ELECTRONICALLY COMMUTATED MOTOR FOR DRIVING A COMPRESSOR

ABSTRACT

A system which drives a compressor of a refrigeration system at one or more preset speeds. The system includes a motor having a stationary assembly and a rotatable assembly. The stationary assembly includes windings adapted to be commutated in at least one preselected sequence. The rotatable assembly is in magnetic coupling relation to the stationary assembly and in driving relation to the compressor. The motor drives the compressor at a desired speed corresponding to a speed select signal representative of one of the preset speeds. The system further includes an application specific integrated circuit (ASIC) connected to the motor. The ASIC receives the speed select signal and is responsive to it for generating a commutation reference signal. The commutation reference signal in combination with the commutation signal generates a peak current demand signal and thereby cause the motor to operate at the desired speed.

FIG. 1