ASIC/1-8655 Release Note

APPLIES TO   **ASIC/1-8655**

LAST REVISED   **2008-06-04**

ASIC/1-8655 FW655a2.1 (2008-06-03)

WHAT HAS CHANGED

- Fixes a Fan Wait Timer Bug when switching rapidly between Occupied and Unoccupied
- Fixes Lights Occupied Enable so the lights go on and off with Occupied State. Adds Lights Default Off option. Adds Lights Delay Off Time in minutes.
- Fixes problem with compressor not on in CLG when HTG O/R Off.
- Adds State Default Unoccupied feature.
- Adds Occupancy Delay Timer when going from OCC to UNOCC
- Adds Single Setpoint Deadband to Single Setpoint feature for WS-051 Digital Display
- Adds CO_2 Economizer Maximum Position
- Adds Auxiliary Occupied Output feature when Aux Heating is not used.

STEPS TO COMPLETE UPGRADE

Download hex655a21-rel.zip and update FlashDev 8655 folder. The updated files are available from the ASIC/1-8655 page in the integrator center. Use FlashDev to update the firmware in the controller.

> Note: Some tables have increased in size and some parameters may have moved in memory. Please upload and save your current configuration file, A1-8655-xxxx.asi before upgrading to this release. Then set ASIC/1 Factory Defaults (braindump) in the controller before reloading your configuration.

You also need to upgrade the ASI Expert, ASIC1.mdb file, and the a1-8655.pvs & .tcl files to use these new features. Download the 655a21-pvs.zip file from the from the ASIC/1-8655 page in the integrator center.

Fan Wait Bug

A Fan Wait Timer bug when switching rapidly between Occupied and Unoccupied has been fixed.

Lights Upgrade

Fixes the Lights Occupied Enable feature so the lights go on and off with Occupied State. A Lights Default Off parameter has been added, so that an un-synchronized the controller may start with the lights off. Also Lights Delay Off Time and Timer parameters (in minutes) have been added. If the Lights Delay Off Time is zero then the light blink is skipped and and the shut off of the lights is delayed.

Compressor Not On Bug

Fixes a problem with the compressor not turning on in cooling mode when the Heating Output has been overridden Off.
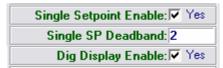
State Default Unoccupied

A State Default Unoccupied parameter has been added, so that if not synchronized the controller may start in the Unoccupied Control State.

Occupancy Sensor Delay Timer

Occupancy Sensor Delay Time and Timer parameters have been added to the Occupancy feature. If the Occupancy Sensor Delay Time in seconds is non-zero, then the transition from OCC to UNOCC is delayed.

Single Setpoint Deadband

A Single Setpoint Deadband parameter has been added to Single Setpoint feature for the WS-051 Digital Display. If Digital Display Enable, Single Setpoint Enable and User Adjust Enable are set, then the WS-051 displays and allows change to the Occupied Cooling Temperature Setpoint. The Occupied Heating Temperature Setpoint is set the Occupied Cooling Temperature Setpoint minus the Single Setpoint Deadband.

Single Setpoint Enable:	☑ Yes
Single SP Deadband:	2
Dig Display Enable:	☑ Yes

CO2 Economizer Maximum Position

CO2 Economizer Maximum Position parameter has been added to the CO2 Economizer feature to limit the maximum economizer position based on CO2 level. f CO2 Ventilation Enable is yes, then a CO2 Ventilation Minimum Position is calculated from 0 to CO2 Ventilation Maximum, based on the CO2 Level 0-2000 ppm as measured on a sensor on Input 4 compared to a CO2 Setpoint.

CO2 Ventilation Enable:	☑ Yes
CO2 Vent Setpoint:	800
CO2 Vent Gain-Ki:	64
CO2 Vent Max Pos[%]:	43

Auxiliary Occupied Output

Adds an Auxiliary Occupied Output feature when Aux Heating is not used. If Aux Heating Enable is no, that output is used for the Auxiliary Occupied Output. Then if Control State is Occupied, the Aux Occupied output is ON, otherwise the Aux Occupied Output is OFF. An unused output must be assigned to the Aux Occupied Output Mask.

Aux OCC Output Status:	Off
Aux OCC Output Enable:	☑ Yes
Aux Occupied Output Mask:	OUT-5

ASIC/1-8655 FW655a2.0 (2007-01-04)

WHAT HAS CHANGED

- Adds Single Setpoint feature for WS-051 Digital Display.
- Fixes Analog Outputs for AO Assignment 1= CLG; 2= HTG; or 4 = Xover. When Fan is Off, Analog Output goes to AO Minimum Value.

STEPS TO COMPLETE UPGRADE

Download hex655a20-rel.zip and update FlashDev 8655 folder. The updated files are available from the ASIC/1-8655 page in the integrator center. Use FlashDev to update the firmware in the controller.

Single Setpoint Feature

If User Adjust Enable is yes, the WS-051 can be used to change the Occupied Cooling and Heating Temperature setpoints. If Single Setpoint Enable is yes, then single setpoint adjustment is supported where the Occupied Cooling Temperature Setpoint is changed and the Occupied Heating Temperature Setpoint is set 2 degrees lower. Please see the Application Bulletin 69, ASIC/1 Digital Display for further details.

Analog Outputs Fix

For Analog Output Assignment 1= CLG; 2= HTG; or 4 = Xover , the Analog Output goes to AO Minimum Value when Fan is Off. If Gas Heat Enable is set, then Fan is ignored in the heating and the Analog Output follows the heating requirement.

ASIC/1-8655 FW655a1.9 (2006-06-23)

WHAT HAS CHANGED

- Fixes Dehumidification Output Feature to ignore the status of the fan. It acts as a Humidistat.

STEPS TO COMPLETE UPGRADE

Download hex655a19-rel.zip and update FlashDev 8655 folder. The updated files are available from the ASIC/1-8655 page in the integrator center. Use FlashDev to update the firmware in the controller.

ASIC/1-8655 FW655a1.8 (2006-05-25)

WHAT HAS CHANGED

- Optional parameter for Outdoor Air Temperature. If OAT Override Enable (T6,E6,bit2) flag is set,then the economizer is controlled using a new parameter OAT Control(T18,E15 WORDs).At reset OAT Control is initialized at reset to Econo Low LimitSP*100 (T2,E21)
- Adds Dehumidification Output Feature to energize an output if the Relative Humidity exceeds a setpoint. The Relative Humidity sensor can be assigned to an unused input.
- New Soft Interlock Command, MT=0x10, M1=15 (0x0F), Set Soft Interlock. When sent to Destination Address (not group or global) it sets a soft controller interlock for 30 seconds.

- Adds Cooling Fan Delay feature to lock out fan until Compressor comes on. If Cooling Fan Delay Enable (T6,E6 bit2) is yes, the it holds fan off until compressor comes on.

- Fixes Intermittent Fan problem where fan goes off for a Fan Start Delay and comes back on until the end of the Fan Wait Time.

- Improves Trend by fixing occasional missed value bug. Corrects problem with updating Trend Day of Week when trend rolls over.

STEPS TO COMPLETE UPGRADE

Download hex655a18-rel.zip and update FlashDev 8655 folder. The updated files are available from the ASIC/1-8655 page in the integrator center. Use FlashDev to update the firmware in the controller.

Note: The size of Table 3 has changed so you will need to reload your application after upgrading the firmware.

Download and update Expert, ASIC1.mdb, the a1-8655.PVS, a1-8655.TCL files The updated files are available from the ASIC/1-8655 page in the integrator center.

REFERENCES

ASIC/1-8655 Engineering Guide

Outdoor Air Temperature Parameter

An option has been added to version 655a1.8 to allow the Outdoor Temperature to be a control parameter broadcast to the controller, freeing up Input 5 that is typically used for the Outdoor Air Temperature. If the OAT Override Enable flag is "Yes", then the Economizer and other Outdoor Air Lockout functions use the word value stored in OAT Control (T18,E15.16) for control functions. . At reset of power this parameter is loaded with the Economizer Low Limit Setpoint. You may override the value of OAT Control by broadcast on the communication line. If the OAT Override Enable flag is "No", then the controller uses the converted value of Input 5 for OAT control functions. The OAT Override Enable flag and the OAT Control parameter are displayed on the Expert "Input Config" view.

OAT Override Enable: ☑ Yes   OAT Control: 45.00

Dehumidification Output

If a new parameter Dehumidify Output Enable (T6,E6, bit 3) is Yes, then the inputs are examined to find a Relative Humidity Sensor. Any unused input may be configured for Relative Humidity. The value of the first RH sensor found is loaded into the RH Value (T18,E29.,30 Word) 0.0 to 100.0% RH. If the RH Value is greater than the RH Setpoint (T3,E48), then the Dehumidify Output is On. If the RH Value is less than the RH Setpoint minus the RH Hysteresis (T3,E49) then the Dehumidify Output is "Off". No other action is take by the controller. This sequence depends on the air conditioning unit to perform the necessary interlocks.

The Dehumidify output uses the Aux Cooling Output which is disabled if Dehumidify Output Enable is Yes. The Dehumidify Output Mask (T3,E41)must be assigned to an unused output.

The Dehumidify feature is configured on the Expert "Aux Output " view.

Dehumidify Output Enable: ☑ Yes   Dehumidify OR Action   Dehumidify Output Status: Off
DehumidifyOutputMask: OUT-8   RH Value: 53.9
RH Setpoint: 60   RH Hysteresis: 5

The RH sensor is configured on the Expert "Input Configuration" view..

Soft Interlock Command

A new command, Set Soft Interlock (MT=0x10, M1=15 (0x0F)) has been added to version 655a1.8 . When sent to the controller, it temporarily sets a soft interlock for 30 seconds. This allows the user to bypasses hardware interlock and to change a controller address or to do a remote brain-dump. A soft Interlock Action button is now on the Expert "Configure" view.

Soft Interlock Action

> Note: Do not send this message with Group or Global command as it will set the Interlock for ALL controllers. Expert uses a special 0xB455 initialization address which is taken by any controller with the interlock set.

Cooling Fan Delay

A Cooling Fan Delay Enable (T6,E6,bit 2) flag has been added to version 655a1.8 that locks out Intermittent Fan in CLG until CLG Requirement is non-zero. This prevents unconditioned air from entering the space, before the cooling comes on. Cooling Fan Delay Enable has been added to the Expert "Fan" view.

Fixes Intermittent Fan problem

When the fan goes off because of Intermittent Fan going into deadband, the controller would improperly apply the Fan Start Timer for a Fan Start Delay to force the fan off. This has been corrected in version 655a1.8

Trend Improved

The operation of Trend has been improved. Earlier versions would occasionally miss a sample. Also the Trend Day of Week updates properly.