS 5580 chiller config I saw that the EXV bump logic was opening the valve even though it was set to MOP HOLD.
16. SI min/max range. (High) Custom mix max range test is generating an Alarm if the SI value is set to 9999 and the range is between -32000 and 32768.
17. Subcooler EXV: Reported by Anand - Voltals "We tried to test the cfg with the different Hex files. The Observation is as below. We set the Eco Sup Heat target at Setpoint # 253, but the Eco EXV is not working correctly based on it. It doest Modulate"
18. CENT firmware only - If comp is in "Shutting Off" state and surge occurred, the comp get stuck running. Do not allow the surge to change the state when in shutting off state.

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Any questions regarding this release, contact:
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