

PJ Power offers a variety of work solenoids, electronic controls and contactors. In order to assure that the Trombetta product selected is satisfactory for your application, detailed information is required. A representative from PJ Power will be working with you to gather this information.



Work Solenoid - A solenoid is essentially an electromagnet with at least one moving part capable of doing some useful work. The work output of a solenoid is characterized by limited motion, i.e. a few inches of travel or less and fast response time, i.e. milliseconds.



Electronic Control - Electronic controls are developed to enhance solenoid performance by increasing force capability and reducing temperature. Trombetta can also develop electronic controls for non-solenoid applications.



Contactors – An electromagnetic switch that routes electric current to a high current load (motor, starter) when a switch (key switch) is turned on or pushed on an automobile, motorcycle, lawn tractor or any other device that uses a battery.

General Information:

1) Company: _____

Address: _____

2) Contact Information:

Your Name: _____ Your Title: _____

3) Briefly describe the application:

**What are the Work Solenoid and/or Electronic Control Operating Requirements?
(If question is N/A based upon your application, please indicate)**

- 1) Voltage: _____ Max Ampere Limit: _____ AC/DC: _____ Hertz: _____
- 2) Power Source (e.g.: battery): _____
- 3) Distance from your power source to your solenoid: _____
- 4) Stroke Length in Inches: _____ Push or Pull when energized: _____
- 5) Load (in pounds) at Start of Stroke: _____
Load at Mid-Stroke: _____ Load at Hold/Seated: _____
- 6) Is the load returned by gravity? _____ Returned by spring? _____
What spring force is required at beginning of stroke? _____ Other: _____
- 7) Cycle Rate "ON" time: _____ Cycle Rate "OFF" time: _____
- 8) Cycles per second: _____ per minute: _____ per hour: _____ per year: _____
Other: _____ Product life desired: _____
- 9) Specific pull-in time required? Max: _____ Drop-out time (release time) Max: _____
- 10) How is solenoid mounted? Horizontal? _____ Verticle (plunger up or down)? _____
Angled (Altitude)? _____
- 11) Size restrictions: Height: _____ Width: _____ Length: _____
Diameter: _____ Weight: _____

If Contactor application, what are the DC Contactor Operating Requirements?

- 1) Voltage: _____
- 2) Maximum sustained duty cycle: _____
- 3) Nominal Carry: _____ Peak Carry: _____
- 4) Contact Peak Inrush current capability: _____
- 5) Running current: _____

- 6) Pull in voltage (at 25°C): _____
- 7) Hold voltage (at 25°C): _____
- 8) Nominal coil resistance (at 25°C): _____
- 9) Contact material? Copper: _____ Silver alloy: _____
- 10) Standard operating temperature range: _____
- 11) Grounding method? Isolated: _____ Through bracket: _____
- 12) Number of terminals: 3 _____ 4 _____ 5 _____ 6 _____
- 13) Life cycles: Electrical: _____ Mechanical: _____
- 14) Mounting position of solenoid: Vertical _____ Horizontal _____
- 15) Mounting means of contactor: Flat bracket _____ Curved bracket _____
Other: _____
- 16) Break Current: _____

What Environmental Factors need to be considered?

- 1) Ambient Temperature (°F) Max: _____ Min: _____
- 2) Are rapid temperature swings anticipated? _____
- 3) What heat dissipation factors affect the solenoid? _____
Enclosures? _____ Heat sinks or sources? _____
- 4) Briefly describe the operating environment: _____
- 5) Please identify extreme operating conditions (e.g.: high temperature, minimum supply voltage)? _____
- 6) Check all that apply:
Moisture: _____ Dust: _____ Dirt: _____ Side Loading: _____
Humidity: _____ Salt Spray: _____ Shock: _____ Ultraviolet Light: _____
Oil: _____ Vibration: _____ Electrical Noise: _____

What Safety and Testing Requirements are present?

- 1) Could personnel come into contact with the solenoid housing? _____
- 2) What happens if the solenoid fails to energize, de-energize, or move? Can personal injury or mechanical damage occur? _____

CUSTOMER IS RESPONSIBLE FOR ANY AGENCY APPROVAL OR CERTIFICATIONS

Additional Data:

- 1) What is the projected annual production volume? _____
- 2) Are prototypes and pre-production units required? _____
- 3) What are the price targets? _____

Please attach a drawing of your application, or provide a simple sketch below:

