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ICE® · 142

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Applications

Our ICE 142 motors are primarily used in the evaporator of commercial refrigeration walk-in coolers and freezers as well as outdoor condensers, but can be used in many applications demanding high efficiency and dependability with output ratings between 1/5 - 3/4 HP including parallel rack fan motors.

Innovative design

Combining over 20 years of GE ECM by Regal Beloit experience with Morrill Motors commitment to value, quality, and service we are now offering the commercial refrigeration industry's first smart electronically commutated motor available. Our ICE 142 significantly outperforms PSC technology and offers features like variable speed and digital serial interface operation. With efficiencies 30% higher than PSC, in addition to the reliable design, the ICE 142 provides users the most reliable and best energy savings solution for their applications.

Optimize your performance

All of our ICE 142 motors can be sold with [mounting brackets](#). Additionally, the ECM Toolbox can be used in a lab environment to generate a PWM signal for variable speed operation, or to create communication strings for a Digital Serial Interface (DSI) equipped version.

Electrical Summary

Resources

White Papers

- [General Motor Knowledge Part 9](#)
- [General Motor Knowledge Part 34](#)
- [General Motor Knowledge Part 39](#)
- [General Motor Knowledge Part 40](#)
- [ICE 142 Brochure](#)

- Voltage: 115 (90-132)* or 208-230 (180-264) V Single Phase
- Output: 1/5, 1/3, 1/2, and 3/4 HP
- Efficiency: ~77% peak
- Speed Range: 600 - 1200, or 600 - 1800** RPM
- Speeds: Variable (speed regulated +/- 6%)
- Rotation: CW or CCW for PWM and commanded for DSI (determined from the lead end of the motor)
- Programmable: The speeds range, Rotation, and operating type come configured from our factory. For PWM operating type, our ECM Toolbox can be used to generate the PWM signal for use in laboratory testing. The ECM Toolbox provides utilities necessary to help the user generate DSI communication strings for DSI operation.

Mechanical Summary

- Type: NEMA 48 frame electronically commutated
- Shaft: 1/2" diameter, single, or double flat shafts
- Enclosure: Totally enclosed - air over required
- Bearing: Ball bearing with low temperature grease
- Mounting: Belly band (customer provided), welded base, #8-32 rear studs, or #8-32 front studs
- Operating Position: Vertical Shaft Down, Horizontal, or Vertical Shaft Up
- Leads: Many customized 2/64 ins. 18AWG lead options are available
- Lead Exits: Grommet, 1/2" liquid-tight conduit adapter, or Conduit Box

Environmental Summary

- Storage Temps: -40 to 80° C ambient
- Operating Temps: -40 to 55° C ambient
- Design Life: 10 years, 83,720 hours on time (for typical evaporator fan applications)

The Morrill Motors Pledge

Since 1946, Morrill Motors has earned the trust of customer around the

world. Our commitment to quality and unique designs is unwavering. Working with you and your team, we will ensure exacting specifications and performance standards whether you select one of our many current production models, or choose to have us customize features and specifications to meet your special requirements.

We are pledged to ensure your success. Expect only the best service, quality and value when you specify Morrill Motors.

*All ratings excluding $\frac{3}{4}$ HP

** $\frac{1}{2}$ and $\frac{3}{4}$ HP only

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