

# CG APPLICATIONS

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**Application Note :** 19 January 2006

**Market involved :** HVAC

**Product :** DPA51

**Customer :** - - -

**Subject :** Correct rotation sense  
of compressors' motor

## CUSTOMER ISSUE :

More and more applications require a cooling system or a conditioning plant.

In any case, whatever is the treatment of the heat, in every system at least a compressor has to be used: it can be centrifugal or rotary screw and driven by an asynchronous motor that has always to run with a predetermined direction and speed.

For this reason, if one of these conditions is missing, the compressor can't correctly work anymore, down to a failure in the worst case.

## OUR SOLUTION:

Using DPA51, the smallest phase sequence and loss relay available on the market, the user can ensure the correct working mode of the motor.

Whether the rotation's direction is uncorrect, the motor will be stopped, and even the run without a phase is avoided, thanks to the detection of regenerated voltage up to 85% of the nominal voltage.

DPA51 protects from expensive failures that, in some cases, can reach 30% of the system value.

## ACHIEVED BENEFITS:

- Simple and reliable discrimination of the motor rotation.
- Money saving on mechanical repairs and down time reduction
- Small size, which means saving space solution.
- No set points.

