



SOFTWARE RELEASE NOTES

MCS-MAGNUM

Version 9.01

09/26/2011

Updates from previous versions:

New Features:

1. Added Saturated Liquid Temp and Subcooling display fields to the second compressor screen of each circuit. The headers for this screen are: SST SSH SCT DSH SLT SUBC
2. (Saturated Suction Temperature, Suction Superheat Temperature, Saturated Condenser Temperature, Discharge Superheat Temperature, Saturated Liquid Temp, and Subcooling).
3. Four will be displayed at a time, the shift left and right keys will be used to shift 2 items at a time.
4. Screen headings:
SST SSH SCT DSH (shift right will display)
SCT DSH SLT SUBC (shift right will display)
SLT SUBC SST SSH (shift right will display)
SST SSH SCT DSH (shift right will cycle back to first screen)
5. Added Bacnet AV registers 550-629 for Relay total run hours counter. Active relays ONLY.
6. Added Modbus Misc Registers 678-757 for Relay total run hours counter. Active relays ONLY.
7. Added new authorization level: ADMIN. Only this level can make changes to clear alarms and points. Previously required FACTORY level for these changes. The FACTORY level no longer is a high enough authorization to make these changes.
8. Added support for the Cut In/Out setpoints (#3-18) to have the stages cut in as fixed values or individual stage differential offsets. Setpoint #2's 'Time(sec)' field will determine which option is used. If 0 then each stage has a fixed value, else the stages 2-16 will be added to setpoint #3, stage 1 cut in value.
9. Added support for refrigerant R-423A.

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

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For Digital Scrolls and VFD Fixed Step Compressors:

- Added an Analog Output start percentage and a time delay before this AO setting can be modulated. Added two new fields to the RO information screen, 'Start %' and 'Start % Time'. Also added a new state (#7, "CMP IN STARTUP") to indicate that the compressor is in startup hold. When a new compressor starts the AO will be set to the value in 'Start %' with the compressor state "CMP IN STARTUP" and will remain in this condition until the 'Start % Time' has passed, and then it will be modulated according to the normal logic. When this compressor goes into the Pumpdown state, the AO will be set to the value in in the 'Start %' for the entire time the compressor is in Pumpdown.

Relay Output Information Screen (Magnum V8)																
	Number	Name	Slide Mult.	Slide Div.	Slide Off.	Design Suc.PSI	Design Dis.PSI	Nominal Tonnage(of Step)	EXV Start (When Lead)	Type	EXV Load Adjust %	EXV Unld Adjust %	Comments	IGV Start Offset %	Start %	Start % Time
▶	M-1	COMP 1	-----	-----	-----	-----	-----	25	20	Step w\ EXV	-----	-----	...	-----	-----	-----

Bug Fixes:

- Corrected the subcooling calculation (Previously the converted pressure to temperature value was added to the actual temperature sensor, now the actual temperature sensor is subtracted from the converted pressure to temperature value).
- Corrected the issue of the second compressor relay for partial (split) winding compressors being turned on one second different from the specified value in setpoint #73 "PART WINDING DELAY".
- Corrected the problem in LWC with cooling stages without rotation. The stages were not turned off properly when cooling demand decreased. First stage on will be the last stage off and the most recent stage turned on will be the first turned off.

Only for TurboCor Compressors

- Changed EXV target calculation to stay within its minimum and maximum values as determined by setpoint #9 "EXV TARGET" $\pm$ setpoint #10 "EXV ZONE+/-".

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