

# Cole Facts

IMPORTANT  
PRODUCT  
INFORMATION

## Solenoids

A solenoid is an electro-magnetic relay used in a direct current wiring system between a low current capacity switch and a high current load requirement. In an engine starting system, the start position of an ignition switch might have a typical rating of 5 amps while the starter motor might have an initial cranking requirement of 200 to 350 amps. The ignition switch energizes the solenoid coil which moves the high current capacity contact to a closed position, thereby energizing the starter motor.

The intermittent starter application is used only when the equipment is started and only for a few seconds during each start. To meet this short term demand, an intermittent solenoid carries a high rating. If the starter was run continuously, the solenoid would overheat and fail, as would the starter. It is constructed so it can be energized for short periods up to 15 seconds without overheating and destroying its windings. The continuous solenoid is rated much lower, however, so that it will not overheat in continuous operation. Used for applications such as accessory circuits and lifts, where operation is uninterrupted, a continuous duty solenoid is constructed so it can be energized constantly without overheating its windings.

Solenoid applications numerous and just a few are listed here.

- RVs
- Farm Equipment
- Buses
- Trucks
- Emergency Vehicles
- Industrial Equipment
- Golf Carts
- Lift Trucks
- Construction Equipment
- Garden Tractors
- Hoists
- Tailgates

### Cole Hersee Solenoids • Conservative Electrical Ratings

**Intermittent Duty  
SPST • 12 VDC**  
750 amps make  
100 amps break  
10 secs. on - 20 min. off

**Intermittent Duty  
SPST • 24-36 VDC**  
120 amps make  
65 amps break  
10 secs. on - 30 min. off

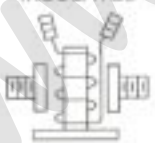
**Continuous Duty  
SPST • 6-36 VDC**  
85 amps

**Continuous Duty • SPDT**  
35 amps - front studs, normally closed  
85 amps - side studs, normally open

As the demands placed upon vehicle electrical systems continue to increase, the electrical system components must be able to handle higher loads. Only several years ago an 85 to 100 amp solenoid was adequate for most applications. Today, many vehicles require additional capacity. Cole Hersee has responded to an increasing number of customer inquiries for a higher capacity solenoid with two new products.

### 200 amp Continuous Duty Solenoid • SPST • Normally open contacts • One circuit: OFF-ON

INSULATED



- Silver contacts.
- Plated steel housing.
- Contact terminal 5/16"-24 thread.
- Bracket mounting holes 5/16" x 19/32", 2 13/64" on centers.



**No. 24143 12 volt**  
• Rated at 200 amps.

**No. 24144 24 volt**  
• Rated at 200 amps (carry only,  
not to break 200 amps at 24 volts, D.C.)



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CF-101

Cole Hersee Solenoids

**Intermittent Duty • SPST  
Steel Housing  
Normally Open contacts**

**One Circuit: Off-On**

Part No.	Voltage	Type
24008	24	Insulated
24104	24	Insulated
24037	12	Grounded
M-202	12	Grounded
24044	12	Grounded
24103	12	Grounded
24046	12	Insulated
24047	12	Insulated
M-200	12	Insulated
UL listed		
24041	6	Grounded
24039	6	Grounded
24055	6	Insulated
24043	6	Insulated

**Intermittent Duty • SPST  
Phenolic Housing  
Normally Open contacts**

**One Circuit: Off-On**

Part No.	Voltage	Type
24022	12	Grounded
24020	12	Grounded
24021	12	Grounded
24138	12	Grounded
2430	12	Insulated
24023	12	Insulated

**Intermittent Duty • SPST  
Plasticized Steel Housing  
Normally Open contacts**

**One Circuit: Off-On**

Part No.	Voltage	Type
24076	12	Insulated
24077	12	Insulated
24071	12	Grounded

**Continuous Duty • SPST  
Steel Housing  
Normally Open contacts**

**One Circuit: Off-On**

Part No.	Voltage	Type
24080	36	Insulated
24080-01	36	Insulated
UL listed		
24124	24	Grounded
24063	24	Insulated
24107	24	Insulated
24059	12	Insulated
24059-08	12	Insulated
UL listed and CE listed		
24106	12	Grounded
24082	12	Grounded
24115	12	Insulated
24097	6	Insulated

**Continuous Duty • SPST  
Steel Housing  
Normally closed contacts**

**Part No. Voltage Type**

24420	12	Insulated
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**Continuous Duty • SPDT  
Steel Housing  
Normally open and normally closed contacts**

**Part No. Voltage Type**

24400	36	Insulated
24402	24	Insulated
24401	12	Insulated
24401-01	12	Grounded

**Continuous Duty • SPST  
Plasticized Steel Housing  
Normally Open contacts**

**One Circuit: Off-On**

Part No.	Voltage	Type
24135	36	Insulated
24135-01	36	Insulated
UL listed		
24063-08	24	Insulated
UL listed		
24117	12	Insulated
24117-01	12	Insulated
UL listed		

**UL Listed Solenoids**

Some applications require a solenoid tested and listed by Underwriters Laboratories. In marine applications, U.S. Coast Guard regulations require the use of UL listed electrical products in the engine compartment.

**Latching Solenoid**

**No. 24200**

- Electrical Rating: 110 amps continuous (carry only).
- Continuous duty.
- For 12 volt, D.C. electrical systems.
- Plated steel case.
- Complete with hex nuts and lockwashers.
- Small terminals 10-32 thread, large terminals 5/16"-24 thread.
- Bracket mounting holes .281" (7.16mm) x .310" (7.87mm), 2.20" (55.88mm) on centers.



**Features:**

- Because coil is taken out of circuit no heat is generated.
- Requires less than 3.5 amps to operate.
- Compact, mounts in tight locations.

**How it works:**

1. Actuate a momentary switch to close the solenoid's contacts allowing current to flow.
2. Once the momentary switch is actuated, the circuit remains closed.
3. Upon a second actuation of the momentary switch the circuit opens again.

**Application Information**

**Remote battery disconnect switch.**

Can be used as a battery disconnect switch in conjunction with a momentary switch located on a panel or dash.

**Remotely operated battery isolator**

Can be used to isolate one battery from another in conjunction with a momentary switch in a two battery system.

For more information on Cole Hersee's full line of solenoids, please consult our Master Catalog D-272, Section E, or our Marine and Heavy Duty catalogs under Solenoids.

