



Cover story, continued...

User Restrictions and Controller protections: Part Three

This month we finish up our 3 part series on control features designed to prevent tampering and to protect your equipment. In our final round we take a look at additional safeties, flow switches and controller display information.

ADDING KEYPAD IDENTIFICATIONS AND FUNCTIONALITIES

Additional Safeties

Cooling anti-cycle delay is useful in preventing dx cooling from cycling, which leads to premature wear. This configuration is based on time and is adjustable.

	EVCB	EFCB	TUCB/TUHB
Cooling anti-cycle delay	AV.51	AV.46	AV.46

Freeze protection feature, when enabled, will restart the unit along with the heating elements to prevent the zone from dropping below 4°C (39°F). Will only operate if heating is available.

	EVCB	EFCB	TUCB/TUHB
Freeze protection	BV.6	BV.5	BV.5

Fan auto time out delay (fan coil controllers only), is used to purge the residual heat or cool from the coils. This function is also expressed in minutes and will keep the fan operating for the configured time.

	EFCB	TUCB/TUHB
Fan auto time out delay	AV.61	AV.61

Flow switches (fan coil controllers only) can be configured on analog (TUCB/TUHB only) or binary inputs. Depending on the configuration of the polarity of the input, it can be a normally opened or normally closed contact. When in alarm, all the outputs are deactivated except for the fan. This is useful in preventing heating or cooling outputs from being energized if no airflow is sensed.

Controller Display Information

The information displayed on the controller can be modified through MSV.95 cfg Display Info. By default, the temperature and demands are shown. Other options include Setpoint & demand, temperature only, setpoint only or off (blank display).

When using the TRLG24, TRLH24 or TRLGH24 on the EVCB controllers, you may display CO₂ or humidity reading on the TRL. It can also be removed from the display using BV.60 (%RH) & BV.65 (CO₂)

Special BMS

A BRIEF DESCRIPTION OF AN ADD PROGRAM LOCK

Override & override heat can be configured on binary inputs and allows the integrator to override the entire unit (override) or override heating only. The EVCB controllers can isolate the heating ramp to be locked. This is useful to lock out heating when outside air temperatures are high enough. Note that the fan coil controllers do not disable heat ramp 2 without fan (baseboards). This function is also available for stand-alone applications by energizing the input configured (hard wired).

	EVCB	EFCB	TUCB/TUHB
Override	Available	Available	Available
Override heat ramp 1	Available	Not available	Not available
Override heat ramp 2	Available	Not available	Not available
Override heat all	Available	Available	Available

As you all may know, it is possible to use the BMS as a *network sensor*. In order to achieve this, the temperature control source (MSV.4 on EVCB & MSV.21 on the fan coil controllers) must be configured as network. This feature comes with a time-based safety called network time out. If the temperature is not written within this time frame, the unit will lockout to prevent any damage. The time configuration can also be set to 0 minutes. In the event of loss of communication, it will remain with the last sent value. When the temperature is written again (proof that communication is back on-line), the unit will restart.

Condensation alarm is a binary value that can be linked to a binary input via a BMS. This configuration is only found in the EFCB controllers. When the condensation alarm is triggered, the controller de-energizes the fan & cooling outputs. This function is used as a float switch contact for the condensing drain pan. When using BACnet via a BMS, you can configure an input or output to off and control it directly via the platform through point binding functions. This allows more flexibility to do special applications without affecting the sequence of operation of the controller.

Note: The configuration names may vary a little from one controller to the other. To simplify the compared objects, we used names that reflect the function. This is why we included the object identification numbers which can be found on the installation & instructions manual (menu based) or the BACnet guide of the specific controller. Even if you use the controllers as a stand-alone, the BACnet guide is a good source of information on the configuration functionality.

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