



**Sensors**



**Switches**



**Controls**



**Fieldbuses**

## Application notes



**Application Note : May 2017**

**Market involved : Food and beverage**

**Product : RSGD 45mm**

**Customer : OEMs**

**Subject : Reduction of starting current of pumps and blowers in tunnel washers**

### CUSTOMER ISSUE :

The tunnel washer needs high pressure cleaning to remove left-over material from the crates.

These machines are widely used in meat processing plants.

The high pressure cleaning is achieved by means of a series of centrifugal pumps which drive water through nozzles located in specific positions in the washer.

Depending on the number of cleaning stages, quite a high number of pumps might be installed.

The starting of all these pumps may result in high starting currents that can create disturbances on the electrical network.

The last stage is normally drying, which is done by means of convectional blowers with different blade diameters.

### OUR SOLUTION :

The RSGD self-learning algorithm is well suited for low starting torque applications such as centrifugal pumps, as well as for medium-inertia applications requiring longer ramp-up times, such as ventilators.

The RSGD is designed in a very compact housing reaching, 45Arms in a 45mm wide housing.

A number of integrated protection functions, such as phase sequence monitoring, result in a more complete motor protection solution in only one device, thus saving precious panel space.

The RSGD is designed to operate at temperatures ranging from -20°C to +60°C (>40°C derating applies).

### BENEFITS :

- Self-learning algorithm optimises pump and ventilator starts by reducing starting current by approximately 40% vs direct on line starts
- The current ramp algorithm reduces mechanical stress on mechanical parts
- Compact dimensions result in easier replacement of mechanical contactors
- Integrated protection functions safeguard the motors during abnormal conditions
- Wide operational temperature range ensures reliable operation under extreme conditions
- Wide operational voltage range (220-600VAC) reduces the number of product variants for customers operating globally.