



SOFTWARE RELEASE NOTES

MCS-MAGNUM Version 14.00Y 07/17/2013

Updates from previous versions:

New Features:

1. Relay that indicates the status of the unit.

Set point #236:

- a. Value, contains the minimum number of steps that must be available.
 - b. Safety time is the time that the control temperature rate of change must be positive.
 - c. Specify the relay in the General Information Screen in the Unit Indicators Section.
 - d. Set point #236 and the status relay must be specified for this option to be active.
 - e. Relay will be off if the Unit Status is off for any reason or the unit is normal but the control temperature has been above the control zone and the rate of change has been positive for more than the safety time of set point #236 and the number of steps is less than the value of set point #235. Else the relay will be on.
2. The control of the circuit economizer (3rd LLS) for screw type compressors has been expanded to enable control based upon suction and/or discharge pressure. The same criteria must be met as previously (refer to set point #99's documentation).
 - a. Set point #99 (LLS#3 ON ECONOMIZER):
 - Used as described in HVAC manual. Note this type of control is for screws only.
 - b. Set point #78 (LO SUCT UNLD): This must be set up as a TARGET type if suction pressure is to be used in controlling the economizer relay.
 - High Zone is the top of the acceptable suction pressure.
 - Low Zone is the bottom of the acceptable suction pressure.
 - The values in the High and Low Zone cells are actual pressure values not differential values. These are used to create an acceptable suction pressure zone. If the suction pressure is not within this zone the economizer relay will be off.
 - c. Set point #82 (HI DISC UNLD): This must be set up as a TARGET type if discharge pressure is to be used in controlling the economizer relay.
 - High Zone is the top of the acceptable discharge pressure.
 - Low Zone is the bottom of the acceptable discharge pressure.

Any questions regarding this release, contact:

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The values in the High and Low Zone cells are actual pressure values not differential values. These are used to create an acceptable discharge pressure zone. If the discharge pressure is not within this zone the economizer relay will be off.

NOTE: If neither set points #78 or #82 are TARGET type then the existing economizer relay control is used. If both are TARGET type then both the suction and discharge pressure must be within the acceptable zone for the relay to be turned on. Zamil has provided values for these set points based upon type of refrigeration.

Following criteria must be met:

- The circuit Econo Control cannot be Last Step option.
- The circuit's FLA% must be at or above the value of set point #99.
- The circuit cannot be in a safety unload state.
- The circuit discharge super heat must be greater than the value of set point #84 (LO DISC SHEAT) plus the value of set point #210 (ECO LL3 D-SHT).
- Pressure(s) must be within their acceptable zones.

Once the relay is turned on it will remain on unless one of the above criteria is no longer valid or the circuit's FLA % drops below the value of set point #99 minus the value in the Lockout Delay cell.

3. Option to lockout a circuit based upon the number of low suction unloads that occur within a given time.
 - a. Set point #237 must be setup as a LOCKOUT type.
 - b. Value: Maximum number of low suction unloads. -
Lockout Delay cell has the number of hours that will be used.
 - c. This set point must be active to initiate this option. An hourly count of the low suction unloads by circuit will be maintained, with each unload the number of acceptable unloads will be checked. If the number of unloads are greater than the value of set point #237 with the number of hours (value in Lockout delay cell) the circuit will be locked out.

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