



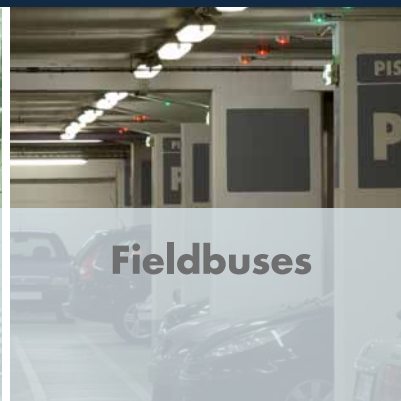
Sensors



Switches



Controls



Fieldbuses

Application notes



Application Note : August 2015

Market involved : HVAC

Product : RSWT 120mm

Customer : OEM

Subject : Reduced starting current on circulation pumps in industrial chillers

CUSTOMER ISSUE :

Industrial chillers are commonly used in large buildings as part of the HVAC system.

Centrifugal pumps are therefore required to circulate the liquid around different areas of the building.

Due to the high starting current of these pumps, peak demand could rise dramatically and, unless properly controlled, could result in light flickering and voltage disturbance to sensitive equipment such as computers.

A dedicated solution is required in order to minimise the starting current of the pumps.

On top of this, vibration during pump starts and stops may cause cracks in the pump as well as compressors' pipes leading to leakages in the system.

OUR SOLUTION :

The RSWT..V110/V111 series is a 3-phase controlled soft starting solution designed with an algorithm that is dedicated to centrifugal pumps.

The algorithm is designed to reduce water hammering and pump vibration during starting and stopping.

The algorithm is also self-learning and is active at every start and stop so that, in case of load fluctuations, the RSWT will react accordingly minimising the need for user settings.

The RSWT..V110/V111 series is also equipped with electronic overload protection and PTC input to detect overload conditions and/or pump over heating in case of abnormal conditions. A remote alarm reset is also available with this series.

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

BENEFITS :

- Extremely easy to use – minimal user adjustments required
- Self-learning algorithm ensures that pump starting and stopping is optimised even during load changes
- Highly efficient current reduction with 3-phase control
- Less disturbance to voltage network
- Integrated protection functions increase pump protection even in abnormal conditions
- Wide operational temperature range ensures reliable operation under extreme conditions
- Longer pump lifetime - less vibration during start and stop