



**Sensors**



**Switches**



**Controls**



**Fieldbuses**

## Application notes



**Application Note : May 2017**

**Market involved : Agriculture**

**Product : RSGD 45mm**

**Customer : Panel builders**

**Subject : Increased reliability in reverse osmosis pumps for irrigation systems**

### CUSTOMER ISSUE :

Reverse osmosis is a process that uses high pressure centrifugal pumps and special membranes (filters) for various applications, such as water desalination, production of drinkable water and rain water purification for irrigation.

The high pressure pump applies the necessary pressure to push water through the membrane, which filters out the salt or unwanted particles.

Such systems can sometimes be found in places where the power grid could be quite weak.

Highly reliable installation as well as low maintenance costs are the main requirements from the market.

### OUR SOLUTION :

The RSGD series is a 2-phase controlled soft starting solution with a self-learning algorithm, designed to optimise the pump starts and stops whilst reducing the pump starting current.

The ramp-up and ramp-down settings can be adjusted by up to 20 seconds to maximise the smoothness of pump acceleration and deceleration.

The algorithm during ramp-down is based on torque control, resulting in a more gradual pump deceleration to minimise water hammering.

The RSGD.V.210 is also equipped with an integrated electronic overload (Class 10) to safeguard the pump during abnormal working conditions.

### BENEFITS :

- Extremely easy to use – only 3 adjustments required
- Up to 20 sec ramp-up time can be used in installations with long pipes
- Torque control during ramp-down reduces water hammering
- The electronic overload ensures maximum pump protection under anomalous conditions
- Alarms can also follow an auto-recovery process, resulting in less downtime and fewer maintenance activities