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RANDOM SENSOR ALARMS

It has been known for some time that there can be random faults that appear on the SSE board regarding sensors such as IAQ, OAQ, SAH, etc and the equipment may not actually have these sensors installed.

These sensors are all connected to the economizer board not the SSE board and what could happen is that moisture can get across the terminals for a sensor and complete a circuit. The SSE board would then see that connection and add that sensor to the list of all the other connections to the board. When the moisture dripped o□/ dried the SSE would now create an alarm for a sensor fault because the sensor that was connected is now not sending back any information to the board.

This issue happened more frequently with the older version SSE firmware (1.0/3.4) but occasionally did happen on newer firmware. The resolution to get rid of these alarms was to do a relearn on the SSE and that would look at what was currently connected to the board and when it didn't see these connections (IAQ, OAQ, SAH etc.) the alarm would go away. The problem with this was that if the same issues that created the first false connection point reoccurred you may experience the same issue all over again. Also, the 3.1 and older firmware sometimes will not clear the alarm when the relearn procedure is performed.

The resolution to that was to do a firmware upgrade as the newer versions of firmware were less susceptible to have the issue reoccur. This eliminated 90% of these issues but occasionally the alarms could reappear. One issue with doing a firmware upgrade was that older version SSE boards (1.0-3.3) do not have enough memory to accept the newer firmware version, and this would create issues and the SE would have to be replaced. The tech would have to verify that the original firmware version, as seen on the white sticker on the wafer chip on the center of the SSE was 3.4 or higher. If not, the SSE would need to be replaced.

Considering this, there were changes made to the 4.3 and higher versions of SSE firmware that allow these sensor faults to never appear in the first place. See below

Disable or Enable Economizer Sensor Fault Indications. Alarms associated with sensors on economizer control can be masked so that they do not cause active alarms when sensors were never installed. The open terminals on the economizer control have traditionally been known to cause false sensor faults. A previous version attempted to decrease these faults but was known to be unable to fully correct the issue. All faults associated with the sensors located on the economizer can now be Disabled or Enabled. By default, the faults are enabled. Only the fault indications are masked, any required changes to system operation due to a failed sensor are not impacted by this change.

Configuration Points:

- Commissioning → Options → Econ Sensor Fault Indications.
    - Change from Enabled to Disabled.
    - This will eliminate the random sensor faults from occurring.