

Press Release

RVPM: VARIABLE FREQUENCY DRIVE FOR BRUSHLESS DC, PERMANENT MAGNET AND INDUCTION MOTOR COMPRESSORS

Fully targeted at heat pumps, chillers and commercial air-conditioning designed with variable speed compressors.

Lainate, March 2022 - Carlo Gavazzi Automation, the international electronics group with activities in the design, manufacturing, and marketing of electronic equipment, today presents its new frequency drive for scroll compressors.

In the HVAC industry, eco-design directives have forced OEMs to improve the efficiency of heat pumps over the whole heating season. This means that heat pumps need to work efficiently at different operating points. The efficiency of heat pumps, known as seasonal coefficient of performance (SCOP) must be above certain limits or else the heat pump cannot be placed on the EU market. For this reason, variable speed compressors are becoming more popular in this market.

The RVPM fits this market's requirements as it provides a compact and fully compliant product for use in heat pumps, both for the residential as well as commercial sectors.

The RVPM is a frequency drive that is specifically designed for scroll compressors typically used in heat pumps, industrial air-conditioners, chillers and also commercial refrigeration cabinets. This device is designed with a sensor less vector control that can be used with BLDC, PMAC and IM motor types. It comes in two housings, one utilising what is known as the cold-plate and the other one with a heatsink. The cold-plate design enables significant space savings in heat pumps.

"The reduced set of parameters required to setup the RVPM facilitates its installation. OEMs can start running their compressor in a matter of minutes as minimal configuration is required. Furthermore the RVPM can control both BLDC and PMAC compressors as well as Induction motor compressors for an easier integration with a wider range of compressors.", Jason Demicoli International Product Manager states. "With this new variable frequency drive, Carlo Gavazzi's intention is to strengthen its growth in the HVAC&R market segment, providing customers with a more comprehensive range of products".

Developed in our competence centre in Malta, the RVPM enables us to expand our presence in applications that are becoming more and more popular in HVAC systems such as heat pumps, chillers, commercial air-conditioning and commercial refrigeration cabinets.

Main technical features

- Operational voltage: RVPM 1-phase: 230 VAC , RVPM 3-phase: 400 VAC
- Power ratings: RVPM 1-phase: 4.5 kW, RVPM 3-phase: 8.0 kW
- Control method: Modbus RTU
- Compressor compatibility: BLDC, PMAC, IM compressor types
- Configuration software with compressor database for quick configuration and setup
- Built-in diagnostic functions: motor overload, over- and under-voltage, over-temperature and phase loss
- Smart functions: automatic speed and/or switching frequency reduction in case of operation at high temperature
- Crankcase heater function: replicates the functionality of the resistive heater that is used with scroll compressors

ABOUT CARLO GAVAZZI AUTOMATION

Carlo Gavazzi Automation is an international electronics group with activities in the design, manufacture and marketing of electronic equipment targeted at the global markets of industrial and building automation.

Carlo Gavazzi Automation provides customers with technologically innovative, high quality and competitive solutions, in compliance with their requirements and expectations through its 22 National Sales Companies in Europe, the Americas and Asia & Pacific, operating with its production sites in Denmark, Italy, Malta, Lithuania and China.

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