

RVPM: Variable frequency drive for compressors

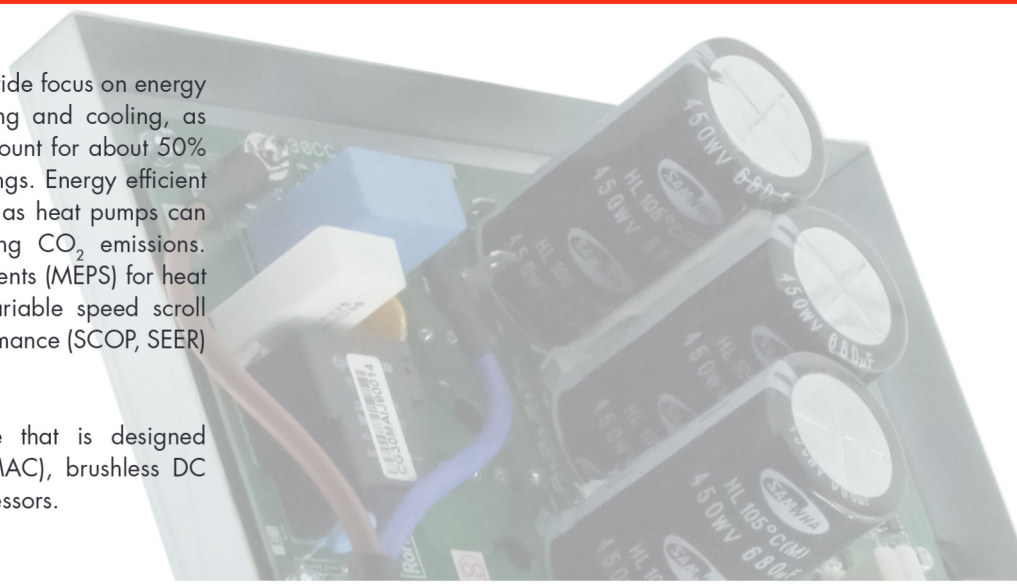
Switches

RVPM

Variable frequency drive for compressors

In recent years there has been a worldwide focus on energy efficiency. Currently, both space heating and cooling, as well as hot water, are estimated to account for about 50% of global energy consumption in buildings. Energy efficient heating and cooling technologies such as heat pumps can have a great impact towards reducing CO₂ emissions. Minimum energy performance requirements (MEPS) for heat pumps have demanded the use of variable speed scroll compressors to meet the required performance (SCOP, SEER) levels.

RVPM is a variable frequency drive that is designed specifically for permanent magnet (PMAC), brushless DC (BLDC) and induction motor (IM) compressors.



Variable frequency drives for PMAC, BLDC and IM compressors



Easy configuration

RVPM requires fewer configuration parameters (typically 10) to set up the compressor



Real-time monitoring

Modbus RTU interface enables the user to monitor critical status variables in real time



Plug and Play

Pre-configured compressors are available in the configuration software for faster commissioning



Protection

Integrated diagnostic functions are available to protect the compressor and the drive in case of abnormal operation



Space saving

Cold-plate design allows RVPM to fit in heat pumps with limited space



Applications

Heat pumps

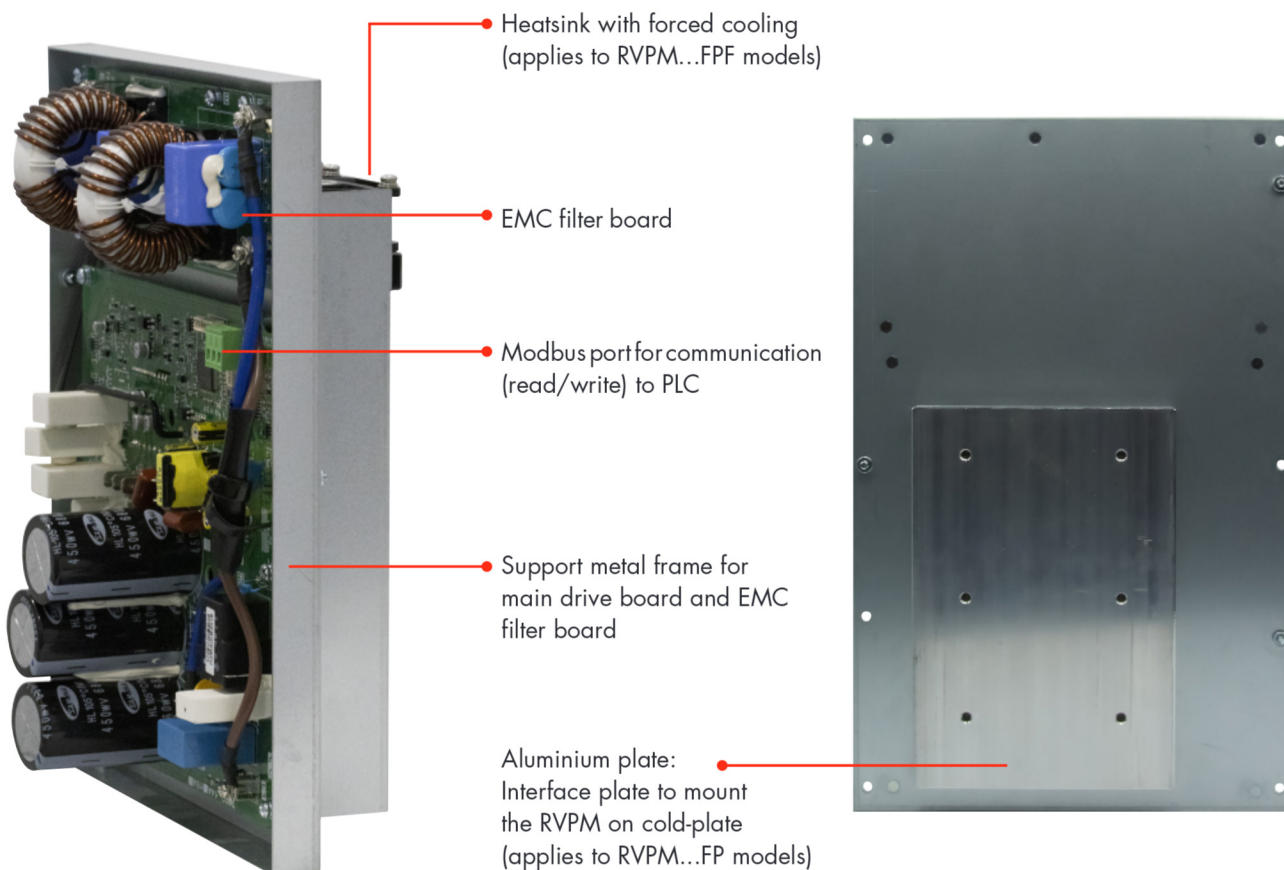
For a higher performance efficiency, latest heat pump designs are using variable speed compressor technology to improve part-load performance. BLDC and PMAC compressors are commonly used as they can handle a wide range of speeds. RVPM is designed with a sensorless control that can control both of these compressor types with just 10 configuration parameters.

It comes with an integrated mains filter to comply with residential EMC requirements.

RVPM is designed with either a heatsink or cold-plate for heat dissipation. The cold-plate version is very suited for heat pumps where installation space is limited.



Main features



Selection guide

AC supply	Rated output power	Rated output current @ 40°C	Cooling method	Ordering code	DC choke/PFC reactor (ordering code)
1 - phase (230 VAC)	4.5 kW	16 Arms	Cold-plate	RVPM1200500FP	RVDC0500
		12 Arms	Heatsink	RVPM1200500FPF	
3 - phase (400 VAC)	8.0 kW	24 Arms	Cold-plate	RVPM3400800FP	RVDC0800
		22 Arms	Heatsink	RVPM3400800FPF	

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