CARLO GAVAZZI
Automation Components

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Application notes

Application Note : September 2013

Market involved : Smart Building

Product : Dupline® environmental sensors

Customer : HVAC System Integrators

Subject : Control of ventilation and temperature in buildings

CUSTOMER ISSUE :

When implementing HVAC systems for ventilation and temperature control in buildings, environmental sensors measuring CO_2, temperature and humidity play a fundamental role.

These sensors provide all the necessary information about climatic conditions in the rooms and the ducts to the DDC controller. This allows the controller to regulate the damper positions and the heating valves in order to achieve the desired set-points for temperature and air quality.

The target is to achieve a comfortable indoor climate with lowest possible energy use.

OUR SOLUTION :

The Carlo Gavazzi Dupline® bus offers an alternative solution to traditional sensor wiring, where each device needs a power supply and "homerun" wire(s) leading back to the DDC controller.

In the Dupline® system the 2-wire-cable provides not only bus communication, but also power supply. In this way, the two wires are dropped from sensor to sensor and no other wiring is needed.

The Dupline® BACnet building controller SB2WEB, automatically converts the environmental data information into BACnet/IP objects, thereby providing easy interfacing with any DDC controller.

ACHIEVED BENEFITS :

- The simplified wiring and commissioning leads to considerable savings on installation costs.
- The effective operating distance of a DDC is significantly increased, thereby reducing the number of control panels.
- High flexibility facilitates system enhancements and last minute changes
- Easy interfacing with any DDC via BACnet/IP.
- A cost-effective solution compared to the traditional wiring method.