WHY PWM?

PWMs have been around for quite a while so why get so excited about the Z18350 from Northern Radiator? The answer is, when looking for a PWM you must research the features of the controller to be sure that it will not only function the way you want it to, but be safe and reliable as well.

Review the features listed below for the best PWM on the market.

**BENEFITS OF NORTHERN’S PULSE WIDTH MODULATOR**

- Made in USA using top tier component suppliers, including circuit boards
- 40A standard current capability
- Short circuit and rotor lock protection without damage to the controller
- Overload protection limits output to 40A
- Overheating protection with automatic reset
- Under and over voltage shut down protects circuitry
- A/C over ride powers fan(s) at 50 percent speed when compressor clutch is activated
- Quiet operation for brushed fans at 99.6% efficiency
- Compact 2 1/8” square by 11/16” deep size allows for easy mounting.
- 180 Degree temperature sensor included.
- Ability to turn the controller off at key-off (optional)
- Hermetically sealed

**CONTROL THE POWER!**

When you hear people talking about Pulse Width Modulators (PWMs) for their electric fan shrouds, it’s highly likely you’re asking yourself the same question as many people do, “what in the world are you talking about”? To make it simple, a PWM is a complete wiring harness that will control the amount of power that is supplied to your brushed fan motor or motors. Traditionally a brushed fan has two speeds, ON and OFF. In other words, the fans are either not operating at all, or going at 100% power. With a PWM you have the advantage of a “soft start” and the fans operating at the speed needed to do the cooling that is required based on the reading of the temperature sensor. When we say “soft start”, we are avoiding any damaging amp spike that you get when starting up a fan. It eliminates the high current in-rush, hence no idle pull down or overloaded connections. The PWM allows you to draw only the power necessary and will ramp up from zero amps to the required draw for cooling the engine.

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