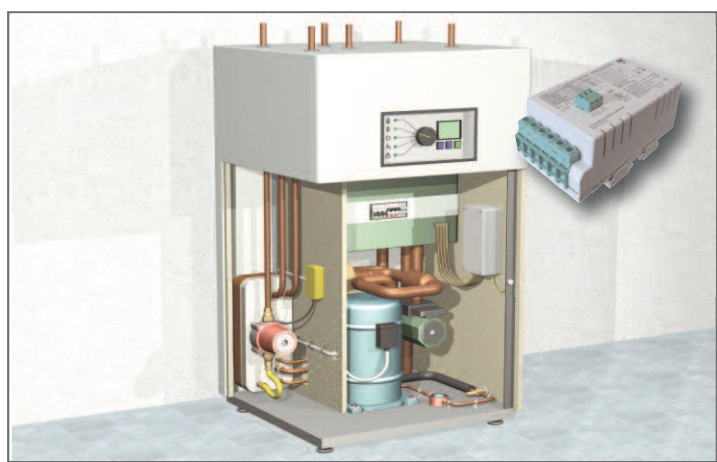


CG APPLICATIONS

CARLO GAVAZZI



Application Note : September 4th 2009

Market involved : HVAC

Product : RSBS

Customer : ---

Subject : Compressor control in heat pumps

CUSTOMER ISSUE :

Starting current in heat-pumps must be kept below specific current limits to conform with requirements of energy companies.

Limitations in panel space demand for product compactness such that the product can be fit in existing heat-pump designs.

Alarm indication needs to be interfaced to an external panel to inform end-user in case of a fault in the system.

Heat pumps are used in residential buildings thus requiring the product to be Class B compliant.

OUR SOLUTION:

RSBS is designed to limit starting current to 40Arms on single phase compressor rated up to 25Amp and 45Arms for compressors rated 32Amp.

RSBS's design incorporates a starting capacitor and bypass relays for reduction of heat losses. RSBS can be panel or DIN mounted offering user flexibility.

In addition to LED indication, RSBS ..V22 includes an auxiliary alarm relay output such that alarms can be interfaced to an external panel.

ACHIEVED BENEFITS:

- Current reduction >45% can be achieved resulting in compliance with energy companies' regulations whilst reducing mechanical stresses on the compressor.
- Compact dimensions and mounting flexibility ensure that RSBS can fit any application having space restrictions.
- External interfacing of alarms helps the end user to be informed about the status of the system at all times.
- Without the need of any additional filter, RSBS achieves Class B performance for EMC emissions thus complying with residential requirements.

