CARLO GAVAZZI
Automation Components

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Application notes

Application Note : July 2016

Market involved : Agriculture

Product : RSGD 75mm

Customer : Panel builder

Subject : Reliable performance 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.

Such systems can 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..VX31.C 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 up to 30 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 is also equipped with an integrated electronic overload (Class 10) as well as PTC input for a complete motor protection solution that safeguards the pump during abnormal working conditions.

BENEFITS :

- Extremely easy to use – only 3 adjustments required
- Longer ramp-up times can be used in special applications with long pipes
- Torque control during ramp-down reduces water hammering
- The electronic overload as well as PTC input ensure maximum pump protection under anomalous conditions
- Alarms can also follow an auto-recovery routine, resulting in the reduction of downtime and maintenance costs