

ABSTRACT**DATA AND COMMANDS COMMUNICATION SYSTEM AND METHOD BETWEEN
VARIABLE CAPACITY COMPRESSOR AND ELECTRONIC THERMOSTAT FOR
A COOLING SYSTEM**

The present invention refers to a data and commands communication system between compressor and electronic thermostat, particularly applied to cooling systems having variable capacity compressor (VCC), with the purpose of providing an exchange of data between said equipment which is technically more efficient and less costly compared to the solutions available today. Accordingly, there is described a data communication system between variable capacity compressor and electronic thermostat for a cooling system, the compressor comprising at least a frequency inverter unit (100) electrically associated to an electrical motor of the compressor, the electronic thermostat (200) being electrically associated to the frequency inverter unit (100), the electronic thermostat (200) and the frequency inverter unit (100) being powered by an alternating voltage source (15), the data communication system comprising a data communication single highway (50) between the electronic thermostat (200) and the inverter unit (100), arranged to establish an exchange of data between the thermostat (200) and the inverter unit (100), the exchange of data between the thermostat (200) and the inverter unit (100) being provided by the modulation of an electrical magnitude ($S_{network}$) of the alternating voltage source (15), the modulation of the electrical magnitude ($S_{network}$) of the alternating voltage source (15) being capable of configuring a modulated information signal (S_x), the exchange of data between the thermostat (200) and the inverter unit (100) being provided by a demodulation of the modulated information signal (S_x).

Fig. 12