

Copeland™ Commercial HVACR Variable Frequency Drive

EVM Series

The EVM variable frequency drive (VFD) series, covering ½ to 30 HP, has single and three phase input options, and is simple to use with Bluetooth® onboard. The EVM VFD series is well suited for chillers, medical refrigeration, display cases, walk-ins, reach-ins, and other stand-alone applications.

Reducing energy consumption with drive technology

Food retailers, contractors, and refrigeration system manufacturers are investing in modern refrigeration systems to maximize energy efficiency and reduce operational costs. Emerson is a global leader in providing integrated cooling solutions. These include compressors and drives for commercial refrigeration applications - innovative and reliable products that fulfill the needs of today's market.

Variable frequency drives can play a critical role in the performance of a refrigeration system. The motor that drives the compressor typically consumes a high percentage of the electrical energy in a refrigeration system. Using a variable frequency drive, energy consumption can be significantly reduced while also enhancing system performance. Emerson has tailored its variable frequency drives to Copeland scroll and reciprocating refrigeration compressors. Thereby, the drive enables the compressor capacity output to match the needs of the system and eliminates unnecessary energy consumption.



EVM Drives

- 4 frame sizes (0.5 – 30HP)
- Keypad (onboard & remote options)
- Onboard safe torque off (STO)
- 5 onboard communication protocols
- Motor auto-tuning
- Bluetooth®
- Pro and basic versions
- Onboard energy savings calculator

Standard features on EVM drives include onboard STO, brake chopper, BACnet MS/TP/IP, Modbus RTU/TCP, Ethernet IP/TCP communications, and an embedded 7 segment LCD display.

Voltage/Phase		Max Output Rating Range (A)	Max Output Power Rating Range (kW)	Internal EMI Filter	Frame Size Range
Input	Output				
Basic Version					
200-240v 3Ø		2.5 - 62	.37 - 15	Yes/No	1 - 4
380-480v 3Ø		2.2 - 46	.75 - 22	Yes/No	1 - 4
Pro Version					
100-120v 1Ø	200-240v 3Ø	2.5 - 7.8	.37 - 1.5	Yes/No	1 - 2
200-240v 1Ø	200-240v 3Ø	2.5 - 25	.37 - 5.5	Yes/No	1 - 3
200-240v 3Ø		2.5 - 62	.37 - 15	Yes/No	1 - 4
200-240v 3Ø		2.2 - 46	.75 - 22	Yes/No	1 - 4

	Pro	Basic
Display Type	Embedded Seven Segment Display	No Display
Communication Capabilities	Bluetooth, Ethernet IP/TCP, BACnet MS/TP/IP, Modbus RTU/TCP	Bluetooth, Modbus RTU
Safe Torque Off Option	✓	✗

Improve Efficiency

- Better load matching
- Less cycling on and off
- Soft start-up (start-up power)
- Faster pulldowns
- Help meet regulations (AWEF)

Precision / Accuracy

- Precise temperature control
- Precise humidity control
- Adaptable capacity for weather
- Low noise (controllable noise level)

Improved Reliability

- Proactive motor failure prevention
- Motor/compressor as a sensor - improved diagnostics
- Ability to deal with power fluctuations
- Reduces number of start-stops

Operational Benefits

- SKU reduction
- Adaptable to many applications
- Reduce food spoilage
- Up sale with quantifiable ROI
- Can negate the need for a motor contactor
- Faster retrofit in many cases