

solenoids & relays

H



STEEL & PHENOLIC BODY SOLENOIDS	H1
PVC COATED SOLENOIDS WITH STEEL HOUSINGS	H2
PLASTIC BODY SOLENOIDS	H3
ELECTRONIC SOLENOIDS	H4
RELAYS	H5
INFORMATION ON SOLENOIDS	H6

solenoids & relays

H1 STEEL & PHENOLIC BODY SOLENOIDS

Continuous Duty

85A except where noted. Normally Open Contacts, SPST, One circuit: Off - On Housings: Plated steel (Phenolic where noted). Contacts: Copper 5/16" -24 thread, hexnuts and lockwashers included. 200A solenoids have silver contacts. Coil, ignition and ground terminals: Steel 10-32 thread, hexnuts and lockwashers included. Bracket mounting holes 5/16" x 19/32" (7.9 x 15.1) on 2 13/64" centers (56.0mm).

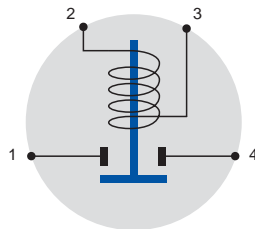
48V insulated

See Section H3: 24848 heavy duty.

36V insulated

Available in Plastic Body (section H3): 24636, 24836 heavy duty.

24080



PVC coated model: see 24135

24080-01 UL-listed



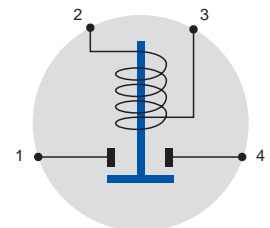
Same as 24080, but UL and CE rated. Continuous Rating: 65A at 36V DC. Intermittent rating: 120A make, 65A break. 10 sec On, 30 min Off.

PVC coated model: see 24135-01

24V insulated

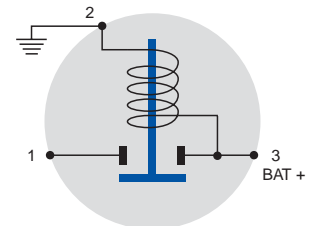
Also available in Plastic Body (section H3): 24624-10.

24063 ★

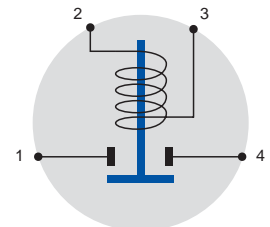


PVC coated and UL-rated model: see 24063-08

24107



24144 200A ★



Electrical Rating: 200A carry only. Not to break 200A at 24V DC. Silver contacts.

CONTINUED **H1**

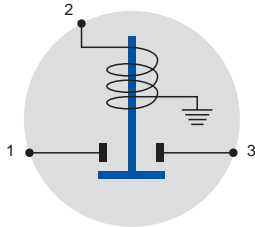
★ Rapid ship item. BP Available in retail clamshell pack. ★ Minimum order quantity may apply.

H solenoids & relays

H1 STEEL & PHENOLIC BODY SOLENOIDS

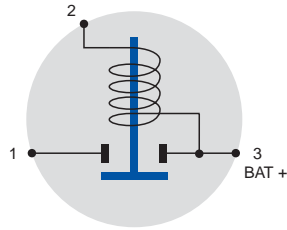
24V grounded

24124 ★

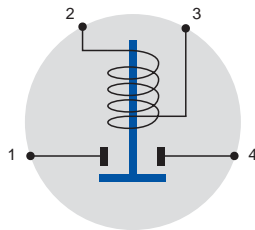


12V insulated

24115



24059 **BP** ★



PVC coated model: see 24117

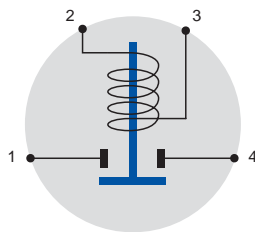
24059-08 UL listed **BP** ★



Same as 24059, but UL and CE rated.
Continuous Rating: 65A at 12V DC. Intermittent rating:
750A make, 100A break. 10 sec On, 30 min Off. Circuit G1.

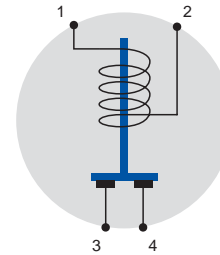
PVC coated model: see 24117-01

24143 200A ★



Electrical Rating: 200A. Silver contacts.

24420 Normally On

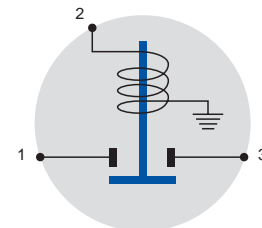


Continuous Duty 35A.

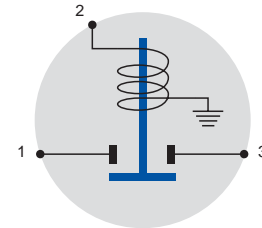
12V grounded

Also available in Plastic Body (section H3): 24612-G10.

24106 **BP** ★

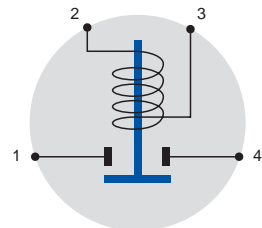


24082 curved bracket ★

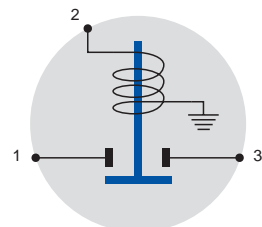


6V

24097 insulated



*24105 grounded

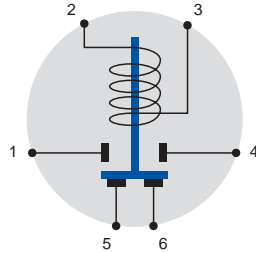


★ Rapid ship item. **BP** Available in retail clamshell pack. ★ Minimum order quantity may apply.

Two circuits, DPST

Normally Off and Normally On. Special application: for forward and reverse systems in electric golf carts, garden tractors, fork lift trucks, winches, etc. Housing: Steel. Continuous Duty, Normally Closed contacts 35A, Normally Open contacts 85A.

24400 36V insulated



24402 24V insulated

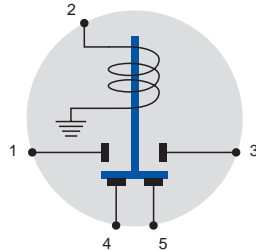
Schematic and picture same as 24400.

24401 12V insulated ★

Schematic and picture same as 24400.

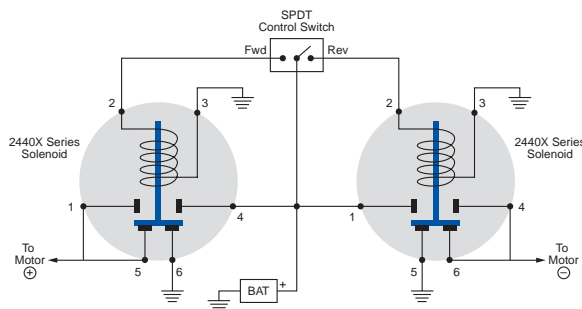
PVC coated model: see 24401-04.

24401-01 12V grounded ★



motor reversing

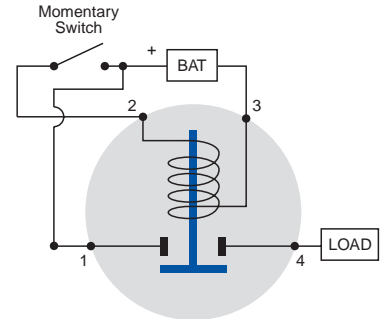
Typical DC series wound permanent magnet circuit, using a pair of double-action solenoids. Use pairs of the following solenoids: 24401 (12V), 24402 (24V), or 24400 (36V).



Latching Solenoid

12V Continuous Duty, 110A (carry only). Insulated. Plated steel housing. Requires only a momentary application of coil power to operate. Very little heat is generated, because the coil is de-energized when the solenoid is On.

24200



the latching solenoid

This special solenoid toggles On and Off, and requires no current to maintain the continuity of the power circuit. Use it with a momentary switch (see Momentary Switches). Actuation of the momentary switch causes current to flow in the solenoid coil, locking the contact in place, maintaining the load circuit in an On position. A second actuation of the momentary switch releases the plunger, turning the load circuit Off.

Suggested momentary switches: 55037, 58027-02.

Special Applications

Remote battery isolator

In a two-battery system, use the Latching Solenoid to isolate the batteries from each other, and prevent battery drain from the higher into the lower. It has an advantage over electronic Battery Isolators (see Battery-Related Products), in that it will not produce a voltage drop during operation.

Remote battery disconnect

Use it as a remote Battery Disconnect Switch. This eliminates the need for heavy gauge wiring between the control panel and the battery.

CONTINUED **H1**

★ Rapid ship item. BP Available in retail clamshell pack. ★ Minimum order quantity may apply.

H solenoids & relays

H1 STEEL & PHENOLIC BODY SOLENOIDS

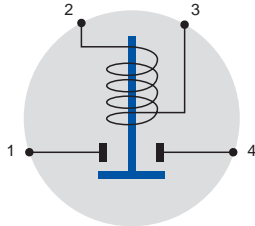
Intermittent Duty

Normally Off, SPST, One circuit: Off - On
 750A make, 100A break, 10sec On, 20min Off, except where noted. Contacts: Copper. Terminals: Copper. Small ignition and ground terminals are 10-32 thread. Large contact terminals are 5/16" -24 thread. Hexnuts and lockwashers are included. Bracket mounting holes 5/16 x 19/32," 2 13/64" on centers (7.9 x 15.1, 56.0mm) and plated steel housing, except where noted.

24V insulated

120A make, 65A break. 10 sec On, 30 min Off.

24008 ★



24044, angled bracket ★



24020 phenolic housing, curved bracket

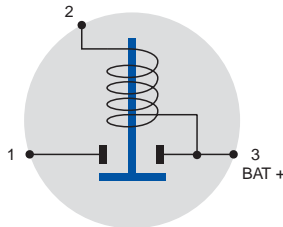


24022 phenolic housing ★



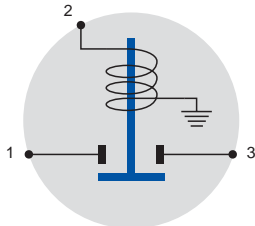
Bracket mounting holes 9/32" x 25/64," 2 7/64" on centers (7.1 x 9.9, 53.6mm).

24104



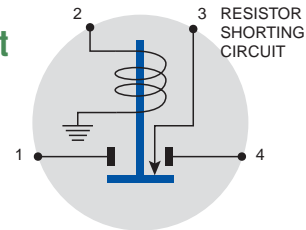
12V grounded

Also available in Plastic Body (section H3): 24712-GS7, 24612-G13.



12V grounded, Resistor Shorting Circuit

In this application, 3 is Normally Open. It becomes common with 1 and 4 when the solenoid is energized. Commonly used in engine starting applications.



24037 ★



PVC coated model: see 24071.

24103



24021 phenolic housing ★



Bracket mounting holes 9/32 x 1/2," 2 13/64" on centers (7.2 x 12.7, 56.0mm). Contact terminal 5/16" -24 thread.

M-202 marine

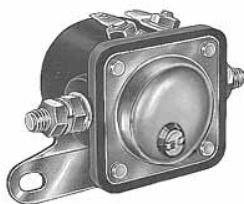


Marine construction. Clear protective finish, brass hexnuts and lockwashers.

★ Rapid ship item. BP Available in retail clamshell pack. ★ Minimum order quantity may apply.

H1 STEEL & PHENOLIC BODY SOLENOIDS

24138 phenolic, with breather

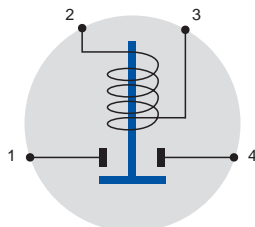


Bracket mounting holes 9/32 x 1/2," 2 13/64" on centers (7.2 x 12.7, 56.0mm). Contact terminal 5/16" -24 thread.

12V insulated

Also available in Plastic Body (section H3): 24512-03, 24512-13, 24612-13, 24712-S6, 24712-S7.

24047 ★



PVC coated model: 24076

M-200 marine **BP**

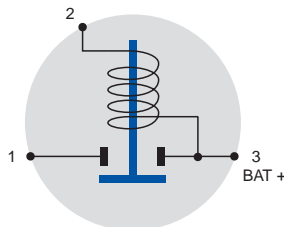
Same as 24047, but marine construction. Clear protective finish, brass hexnuts and lockwashers.

M-200-01 marine, UL listed

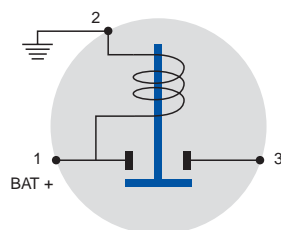


Same as M-200, but with UL & CE listing. Intermittent rating: 750A make, 100A break. 10 sec On, 30 min Off.

24060

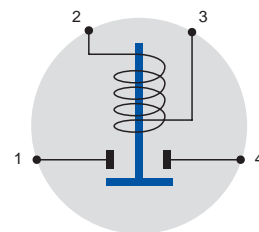


24046



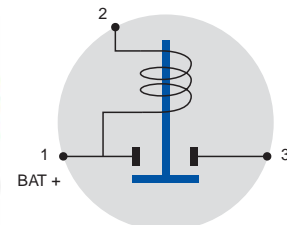
PVC coated model: 24077

24023 phenolic housing



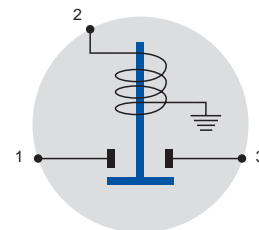
Bracket mounting holes 5/16" x 9/32," 2 9/16" on centers (8.1 x 7.2, 65.1mm).

2430 phenolic housing

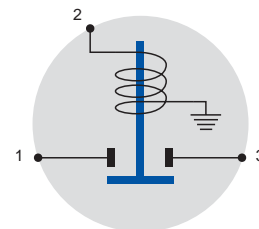


6V grounded

24041

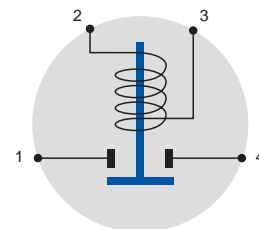


24039 curved bracket



6V insulated

24043



PVC COATED **H2**

★ Rapid ship item. **BP** Available in retail clamshell pack. ★ Minimum order quantity may apply.

H solenoids & relays

H5 RELAYS

Relay Sockets

Accepts Cole Hersee relays and standard ISO relays. Modular – sockets dovetail together. Accepts standard quick-connect terminals. Easy mount bracket. Constructed of rugged glass-filled polyamide. Temperature range -40F to 85C.

99025 High Power Socket



For use with Cole Hersee High Power Relays. Form A (SPST)
Use with Tyco (AMP) terminals 280756 or 280755 (consult terminal manufacturers for full specs).

99026 Heavy Duty Socket



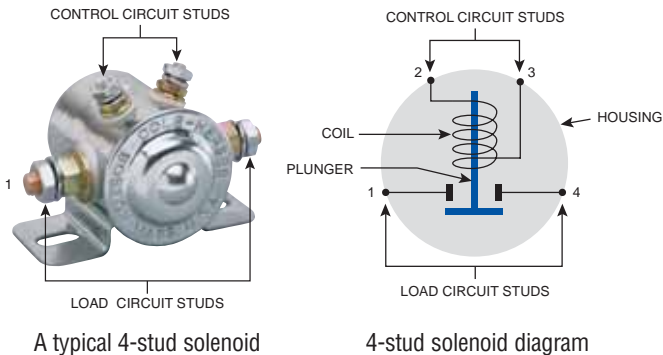
For use with Cole Hersee Heavy Duty Relays. Form A (SPST) or Form C (SPDT).
Use with Tyco (AMP) terminals 42281 or Ark-Les 3000H112A series (consult terminal manufacturers for full specs).

solenoids & relays

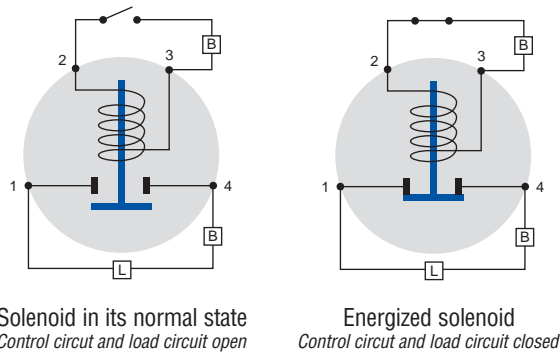
H6 INFORMATION ON SOLENOIDS

Solenoids are relays which are commonly used to remotely switch a heavier current. By using a solenoid, the amount of heavy wiring needed to power the load is reduced, since the control circuit mounted inside the cab typically utilizes a smaller wire gauge.

Solenoids are commonly used to control starter and winch motors, and they have many other uses on vehicles of all kinds.



The diagram shows a magnetic coil surrounding a contact plunger. Before energization, the plunger is not electrically connected to the control circuit. When the control circuit is energized, the electromagnetic force induced in the coil attracts the plunger, which moves to close the load circuit. When the control circuit is de-energized, the spring-loaded plunger returns to its normal state and the load circuit is broken. In continuous duty applications, energization of the coil causes heating, therefore the solenoid housing will become warm even in normal operation.



For more information on solenoids, visit the interactive training section of the Cole Hersee website:
www.colehersee.com > Resource Center > Training.

★ Rapid ship item. BP Available in retail clamshell pack. ★ Minimum order quantity may apply.