



Sensors



Switches



Controls



Fieldbuses

Application notes



Application Note : July 2016

Market involved : Smart building

Product : RSGD 75mm

Customer : System integrator

Subject : Less maintenance of belts and pulleys in ventilators

CUSTOMER ISSUE :

Stricter efficiency regulations in buildings reflect in higher demands on the efficiency of the single components used in all the systems, especially HVAC systems. HVAC systems typically account for 40% of a building's energy use.

In any energy saving scheme, the initial activity is to measure the energy consumption. Ventilators are used in various parts of HVAC systems, such as air-handling units (AHUs) and air circulation and extraction systems.

Our customers need solutions to minimise energy consumption as well as maintenance activities, to maximise the efficiency of the equipment and reduce any discomfort to the occupants of the building.

OUR SOLUTION :

The RSGD...VX31.C algorithm is very versatile and can be used for both low and high inertia ventilators. This is achieved through a hybrid self-learning control algorithm which uses a current-ramp as well as current limit approach.

The adjustments to be made for ventilators are just 2 – full load current setting (FLC) and ramp-up time.

Ramp-up can be adjusted by up to 30 seconds to get the smoothest acceleration especially for high inertia fans.

The RSGD is also equipped with Modbus RS485 communication that can be used for easier troubleshooting as well as monitoring of instantaneous electrical variables.

BENEFITS :

- Easy to use with just 2 settings required
- Faster commissioning through self-learning algorithm
- Self-learning algorithm minimises stress on belts and pulleys
- Reduces troubleshooting time through alarm history file of the last 32 starts
- Modbus communication can be used for read-out of electrical variables by a PLC
- Integrated overload and phase sequence protection extend the lifetime of the motor