

Demand Ventilation

This section details the setpoints and related data, inputs, outputs, general functionality, and operation

regarding the Economizer's Demand Ventilation feature.

Setpoints and Related Data

Setpoints and related data include:

- Demand Ventilation Mode of Operation (DVent-Mode)
- Demand Ventilation Maximum Economizer Position (DVentMaxEconPos)
- Demand Ventilation Differential Setpoint (DVentDiff-Sp)
- Demand Ventilation Indoor Air Quality Setpoint (DVentIAQ-Sp)
- Indoor Air Quality Sensor Range (IAQRange)
- Outdoor Air Quality Sensor Range (OAQRange)

Operational Indoor Air Quality (OprIAQ)

Setpoints and Related Data

Setpoints and related data includes:

- Operational Indoor Air Quality (OprIAQ)
- Indoor Air Quality Source (IAQSrc)
- Indoor Air Quality Sensor Range (IAQRange)

Inputs

Inputs include:

- Network Override Indoor Air Quality (NetIAQ) communicated value on FC Bus
- Indoor Air Quality (IAQ) to COM terminals

Operation

Operational Indoor Air Quality (OprIAQ) is only effective if an economizer board has been connected to the UCB since the last RELEARN SYSTEM (Relearn) was performed. The Operational

Indoor Air Quality (OprIAQ) and Network Override Indoor Air Quality (NetIAQ) parameters are

then shown in the UCB display menu.

The highest priority valid related input is used for Operational Indoor Air Quality (OprIAQ).

The Operational Indoor Air Quality (OprIAQ) has assigned priority for inputs in the following order

from highest to lowest:

- Network Override Indoor Air Quality (NetIAQ)
- Indoor Air Quality (IAQ)

If the input in use becomes invalid, Operational Indoor Air Quality (OprIAQ) reverts to the next highest priority input.

Indoor Air Quality Sensor Range (IAQRange) must be set to match the ppm range of the sensor being

used. This allows the control to properly calibrate the 0-10 VDC input from the sensor to match the

actual ppm measured by the sensor.

Note: Network Override Indoor Air Quality (NetIAQ) is not bound by the Indoor Air Quality Sensor

Range (IAQRange)

Indoor Air Quality Source (IAQSrc) describes the input currently in use for Operational Indoor Air

Quality (OprIAQ).

- *BAS Override*: indicates Network Override Indoor Air Quality
- *Local Input*: indicates Indoor Air Quality sensor
- *Unreliable*: indicates no valid related input is available and demand ventilation economizer functions that use Operational Indoor Air Quality are not permitted

Network Override Indoor Air Quality (NetIAQ) is used if a value is set or communicated within the

past 15 minutes. If 15 minutes elapses without a communicated value, the UI displays Value

Timed Out and the next highest priority input is used.

Indoor Air Quality (IAQ) is used if the IAQ sensor is connected to the IAQ and COM terminals.

Operational Outdoor Air Quality

Setpoints and Related Data

Setpoints and related data includes:

- Operational Outdoor Air Quality (OprOAQ)
- Outdoor Air Quality Source (OAQSrc)
- Outdoor Air Quality Sensor Range (OAQRange)

Inputs

Inputs include:

- Network Override Outdoor (NetOAQ) communicated value on the FC Bus
- Outdoor Air Quality (OAQ) to OAQ and COM terminals

Operation

Operational Outdoor Air Quality (OprOAQ) is only effective if an economizer board has been connected to the UCB and a related input has been present since the last RELEARN SYSTEM (Relearn) was performed. The Operational Outdoor Air Quality (OprOAQ) parameter is then shown

in the UCB display menu. The Network Override Outdoor Air Quality (NetOAQ) parameter is only

shown in the UCB display menu if an economizer board is connected to the UCB and triggers the

economizer board presence indicator.

The highest priority valid related input is used for Operational Outdoor Air Quality (OprOAQ).

The Operational Outdoor Air Quality (OprOAQ) has assigned priority for inputs in the following order from highest to lowest:

- Network Override Outdoor Air Quality (NetOAQ)
- Outdoor Air Quality (OAQ)

If the input in use becomes invalid, Operational Outdoor Air Quality (OprOAQ) reverts to the next

highest priority input.

Outdoor Air Quality Sensor Range (OAQRange) must be set to match the ppm range of the sensor

being used. This allows the control to properly calibrate the 0-10 VDC input from the sensor to match

the actual ppm measured by the sensor.

Note: Network Override Outdoor Air Quality (NetOAQ) is not bound by the Outdoor Air Quality

Sensor Range (OAQRange)

Outdoor Air Quality Source (OAQSrc) describes the related input in current use for Operational Outdoor Air Quality (OprOAQ):

- *BAS Override*: indicates Network Override Outdoor Air Quality
- *Local Input*: indicates Outdoor Air Quality sensor
- *Unreliable*: indicates no valid related input is available for and the differential demand ventilation

economizer function that uses Operational Outdoor Air Quality (OprOAQ) is not permitted

Network Override Outdoor Air Quality (NetOAQ) is used if a value is set or communicated within

the past 15 minutes. If 15 minutes elapses without a communicated value, the UI displays Value Timed Out and the next highest priority input is used.

Outdoor Air Quality Input (OAQ) is used if the OAQ sensor is connected to the OAQ and COM terminals.

IAQ & OAQ inputs

