



Heating & Cooling Coils

Clutch Coils used in magnet type clutch devices engage/disengage a clutch hub or shaft. One common application is automotive engine cooling. Input parameters from either the embedded fan speed sensor or engine control unit control the speed of the cooling fan as required. Some benefits include improved fuel efficiency and engine noise reduction. Pontiac Coil's solutions with embedded electronics (see sht.2) can help save package space as well.

PERFORMANCE*

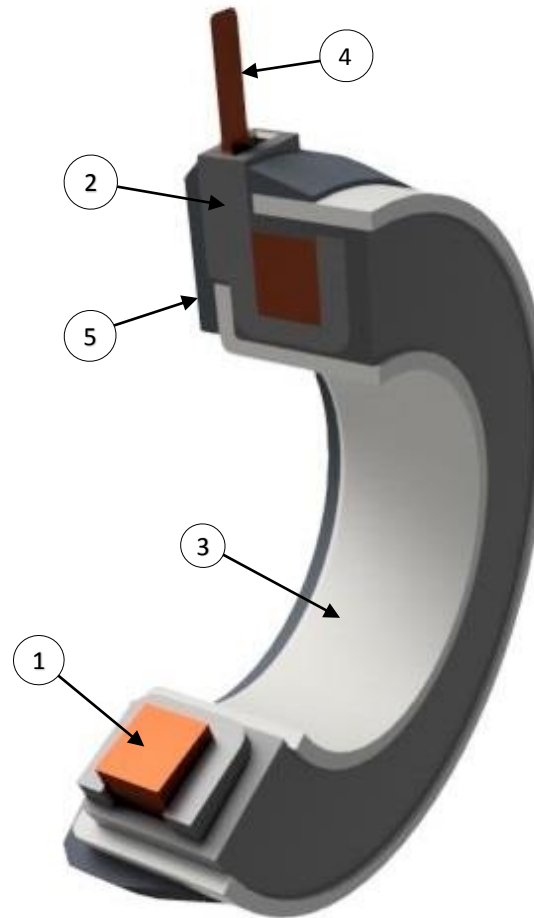
Operating Voltage	9V to 24V
Duty Cycle	Intermittent
Durability	Up to 10,000,000 Cycles
Force	See the profile in the graph provided
Resistance of the Coil	3 - 10 Ohms (can be varied based on customer requirements)
Operating temp. range	-40 C to 150 °C

PACKAGE SIZE

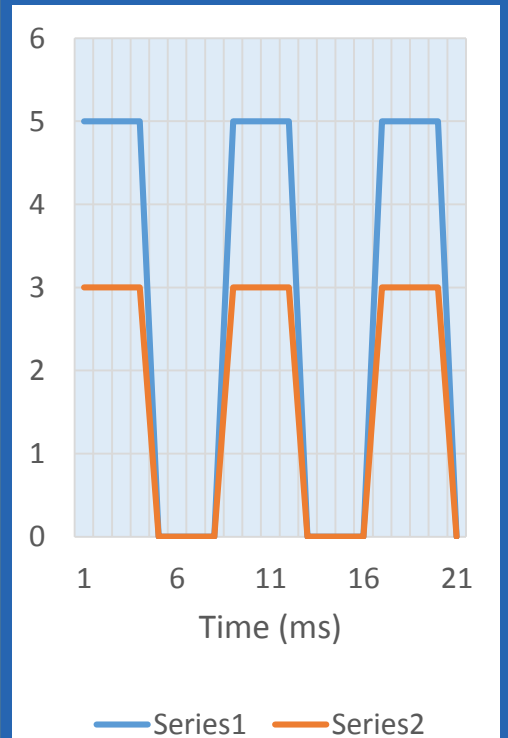
Length x Width x Height	Typically based on customer specification
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CAPABILITY

1	Coil	Precision layer wound magnet wire; 20 - 35 AWG, Insulated rating up to 280°C
2	Bobbin	Thermoset or Thermoplastic
3	Flux Carrier	Low carbon steel, carbon steel bar, stainless steel, powered metal, or metal injection molded (MIM)
4	Termination	Resistance Weld, Pulsed Arc Weld, IDC, Robotic Solder to customer specified connector
5	Overmold	Thermoset or Thermoplastic



STATOR FORCE RISE TIME PROFILE*



* Performance data is provided for reference purposes only and will vary based on application

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ADVANCED FEATURES

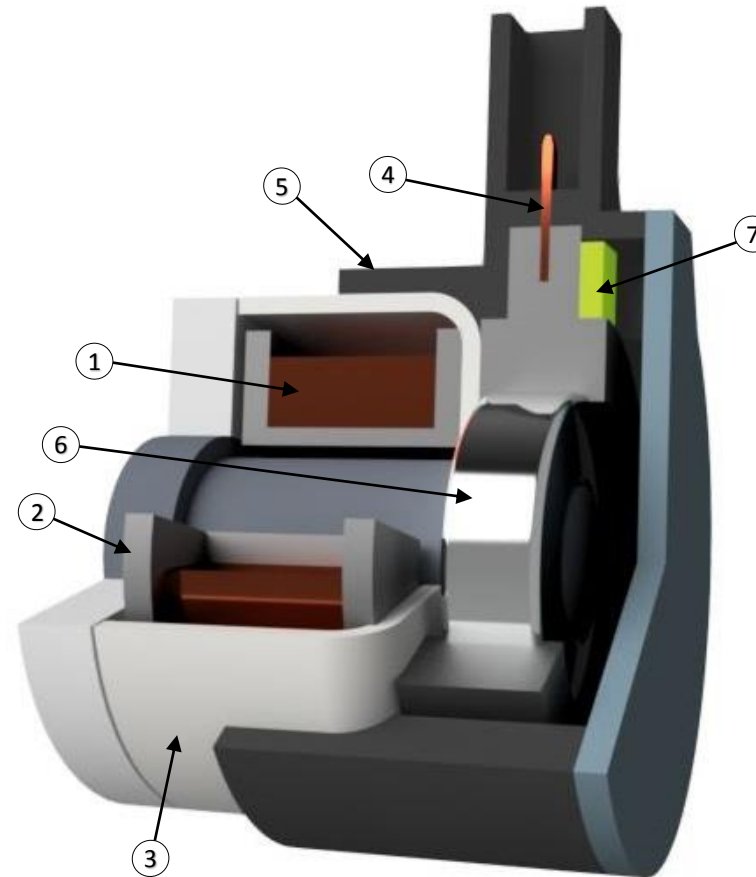
- Integrated Hall sensor
- Integrated speed sensing rotor
- Custom integrated circuitry
- Wide temperature range as required (ex. -55°C to 170°C)

PACKAGE SIZE

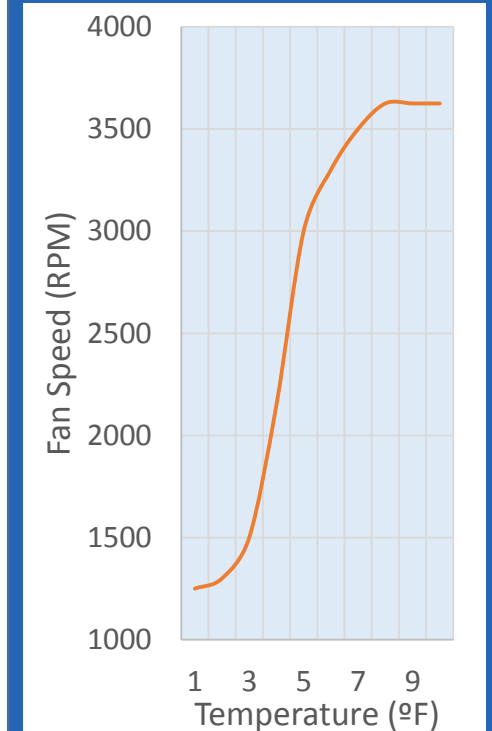
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CAPABILITY

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5	Overmold	Thermoset or Thermoplastic
6	Bearing	Overmolded bearing with high temperature seal
7	Circuit Board	Temperature rating of components around -55 to 170°C with conformal coating. All components automotive rated.



Fan Speed v. Temperature*



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