

G3 ELECTRONIC DIMMER SWITCHES**74600-02, 4 Amps, Delphi (Packard) Connector**

Three wires (load, battery, ground) with Delphi (Packard) connector 2984378 on 3" (76.2mm) leads. Duty cycle: 0 - 100%.

**74600-09, 4 Amps, Leads**

Same as 74600-02, except with two wires, no connector. Two wires (load, battery) 1 25/32" (45.3mm) long. Duty cycle: 1 - 99%.

74603 6, Amps, AMP Connectors

Two wires (load, battery) 2" (50.8mm) long, with two AMP connectors (load 480054-3, battery 480053-3). Duty cycle: 1 - 99%.

**74601-01, 7 Amps BP ★**

Two wires (load and battery) 1 25/32" (45.2mm) long. Duty cycle: 1 - 99%.

**H push-pull, rotary & headlamp****H1 ONE CIRCUIT PUSH-PULL SWITCHES**

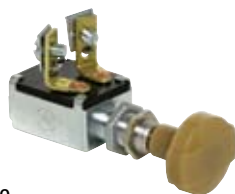
SPST, Off-On. Universal application. Mounting hardware included.

Normally Off, 10A

Heavy duty, 10A at 12V DC, 6-36V.

5007, Screw Terminals BP ★

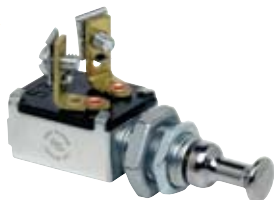
Aluminum mounting stem 3/8"-32 thread, 5/8" (15.9mm) long. Tan plastic knob with 10-32 threaded metal insert. Two screw terminals, plated steel case.

**50031*, Blade Terminals**

Same as 5007, except with two blade terminals and ivory plastic knob.

5011, Screw Terminals BP ★

Steel mounting stem 1/2"-20 thread, 5/8" (15.9mm) long. Chrome-plated knob. Two screw terminals, plated steel case.

**50070, Silver Contacts, Blade Terminals**

Same as 5011, except with two blade terminals.

5053, Glass Fuse, Chrome Knob

Steel mounting stem 1/2"-20 thread, 5/8" (15.9mm) long. Chrome-plated knob. Two screw terminals, plated steel case. 20A SFE fuse.

**5067, Glass Fuse, Plastic Knob**

Same as 5053, except with ivory plastic knob.

50077, Sealed Case

O-ring in stem, and gasket-sealed terminal insulator. Brass mounting stem 7/16"-28 thread, 5/16" (7.9mm) long. Black plastic knob with 10-32 threaded metal insert. Two screw terminals, zinc case.



M-606, PVC-Coated BP ★

SPST Off-On, normally Off. Brass housing, plasticized. Two insulated copper wire leads, 12" (304.8mm) long. Chrome-plated brass knob, 10-32 thread.



5050, Extra Heavy Duty with Circuit Breaker

20A total, 6-36V. With 30A circuit breaker (available with other values). Silver contacts. Plated steel mounting stem 1/2"-20 thread, 5/8" (15.9mm) long. Black plastic knob 10-32 thread with set screw, imprinted 'Lights'. Two screw and one stud terminals, plated steel case



Normally Off, 20A

Extra heavy duty, 20A at 12V DC, 6-36V.

50001, Black Knob

Silver-laminated contacts. Brass mounting stem 1/2"-20 thread, 5/8" (15.9mm) long. Black plastic knob with 10-32 threaded metal insert. Two screw terminals, plated steel case.



50002, Metal Knob

Same as 50001, except with chrome-plated brass integral knob.

50066, Sealed

Same as 50001, except with O-ring seal in stem, and gasket-sealed terminal insulator.

Common Circuits

Switches energize two independent circuits alternately from a common feed. SPDT, Off-On-On Off - On circuit 1 - On circuit 2. 6-36V.

5066, Screw Terminals

10A at 12V DC. Three screw terminals. Steel mounting stem 1/2"-20 thread, 5/8" (15.9mm) long, and integral chrome-plated knob. Plated steel case.



50082, Blade Terminals

8A at 12V DC. Three blade terminals. Steel mounting stem 1/2"-20 thread, 5/8" (15.9mm) long, and integral chrome-plated knob. Plated steel case.



Normally On

50046

Heavy Duty: 10A at 12V DC, 6-36V. Aluminum mounting stem 3/8"-32 thread, 5/8" (15.9mm) long. Black plastic knob with 10-32 threaded metal insert. Two screw terminals, plated steel case.



H2 TWO CIRCUIT PUSH-PULL SWITCHES

Independent Circuits

Switches energize two independent circuits simultaneously.

5027, SPST Extra Heavy Duty, Off-On, Normally Off

18A at 12V DC, 6-36V. Three screw terminals and ivory plastic knob, imprinted 'Lights', with 10-32 thread and set screw.



H3 SPECIALIZED SWITCHES

7014, Heater Switch, Four Positions

Off-Low-Med-Hi. 12V DC. Coil resistance 3 Ohms. Two screw terminals. Ivory plastic knob, imprinted "Heater" in gold lettering, with 10-32 threaded metal insert. Plated steel case 3 5/64"L x 1 5/64"W x 3/4"H (78.2 x 27.4 x 19.1mm). 7/16" -28 thread mounting stem, .26" (6.7mm) long.



7019, Heater-Defroster Switch

Three positions: Off - Low - High. 10A at 12V DC. Two screw terminals. Without knob, shaft is 10-32. Three female bullet terminals. Case 1.625" x .85" x .635" (41.3 x 21.6 x 15.9mm). 7/16" -28 thread mounting stem, .34" (8.6mm) long. Replaces: Ford FAA-18578-A.



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

50071, Heater Switch

Two-circuit, SP Off - On (low speed) - On (high speed). Energizes two circuits alternately from a common feed. Heavy-duty: 10A at 12V DC, 6-36V DC. Plated steel housing and mounting stem, 1/2" -20 thread, 1/4" (6.4mm) long. Integral chrome-plated brass knob. Three female bullet terminals. Mounting hardware included.



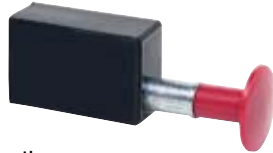
68028, Heater Switch, Three Positions

Off-Hi-Lo. 12V DC. Coil resistance 3 Ohms. Two screw terminals. Ivory plastic knob, imprinted "Heater" in gold lettering, with 10-32 threaded metal insert. Plated steel case 1 13/16"W x 1 19/32" x 1/2"H (46.0 x 40.5 x 12.7mm). 7/16" -28 thread mounting stem, 5/16" (15.8mm) long.



50036, Two-Speed Axle Switch

Two-circuit, On-On. 12V DC. For mounting on gear shift lever with a clamp (not supplied). Red plastic knob, 1 1/4" (31.8mm) diameter. Three female bullet terminals. Zinc case with protective rubber boot. For use with 9283 and 40102.



Replaces: Diamond T/Reo 9935-H, 319305, Dodge 1390517, Eaton 32861, Ford 8QH-4078, SW-1535, GMC 2274282, International 79348-R91, Mack IMR-201, White 716913.

9283, Terminal Block Limit Switch

Controls Eaton two-speed axle shift. Use with 50036. Mounts in axle shift motor housing. Heavy plastic insulator base, two 8-32 studs, 3/4" (19.1mm) long and two 8-32 studs 7/32" (5.6mm) long.



Replaces: Chevrolet 2279014, 3854312, Diamond T/Reo 9913-H, 356005, Dodge 1390517, 1508375, 1508404, Eaton 32382, 32414, 62252, Ford B2Q-4107-A, SW-1356, GMC 2279002, International 79050-R91, White 716920.

40102, Connector & Cable Assembly

Wire harness connects 9283 and 50036.

Replaces:
Eaton 38810, Ford FAB-14668-B.



40103, Drive Screw Assembly

Screw assembly operates 9283 (Terminal block limit switch).

Replaces: Chevrolet & GMC 2279003, Diamond T/Reo 9920-H, 3563-D5, Eaton 32364, Ford 8QH-4086-A, International 79037-R11, White 716925.



50203, Magneto Switch, Out-Run

In-Off (magneto terminal grounded) out-Run (magneto terminal open). 10A at 12V DC, 6-36V DC. Integral nickel-plated knob. One screw terminal. Plated steel housing. Aluminum mounting stem 3/8" -32 thread, 5/8" long (15.9mm).



H4 PUSH-PULL HEADLAMP SWITCHES

3-Position

Three knob pull positions: In - Mid - Out.
In = Headlamps Off; Mid = Parking Lights and Tail Lights On;
Out = Headlights and Tail Lights On



7124, With Black Knob 'Lights'

Four screw terminals, plated steel case, mounting stem with 7/16" -28 thread. 15A per circuit at 12V DC.



72100, With Black Knob 'Lights'

O-ring seal in mounting stem, gasket seal at terminal insulator. Four screw terminals, diecast case, silver contacts, mounting stem with 7/16" -28 thread. 20A per circuit at 12V DC.



7152, With Ivory Knob 'Lights'

Four screw terminals, plated steel case, silver contacts, mounting stem with 3/8"-24 thread. 15A per circuit at 12V DC.



7157, With Breaker

With 30A at 12V circuit breaker, ivory knob imprinted 'Lights'. Three screw terminals, plated steel case, silver contacts, mounting stem with 7/16"-28 thread.



72101, With Breaker

With 30A at 12V circuit breaker, black knob imprinted 'Lights'. O-ring seal in mounting stem and gasket seal at terminal insulator. Three screw terminals, diecast case, silver contacts, mounting stem with 7/16"-28 thread.



7127, With Fuse

With 20A at 12V glass fuse, black knob imprinted 'Lights'. Four screw terminals, plated steel case, mounting stem with 7/16"-28 thread.



With Dimmer

These switches have Headlamp/Parking Lights/Tail Lights functions as noted above, plus rotary dimmer functions for panel/dome lamps.

71092-02, 4.5 Ohm, With Internal 15A Breaker ★

In = All lights Off, except dome light on rotary dimmer. Mid = Parking lights & rear lights On; panel lights & dome light on rotary dimmer. Out = Headlights & rear lights On; panel lights & dome light on rotary dimmer. 4.5 Ohm Dimmer, 15A at 12V internal Circuit Breaker. With black knob imprinted with SAE headlamp symbol. Eight blade terminals accept Delphi (Packard) connector 2977645 or 2984169. Plated steel case. Mounting stem 7/16"-28 thread. Terminal connections: 1 to battery +; 2 to panel lights; 3 to rear lights; 4 to rear lights; 5 to battery +; 6 to headlights; 7 to parking lights; A to dome light. Connect frame ground terminal to ground.



71092

Same as 71092-02, but without knob and shaft.

7178, 3.75 Ohm, With 30A Breaker

Rotation of knob dims panel lights in Mid and Out knob positions. 3.75 Ohm Dimmer, 30A at 12V Circuit Breaker. With black knob imprinted 'Lights'. Four screw terminals. Plated steel case. Mounting stem 3/8"-24 thread.



71016, 11 Ohm, With 20A Breaker

Rotation of knob dims panel lights in Mid and Out knob positions. 11 Ohm Dimmer, 20A at 12V Circuit Breaker. With tan knob imprinted 'Lights'. Four screw terminals. Plated steel case. Mounting stem 3/8"-24 thread.



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

71042, 7 Ohm

Rotation of knob dims panel lights in Mid and Out knob positions. 7.0 Ohm Dimmer. With ivory knob imprinted 'Lights'. Three single and three double blade terminals. Plated steel case. Mounting stem 3/8"-24 thread.



4-Position Headlamp and Worklight Switches

Four knob pull positions: In – Mid1 – Mid2 – Out.

7112, Headlamp Switch

Five screw terminals. Plated steel case. Mounting stem 3/8"-24 thread. With tan knob imprinted 'Lights'. 10A at 12V DC.



71033-02*, Work Light Switch

Three blade terminals. Plated steel case. Mounting stem 7/16"-28 thread. With O-ring seal at the mounting stem. With black knob imprinted with SAE work light symbol.



H5 ROTARY HEADLAMP SWITCHES

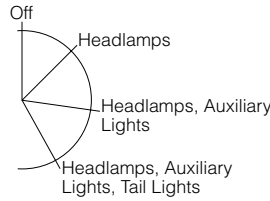
72079-01, With Knob

With black knob imprinted with SAE headlamp symbol. Silver contacts. Five screw terminals. Plated steel case. Mounting stem 5/8"-32 thread. With O-ring seal in the mounting stem. 20A per circuit at 12V DC.



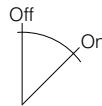
72023-01, With Short Lever

With short diecast lever. Four screw terminals. Plated steel case. Mounting stem 5/8"-32 thread. With O-ring seal in the mounting stem. 20A per circuit at 12V DC.



24052*, Illuminated with 'Fog Light' Imprint

Illuminated tan knob with 'Fog Light' imprint. Three screw terminals. Plated steel case. Mounting stem 5/8"-32 thread. 20A fuse and No. 53 bulb supplied.



H6 UNIVERSAL ROTARY SWITCHES

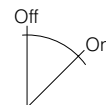
In a full range of styles and circuitries for lighting, ignition and similar applications.

2-Position

Lever actuator. Two screw terminals. Plated steel case.

9500, 10A with Compact Case

10A at 12V DC. Mounting stem 1/2"-20 thread.



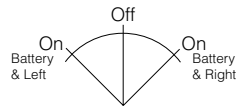
★ Rapid ship item. BP Available in retail clamshell pack. ★ Minimum order quantity may apply.

3-Position

On1 – Off – On2. Three screw terminals. Plated steel case.

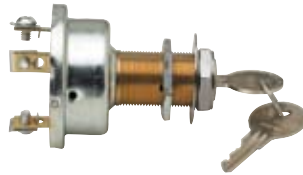
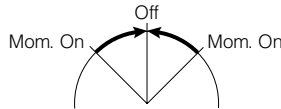
24054, 10A

10A at 12V DC. Lever actuator.
Mounting stem 1/2" -20 thread.



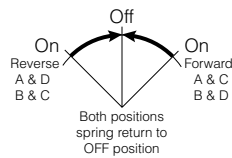
75705-01, 10A Momentary

10A at 12V DC. Mom On1 – Off – Mom On2, spring return to Off from both positions. Key actuator with coded tumbler lock. Mounting stem 13/16" -24 thread. Internal O-ring seal.



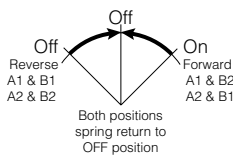
90005-03, Reversing Switch ★

For forward-reverse operation of a motor, to give a motion such as Up/Down, Left/Right, In/Out, Rotate/Counter-rotate. Suitable for control of tailgates, winches, windlasses, snowplows and other applications. DPDT. Spring return to Off from both On positions. Four screw terminals. Plated steel case. 15A at 12V DC. Key actuator with coded tumbler lock. O-ring seal in stem. Mounting stem 13/16" -24 thread.



7512-04 Reversing Switch

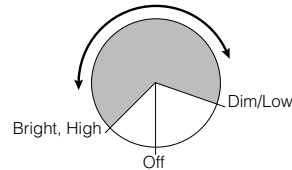
Four screw terminals. Silver-laminated contacts.



H7 ROTARY TEMPERATURE & RHEOSTAT SWITCHES

Rheostat Switches

For 12V DC systems. Ceramic insulator with embedded coil for effective heat dissipation. 7/16" -28 thread mounting stem, .1532" (11.9mm) long. Plated steel case, 1.32" (33.5mm) diameter, .88" (22.4mm) long. Black plastic knob with metal insert and set screw.



2 Screw Terminals

7493, 8 Ohm

With black knob

7493-07, 8 Ohm, Imprinted

With black knob imprinted "Panel Lamps"

2 Blade Terminals

7496, 8 Ohm

With black knob

7496-04, 8 Ohm, Imprinted

With black knob imprinted "Panel Lamps"

Heater-Defroster Switches

Four positions: Off-High-Medium-Low. 12V DC 3 Ohms or 24V DC 6 Ohms. Two screw terminals. Coil embedded in ceramic insulator for effective heat dissipation. Connections are welded to the resistance coil. Plastic round/bar knob with metal insert and set screw. Mount through a 5/8" hole (15.9mm) or with an optional bracket.

68362, 12V

68363, 24V



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

H8 FOOT-OPERATED SWITCHES

Headlamp Dimmer Switches

SPDT On - On. Depress-release for low beam, depress-release for high beam. Corrosion-resistant diecast metal housings, moisture-repellent insulators.

Also available: 7794 Column-mounted Dimmer Switch. SPDT On-On. Three blade terminals. Replaces: Delco 1997045, 7838234, D-812.*

Through-Floorboard Mounting

7700, With Three Wire Terminals

PVC-coated case and leads gives added protection. Three 16AWG leads 5.75" (146.1mm) long. 27/32" (21.4mm) diameter stem. Three 1/4" -20 tapped mounting holes, 1 3/4" and 1 3/4" on centers (19.1 and 44.5mm).



7786, With Three Screw Terminals ★

1 1/16" (27.0mm) diameter stem. Three 1/4" -20 tapped mounting holes, 3/4" and 1 3/4" (19.0 and 44.4mm) on centers.

Replaces:
Delco 1997014, D-805.



7787, With Three Screw Terminals

7/8" (22.2mm) diameter stem. Two 1/4" -20 tapped mounting holes, 1 3/4" (44.4mm) on centers.

Replaces: AMC 803870, 811681, Chrysler 1689512, Delco A-800, Ford A8AZ-13A024A, 7RA, 8A-13532, Motorcraft SW-256, 260.



7769, With Three Screw Terminals ★

27/32" (21.4mm) diameter stem. Three 1/4" -20 tapped mounting holes, 3/4" and 1 3/4" (19.0 and 44.4mm) on centers.

Replaces: Delco 465A-Z, 471P-Z, 1997002, 1997008, 1997009, 199870014, D-805, U-802, Ford 81A, 11A13532, Mack 1MR-234.



On-Floorboard Mounting

7702 ★

Two 7/32" (5.6mm) diameter mounting holes, 1 5/8" (41.3mm) on centers. Three blade terminals.

Replaces: Delco U803, Ford COTF, COTZ-13A024A, Motorcraft SW-263.



7776

Two 7/32" (5.6mm) diameter mounting holes, 1 5/8" (41.3mm) on centers. Three blade terminals.

Replaces: AMC 3156124, 3160926, Chrysler 1841895, 1881938, 2097628, 2291202, 3488882, CH-247, Delco U-801, Ford B9A-13532-A.



7762 ★

Two 9/32" (7.1mm) diameter mounting holes, 1 3/4" (44.4mm) on centers. Three blade terminals.

Replaces: AMC 5457282, Delco 1997028, 1997031, 1997035, 1997037, 1997040, 1997043, D-803, D-804, D-808, D-809, D-810, GMC 5834446, 578005, 1539288.





rotary dimmers

See page 56.

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

30156, Connector

Fits Cole Hersee switches 7702 and 7776.

Ford trucks 60-87,
Dodge trucks 59-86.



30155, Connector

Fits Cole Hersee switch 7762.

Trucks: Autocar 68-80,
Chevrolet 61-86, GMC 69-86,
International 61-80, Freightliner 63-67,
72-80, Kenworth 65-67, 72-74, 77-80.



Turn Switches

Through-floorboard mounting. Depress to On, spring return to Off. Two switches are needed for left and right turn signals.

7785, Sealed, With Wire Leads

7/8" (22.2mm) diameter stem. Three 1/4" -20 tapped mounting holes, 3/4" and 1 3/4" (19.0 and 44.4mm) on centers. Plastic-coated, providing protection against moisture, dust and roadsplash.



7792, Sealed, With Screw Terminals

7/8" diameter stem. Three 1/4" -20 tapped mounting holes, 3/4" and 1 3/4" (19.0 and 44.4mm) on centers. Plastic-coated, providing protection against moisture, dust and roadsplash.



Starter Switches

Off-On, normally Off. Depress to On, spring return to Off.

9060, Through-Floorboard Mounting ★

Two stud terminals, 5/16" -24 thread with hexnuts and lockwashers.

Plunger is 1.83" (46.5mm) long. Two 9/32" (7.2mm) diameter mounting holes, 1 3/4" (44.5mm) on centers.

Replaces: Autolite SW-40001 (15-47), 15-50, 401A, 4002, 4005, 4010, 4015 (15-51), Delco D900 (405C).

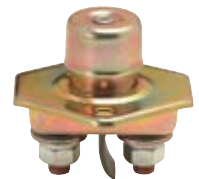


9183, Through-Floorboard Mounting, Short Stem ★

Two stud terminals, 5/16" -24 thread with hexnuts and lockwashers.

Plunger is 1" (25.4mm) long. Two 9/32" (7.2mm) diameter mounting holes, 1 3/4" (44.5mm) on centers.

Replaces: Autolite SW-4012 (15-49), Delco 1996478.



brackets & busbars

Find these accessories for circuit breakers on pages 67 & 68.

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

I specialized modules

24452 Forward & Reverse Module

NEW

Ideal for vehicle lift or tarp operations, but has many other applications such as hoists, cherrypickers, tailgates, winches, snowplows, intake/exhaust fans, vehicle outriggers... anywhere an up/down, in/out, clockwise/counterclockwise control is needed. Dynamic braking stops the motor when the switch returns to Off. Automatically reverses the direction of the motor when the appropriate control circuit is energized.

Carries a heavy load current: 70A at 12V DC intermittent, max On time 5 mins, Off time 3 mins; 50A at 12V DC continuous. Fully sealed to IP-67 – can withstand harsh environments. Low-profile module: 2.91" x 3.51" x 1.86"H (73.9 x 91.7 x 47.2mm). Protective cover 97297 is also available.



48600 Daytime Running Light Module

Automatically turns on low-beam headlights when the ignition is turned on (after a 10 second delay, thus reducing the initial starting load. Activated when the parking brake is released; deactivated when the parking brake is set (with ignition On). Deactivates when high beams are flashed for signaling. Completely solid-state construction. Supplied with 15A mini-fuse ATM98107-15.

Extends the life of the headlights, because (for daytime running) they are powered at 75% of the high-beam intensity. For two or four headlamp systems.

Complies with FMVSS 108 for headlamp intensity. CMVSS-108 and CAN/CSA D-603-88, type 2. Six 28" (711mm) long wire leads, six 30223 Quick Tap wire splicers (see pages 70 & 71), and two self-tapping mounting screws.

Also available without splicers and screws: order part number 48600-01.



Series 48800 Timer/Dimmer Modules

NEW

Three general purpose modules have many applications for controlling motors or lighting. Modules consist of a microprocessor-based timer, driving a solid-state solenoid type output. Users can select from a range of settings by selectively cutting the jumper wires. The actuator of the module can be a manual or automatic switch. See wiring diagram on page 99.



48810-01, Delay Timer **BP**

Suitable for control of exhaust fans or lighting. User-selectable options: 2,4,6 or 8 minutes delay.

48811-01, Stepping Dimmer **BP**

Suitable for control of cab or cabin lights. Repeated actuation of the control switch cycles the lights through the selected lighting intensities. Holding of the momentary switch for 3 seconds turns lights off, without dimming stages. Four user-selectable dimmer stepping options.

48812-01, Intermittent Timer **BP**

Suitable for many applications where timed On-Off cycles are needed. Four user-selectable On-Off cycles.

48000 Trailer Tail Light Converter

Permits a towing vehicle with two lighting circuits for each side to operate lights on a trailer with a single circuit each side. Eliminates the need to rewire the trailer, or to add additional lights. US laws require stoplights, turn signals and taillights on trailers.

For use with 12V DC negative ground systems only. Using the Converter, towing vehicles with four lighting circuits (left stop, left turn, right stop, right turn) can properly operate trailers with two lighting circuits (left stop and turn, right stop and turn). Solid state circuitry provides high reliability and is embedded, giving complete protection against moisture and vibration. Color-coded 18AWG wire leads are 24" (607.6mm) long for towing vehicle connections, 36" (914.4mm) long for attachment to trailer connector.



J1 CIRCUIT BREAKERS

Circuit breakers and fuses are a cost-effective solution to protecting wiring, equipment and subsystems. While fuses are a one-time, disposable solution, circuit breakers can be re-used after overload. Part number suffixes indicate the amperage. eg: 30409-15 is a 15 ampere Type I ATC/ATO breaker.

Plug-In Style, 12V

ATC/ATO Breakers

Conform to SAE J553. Replacement for ATC or ATO fuses. Color-coded housings with rating marked on the top: 10A red, 15A blue, 20A yellow, 25A silver, 30A green

30409, Type I

Terminals are grooved so that they can be easily snapped off with pliers to fit the electrical blocks of different vehicles. Available in: 10, 15, 20, 25, 30A and 10, 15, 20, 25, 30A **BP**.

All items are ★.

Order Nos. 30409-30 or 30409-30BP etc.

Use as is (long terminals) for Kenworth trucks. Use with one segment snapped off each terminal for: Dodge trucks, Ford heavy trucks, Navistar trucks. Use with two segments snapped off (short terminals) for Ford pickup trucks.



Long terminals, as supplied

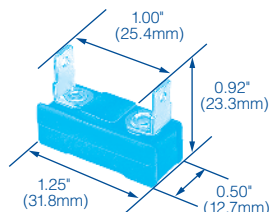
One segment snapped off

Two segments snapped off

Special Applications

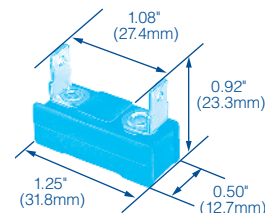
30403, Mack Truck

Type II, fits Mack Truck breaker blocks. Available in: 15, 20, 25, 30A. Order Nos. 30403-30 etc.



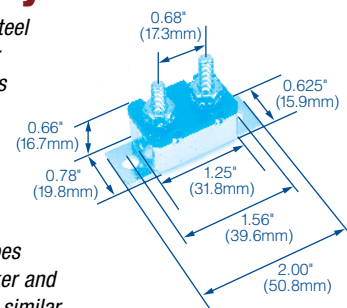
30408, Navistar Truck

Type II, fits Navistar breaker blocks. Available in: 10, 15, 20, 25, 30, 35A and 20, 30A. Order Nos. 30408-30 or 30408-30BP etc.



Stud or Blade Style

Conform to SAE J553. Plated steel or rugged plastic cases with or without bracket. Metal breakers without brackets snap securely into steel brackets (Series 30090) or attach with the stud to nylon brackets (Series 87128), see page 66. Studs are 10-32, two blade types are .250" (6.4mm) wide. Breaker and bracket dimensions shown are similar on all breakers in this section.



24V with Studs, Steel Case

30171, Type I

Available in: 10, 15, 20, 30A. Order Nos. 30171-30 etc.



30172, Type I, with Bracket

Available in: 10,* 15, 20, 30A. Order Nos. 30172-30 etc.

12V with Studs, Steel Case

30055, Type I, with bracket

Available in: 6, 8, 10, 15, 20, 25, 30, 40, 50A and 10, 15, 20, 30, 40, 50A **BP**. Items 10, 15, 20, 25, 30, 40, 50A are ★. Order Nos. 30055-50 or 30055-50BP etc.



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

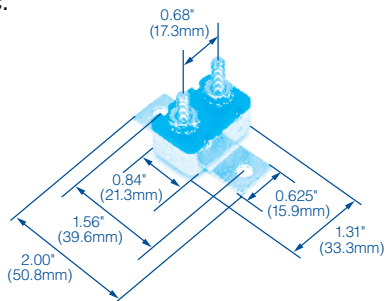
30056, Type I

Available in: 6, 8, 10, 15, 20, 25, 30, 40, 50A and 15, 20, 30, 40A **BP**.
 Items 10, 15, 20, 25, 30A are ★.
 Order Nos. 30056-40 or 30056-40BP etc.



30128, Type I, With Cross-Bracket

Available in: 6*, 8*, 10, 15, 20, 25, 30, 40A.
 Order Nos. 30128-40 etc.



24V with Studs, Plastic Case

30407, Type III, With Cross-Bracket

Available in: 15, 20, 25*, 30, 40, 50A.
 Order Nos. 30407-50 etc.



12V with Blades

Steel case

30401, Type I

Available in: 4*, 6, 8*, 10, 15, 20A.
 Order Nos. 30401-20 etc.



30402, With Bracket

Available in: 4, 6, 15, 20A.
 Order Nos. 30402-20 etc.



30404, Blade & Stud

Available in: 20 and 30A.
 Order Nos. 30404-30 etc.



PVC Coated, Type I

With PVC coated leads and body for added weather

protection. Steel case. 10" (254.0mm) wire loop is readily cut to form two leads for splicing into the circuit. Wire is color-coded: 10A green 16AWG, 15A yellow 16AWG, 20A black 14AWG, 25A white 14AWG, 30A red 12AWG, 40A brown 12AWG. 12V DC.

30063

Available in: 10, 15*, 20, 25*, 30, 40A*.
 Order Nos. 30063-40 etc.



30062, With Bracket.

2.0" (50.8mm) bracket has two mounting holes 1.56" (39.6mm) on centers. Available in: 15*, 20, 30A. Order Nos. 30062-30 etc.



Double Breaker Assemblies

12V, Type I. For high amp applications.

3088

2.0" (50.8mm) bracket has two mounting holes 1.56" (39.6mm) on centers.

Available in: 50, 60, 80A.
 Order Nos. 3088-50, 30088-60, 3088-80.



30507, Sealed

Same as 3088, but stud insulator is sealed.
 Available in: 60 and 80A. Order Nos. 30507-60 or 30507-80.

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

Glass Fuse Style, 12V DC

30410, Type II

Breaker replaces 3AG (AGC) and SFE glass fuses: snaps into standard clips on Cole Hersee fuse blocks. See pages 67 & 68. Available in 10, 15, 20, 25, 30, 40A. Order Nos. 30410-40 etc. 10A replaces Ford DOHB-14526-A, 15A DOVB-14526-A, 20A DOVB-14526-B, 25A DOHB-14526-B, 30A DOVB-14526-C.



J2 BREAKER ACCESSORIES

Breaker Mounting Brackets – Steel

For all steel case breakers without a bracket. Breakers snap into position, engaging with dimples in the case of the breaker. Heavy gauge steel. Brackets up to 12-gang are available. Contact Cole Hersee.

30090-2, 2-Gang ★

.81" x 1.29" (122.2 x 32.8mm). Mounting hole 4.00" (101.6mm) on centers.



30090-3, 3-Gang

5.71" x 1.29" (145.0 x 32.8mm). Mounting hole 4.90" (124.5mm) on centers.

30090-4, 4-Gang

6.62" x 1.29" (160.1 x 32.8mm). Mounting hole 5.81" (147.6mm) on centers.

30090-6, 6-Gang

8.43" x 1.29" (214.1 x 32.8mm). Mounting hole 7.62" (193.5mm) on centers.

30090-7*, 7-Gang

9.34" x 1.29" (237.2 x 32.8mm). Mounting hole 8.53" (216.7mm) on centers.

30090-8, 8-Gang

10.25" x 1.29" (260.4 x 32.8mm). Mounting hole 9.43" (239.5mm) on centers.

Breaker Mounting Brackets – Nylon

For use with Cole Hersee 30056 series and 30137 series breakers. Durable, lightweight molded nylon. Breakers mount securely using stud and hexnut. Mounting holes .280" x .440" (7.1 x 11.2mm). Slots are .910" (23.1mm) on centers, and .210" (5.3mm) wide.

87128-4, 4-Gang

5.69" long (114.5mm), mounting holes 4.89" (124.2mm) on centers.

87128-5*, 5-Gang

6.60" long (167.6mm), mounting holes 5.80" (147.3mm) on centers.

87128-6, 6-Gang

7.51" long (190.8mm), mounting holes 6.71" (170.4mm) on centers.

87128-7*, 7-Gang

8.42" long (213.9mm), mounting holes 7.62" (193.5mm) on centers.



87128-8, 8-Gang

9.33" long (237.0mm), mounting holes 8.53" (216.7mm) on centers.

87128-9*, 9-Gang

10.24" long (260.1mm), mounting holes 9.44" (239.8mm) on centers.

87128-10, 10-Gang

11.15" long (283.2mm), mounting holes 10.35" (262.9mm) on centers.

87128-12*, 12-Gang

12.97" long (329.4mm), mounting holes 11.26" (288.0mm) on centers.

87128-13*, 13-Gang

13.88" long (352.6mm), mounting holes 13.08" (332.2mm) on centers.

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

Copper Busbars

For connecting circuit breakers to provide higher amperage ratings. Recommended for use with nylon mounting brackets 87128. Slots are .910" on centers. Slot width: .210" (5.3mm). Width of bar: .560" (14.2mm).

86126-2, 2-Gang
1.41" L (35.81mm).

86126-3*, 3-Gang
2.32" L (58.4mm).

86126-4, 4-Gang
3.23" L (82.1mm).

86126-5*, 5-Gang
4.14" L (105.2mm).

86126-6, 6-Gang
5.05" L (128.3mm).

86126-8, 8-Gang
6.87" L (174.5mm).

86126-9, 9-Gang
7.78" L (197.6mm).

86126-10*, 10-Gang
8.69" L (220.7mm).

86126-12, 12-Gang
10.51" L (267.0mm).



46377-8, 8-Gang ★
Length: 3.09" (78.5mm). Mounting holes 1.25" (31.8mm) on centers.

46377-10, 10-Gang BP
Length: 3.72" (94.5mm). Mounting holes 1.875" (47.6mm) on centers.

46377-12, 12-Gang
Length: 4.34" (110.0mm). Mounting holes 2.5" (63.5mm) on centers.

46377-14, 14-Gang
Length: 4.97" (126.2mm). Mounting holes 3.125" (79.4mm) on centers.

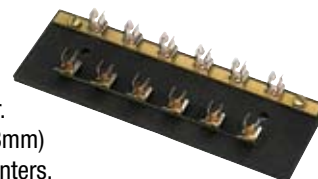
46377-18, 18-Gang
Length: 6.22" (158.0mm). Mounting holes 4.375" (111.1mm) on centers.

Blocks for Glass Fuses and 30410 Breakers

For SFE 20A or 3AG (AGC) fuses, and 30410 circuit breakers (see page 66).

4766, Common Hot Feed with Blade Terminals

6-gang. Blade terminals on one side of the fuse clip. 5 3/4"L x 1 7/8"W x 23/32"H (146.6 x 47.6 x 18.3mm). Brass terminal screws with lockwashers. Solid brass busbar. Two mounting holes 11/16" (4.3mm) diameter, 3.75" (95.3mm) on centers.



4652*, Extra Heavy Duty Fuse Block for SAG (AGU) Fuses

For SAG (AGU) fuses 13/32" diameter x 1 1/2" long (10.3 x 38.1mm), rated up to 60A. Screw terminals, phosphor-bronze fuse clips. Molded plastic base with two 3/16" (4.8mm) mounting holes, .812" (20.6mm) on centers.



M-674, Combination Fuse Block & Terminal Block

For SFE 20A or 3AG (AGC) fuses. Common hot feed to four independently-fused circuits, and common ground strip for four circuits. Solid brass busbars, terminals and terminal screws. Nickel-plated phosphor-bronze fuse clips. Two eyelet holes for mounting with 3/16" (4.8mm) screws, 2.25" (57.2mm) on centers. 3 1/2"L x 2 3/4"W x 25/32"H (88.2 x 69.8 x 19.8mm).



J3 BLOCKS & BUSBARS

For Plug-In Breakers & Fuses

For ATC and ATO fuses and circuit breakers. Fuse/breaker contacts are recessed for safety. Recessed area in the center of the block accepts a label. Electrical ratings: 25A maximum per circuit at 12V to 24V DC. 150A maximum total for the block at 12V DC. For 24V DC applications use only ATC or ATO fuses. Common Hot Feed.

Black thermoplastic block. Blade terminals are .25" wide (6.4mm). Stud terminal is 10-32 with hexnut, flat washer and lockwasher. Four .218" (5.5mm) diameter mounting holes take #10 screws. Size: 3.375" wide x .812" high (85.7 x 20.6mm). Mounting holes 1.06" (27.0mm) on centers, widthwise.

For more information, request sheet D-601.

46377-6, 6-Gang BP ★
Length: 2.47" (62.7mm). Mounting holes .625" (15.9mm) on centers.



Individual Hot Feed Fuse Block



Nickel-plated phosphor-bronze plated fuse clips. Hard fiber insulator base with 11/64" (4.4mm) diameter mounting holes. Width: 2 1/4" (57.2mm), height 5/8" (15.9mm). Plated steel terminals and screws or (with M- prefix numbers) with brass terminals and screws. Mounting holes .75" (19.0mm) on centers.

4622*, Steel 2-Gang

Length: 1 1/4" (31.8mm).

4623*, Steel 3-Gang

Length: 2" (50.8mm).

4624, Steel 4-Gang

Length: 2 3/4" (69.9mm).

4625, Steel 5-Gang

Length: 3 1/2" (88.9mm).

4626, Steel 6-Gang

Length: 4 1/4" (108.0mm).

M-412, Brass 2-Gang BP

Length: 1 1/4" (31.8mm).

M-413, Brass 3-Gang

Length: 2" (50.8mm).

M-414, Brass 4-Gang

Length: 2 3/4" (69.9mm).

M-415, Brass 5-Gang

Length: 3 1/2" (88.9mm).



fuse-style breakers

See page 67.

Common Hot Feed Block

Fiber base, 2.24" (56.9mm) wide, with 11/64" (4.4mm) diameter mounting holes. Solid brass busbar, phosphor-bronze fuse clips. Height: 5/8" (15.9mm). Brass terminals and screws.



M-414-01, Brass 4-Gang BP

Length: 2 3/4" (98.5mm).

M-415-01, Brass 5-Gang

Length: 3 1/2" (88.9mm).

Also available with steel terminals and screws: 4625-01.

M-641-01, Brass 6-Gang BP ★

Length: 4 1/4" (108.0mm).

Also available with steel terminals and screws: 4626-01.

M-643-01, Brass 8-Gang BP

Length: 5 3/4" (146.1mm).

M-645-01, Brass 10-Gang

Length: 7 1/4" (184.2mm).

M-647-01, Brass 12-Gang

Length: 8 3/4" (222.3mm).

J4 TERMINAL BLOCKS

Terminal Blocks, Individual Feed

Moisture-repellent molded Bakelite insulator base with barrier strips. Nickel-plated brass terminal links and 8-32 binding head screws. Width: 1.31" (33.3mm), height: .67" (17.0mm).

M-426, 4-Gang BP ★

Length: 3.22" (81.8mm).

Paired mounting holes
2.81" (71.4mm) on centers.



M-427, 6-Gang BP ★

Length: 4.33" (110.1mm). Paired mounting holes 3.93" (99.9mm) on centers.

M-428, 8-Gang BP ★

Length: 5.46" (138.7mm). Paired mounting holes 5.06" (128.5mm) on centers.



M-429, 10-Gang BP ★

Length: 6.59" (167.4mm). Paired mounting holes 6.19" (157.2mm) on centers.

M-456, 14-Gang

Length: 8.84" (224.5mm). Paired mounting holes 8.44" (214.4mm) on centers.

With Stud Terminals

SQUARE END PATTERN

10-32 thread stud terminals with hexnuts, flat washers and lockwashers. Two eyelet mounting holes for 3/16" (4.8mm) screws (screws not included). Moisture-repellent phenolic insulator base. 5/8" (15.9mm) wide x 27/32" (21.4mm) high.

4721-P2, 2-Gang

Length: 2.62" (66.5mm). Eyelets are 1.87" (47.5mm) on centers.



4721-P3, 3-Gang

Length: 3.25" (82.6mm). Eyelets are 2.50" (63.5mm) on centers.

4721-P4, 4-Gang

Length: 3.87" (98.3mm). Eyelets are 3.12" (79.2mm) on centers.

4721-P5, 5-Gang

Length: 4.5" (114.3mm). Eyelets are 3.75" (95.3mm) on centers.

4721-P6, 6-Gang ★

Length: 5.12" (130.0mm). Eyelets are 4.38" (111.3mm) on centers.

4721-P8, 8-Gang ★

Length: 6.37" (161.8mm). Eyelets are 5.62" (142.7mm) on centers.



4721-P10, 10-Gang

Length: 7.62" (193.5mm). Eyelets are 6.87" (174.5mm) on centers.

4721-P12, 12-Gang

Length: 8.87" (225.3mm). Eyelets are 8.12" (206.2mm) on centers.

4721-P14, 14-Gang

Length: 10.12" (257.0mm). Eyelets are 9.37" (238.0mm) on centers.

ROUND END PATTERN

10-24 thread stud terminals, hardware not included. Two mounting holes for 1/4" (6.3mm) screws (screws not included). Moisture-repellent molded insulator base with barrier strips. 5/8" (15.9mm) wide x 27/32" (21.4mm) high.

4758, 4-Gang

Length: 4.5" (114.4mm). Two mounting holes 3.75" (95.3mm) on centers.



4755, 5-Gang

Length: 5.25" (133.3mm). Two mounting holes 4.50" (114.3mm) on centers.

TRUCK-TRAILER LIGHTING PATTERN

4744

Six-gang, with circuit identification printed in white lettering. Two mounting holes 5.25" (133.4mm) on centers. 10-24 thread stud terminals, with hexnuts. 4 7/8"L x 1 3/16"W x 3/4"H (149.2 x 38.1 x 19.1mm).



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

Terminal Blocks, Common Busbar

M-449, 10-Gang **BP** ★

Solid brass busbar safely carries up to 150A. Two 1/4-20 brass studs with hexnuts. 8-32 round head screws for attachment of wires. Two mounting holes accept No.10 countersink flathead screws. Moisture-resistant molded thermoplastic insulator base. 5 3/4"L x 1 1/4"W x 1 1/32"H (146.0 x 31.7 x 26.1mm). Two mounting holes 5.19" (131.8mm) on centers.



M-448, 20-Gang

Same as M-449, but with 20 outlets. Length: 8 7/8" (225.4mm). Two mounting holes 8.31" (211.1mm) on centers.

46206-04 **BP** ★

4-gang, with solid brass busbar. 10-32 stud terminals with hexnuts and lockwashers. Two eyelets for mounting with 3/16" (4.76mm) screws (not included). Eyelets are 3.125" (79.4mm) on centers. Moisture-repellent thermoset plastic insulator base. 3 7/8"L x 5/8"W x 27/32"H (44.4 x 15.9 x 21.4mm).



buzzers & alarms

See page 80.

J5 CONNECTORS AND TERMINALS

Quick-Connect Taps

Female molded plastic tap connector provides a fully insulated connection. Tap leg (see below) is disconnectable for added flexibility.

30244*, For 12AWG Wire

Coded yellow. 25 per pack.



30243*, For 18-14AWG Wires

Coded blue. 25 per pack.

30242*, For 22-18AWG Wires

Coded red. 25 per pack.

31729, Tap Leg for 16-14AWG

Male blade tap leg. Use with 30243 tap. Coded blue. 50 per pack.



31728, Tap Leg for 22-18AWG

Male blade tap leg. Use with 30242 tap. Coded red. 50 per pack.

30223, Quick-Tap Splicer and Tap **BP**

Use Quick-Tap to connect two wires or create a tap without stripping the wires. Two wires can be connected in-line or as a pigtail. Consists of a small molded plastic hinge unit. Insert the wires, close and snap shut with pliers. Fully insulated to prevent short circuits. Splicing instructions are included. 10 per pack.



quick-tap wire splicer

Part No. 30223 does it all!

To make a Tap Splice

With the splicer open:
 Press the existing circuit wire (red wire in the picture) into the outer channel.
 Press the tap wire (yellow) into the inner channel.
 Snap the splicer cover into place.
 Squeeze with pliers.



To make an Inline Splice

With the splicer open:
 Press one wire (yellow) into the outer channel.
 Press the other wire (red) into the inner channel.
 Snap the splicer cover into place.
 Squeeze with pliers.



To make a Pigtail Splice

With the splicer open:
 Press one wire (red) into the outer channel.
 Press the other wire (yellow) into the inner channel.
 Snap the splicer cover into place.
 Squeeze with pliers.



30245 Quick-Connect Bullet Socket

Mates with bullet terminals (31731 and 31739). Self-stripping connector provides fast and easy connect and disconnect for many vehicle applications, including vehicle to trailer connections. For 18AWG to 14AWG wires. 20 per pack.



31731*, 16-14AWG. Blue Bullet Terminal

For use with 30245. 50 per pack.

31739*, 22-18AWG. Red Bullet Terminal

For use with 30245. 50 per pack.

Inline Fuse/Breaker Holders

30147, For ATC/ATO Type **BP**

Accepts ATO and ATC fuses and circuit breakers from 3A to 20A. Easy to install and easy to change the fuse. 16AWG insulated copper wire leads, 4" (101.6mm) long. Brass contacts. Supplied without a fuse.



3031, For Glass Fuses

Accepts SFE fuses through 20A and 3AG (AGC) fuses through 30A. Positive twist-lock seal will not open accidentally; large brass contacts maintain solid contact with the fuse for maximum efficiency. 14AWG wire leads, 8" (203.2mm) long. Brass contacts. To install, cut wire loop.

3031-0, Without Fuse **BP** ★

3031-4*, With 4A Fuse

3031-9*, With 9A Fuse

3031-14, With 14A Fuse

3031-20, With 20A Fuse **BP** ★

3031-30, With 30A Fuse



Connectors with Quick-Connect Terminals

For fast wiring installation on vehicles and equipment. Molded insulators are made of durable, flexible polypropylene, which provides excellent resistance to moisture, chemicals and abrasion. Brass quick-connect terminals. Packaged 100 pieces per box.

One Pole, Single Body Connector

30200*, Insulator



31102*, Male Terminal for 14-16AWG wire



31103, Female Terminal for 14-16AWG Wire



One Pole, Two-Piece Connector

30201*, Male Insulator

Receives one female terminal.



30202*, Female Insulator



31100, Female Terminal for 14-16AWG Wire



Two Pole, Two-Piece

30204, Female Insulator



Receives two male terminals 31595-A.

Three Pole, Two-Piece

30205*, Male Insulator

Receives three female terminals 31100.



30206*, Female Insulator



ignition



See Section B.

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

Insulated Terminals and Connectors

For use with crimping tool. Tin-plated copper for resistance to corrosion and maximum conductivity. Vinyl insulator has ridge for positioning of crimping tool, and is flared for easy insertion of wire.

Color-coded by wire size:

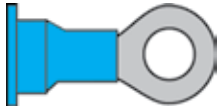
22-18AWG wire: red

16-14AWG wire: blue

12-10AWG wire: yellow

Ring Terminals

Terminals are packed 100 per box.



31302*, For 22-18AWG Wire, Stud Size 8. Red

31304*, For 22-18AWG Wire, Stud Size 10. Red

31301*, For 16-14AWG Wire, Stud Size 6. Blue

31305*, For 16-14AWG Wire, Stud Size 10. Blue

31732*, For 12-10AWG Wire, Stud Size 6. Yellow

31734*, For 12-10AWG Wire, Stud Size 10. Yellow

Snap-On Spade Terminals

Terminals are packed 100 per box.

31322*, For 22-18AWG Wire, Stud Size 8. Red



31324*, For 22-18AWG Wire, Stud Size 10. Red

31321*, For 16-14AWG Wire, Stud Size 6. Blue

31323*, For 16-14AWG Wire, Stud Size 8. Blue

31325*, For 16-14AWG Wire, Stud Size 10. Blue

31735*, For 12-10AWG Wire, Stud Size 6. Yellow

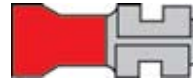
31736*, For 12-10AWG Wire, Stud Size 8. Yellow

31737*, For 12-10AWG Wire, Stud Size 10. Yellow

Female Blade Terminals

Terminals are packed 100 per box. Blade width .250" (6.4mm).

31340*, For 22-18AWG Wire. Red



31341*, For 22-18AWG Wire. Red

31738*, For 12-10AWG Wire. Yellow

Butt Connectors

For efficient two-wire connections.

Blade width: 1.00" (25.4mm). Packed 50 per box.

30238, For 12-10AWG Wire. Yellow



30220*, For 16-14AWG Wire. Blue

30219*, For 22-18AWG Wire. Red

30240 Moisture-Resistant Butt Connectors. Blue

Weather-resistant connections can be made easily without a heat source or additional protective material. For 16-14AWG.





emergency cutoff

Emergency cutoff switches are commonly mounted on many types of vehicles such as buses, and those used in construction and agriculture. Fire departments routinely familiarize themselves with the location of cutoffs, so that power can be quickly turned off in case of emergency. Additionally, OSHA requires cutoffs on certain vehicles, particularly those with ancillary motorized equipment, such as garbage trucks. See Section D1.

Special Purpose Connectors

3032, Flasher Connector

Accepts standard 3-prong flasher units (not included). Molded plastic connector has 14AWG wire leads, with phosphor-bronze contacts. Comes with plated steel bracket that has two .203" (5.2mm) diameter mounting holes.



4028, Headlight Harness

For Chevrolet and GMC RVs. Accepts one 3-prong headlamp and one 2-prong headlamp. This harness attaches to a 3-pole Packard connector that is supplied with the vehicle chassis. Leads are 16AWG wire that connects into silvered bronze contacts in molded plastic connectors.



Sealed Beam Connectors & Parts

Accepts sealed-beam headlamp terminals. 8" (203.0mm) 14AWG thermoplastic wire leads with plated bronze contacts.

3029, Connector with 3 Leads BP

3051, Connector with 2 Leads



Dimmer Switch Connectors

30155

Fits Cole Hersee foot switch 7762
Ford trucks 60-87, Dodge trucks 59-86.



30156

Fits Cole Hersee switches
7702 and 7776 Trucks: Autocar
68-80, Chevrolet 61-86,
GMC 69-86, International 61-80,
Freightliner 63-67, 72-80,
Kenworth 65-67, 72-74, 77-80.



J6 CLAMPS, CLEATS, CLIPS & TIES

Spring Clip

3118 BP

Teeth hold the clip in place after it is snapped over material up to 3/16" thick (4.8mm). Plated for corrosion resistance. 1/2" wide, 1 1/2" long (12.7 x 38.1mm).



Steel Clamps

Plastic-Coated Clamps

Plastic-coated for corrosion protection. Mounting hole diameter .281" (7.13mm) unless noted.

31230, .187" ID, .281" Hole
.187" inside diameter (4.74mm).

31231, .281" ID, .281" Hole
.281" inside diameter (7.13mm).

31232, .312" ID, .281" Hole
.312" inside diameter (7.92mm).

31233, .437" ID, .281" Hole
.437" inside diameter (11.09mm).

31234, .562" ID, .281" Hole
.562" inside diameter (14.27mm).

31235, .750" ID, .250" Hole
.750" inside diameter (19.05mm),
mounting hole diameter .250" (6.35mm).

31236, .875" ID, .281" Hole
.875" inside diameter (22.22mm).

31237, 1.187" ID, .343 Hole
1.187" inside diameter (30.14mm),
mounting hole diameter .343" (8.71mm).



Steel Clamps

Plated for corrosion resistance.



31017*, 7/16" ID

7/16" inside diameter (11.1mm),
mounting hole diameter 13/32" (10.2mm).

31018*, 9/16" ID

9/16" inside diameter (14.3mm),
mounting hole diameter 9/32" (7.1mm).

31019*, 9/16" ID

9/16" inside diameter (14.3mm),
mounting hole diameter 1/4" (6.4mm).

Nylon Clamps

Inside edges are beveled to protect harnesses from chafing. Mounting hole diameter .167" (4.3mm) unless stated.

31240, 3/16" ID BP

3/16" inside diameter (4.8mm).



31241, 1/4" ID BP

1/4" inside diameter (6.4mm).

31242, 5/16" ID BP

5/16" inside diameter (8.0mm).

31243, 3/8" ID

3/8" inside diameter (9.52mm).

31244, 1/2" ID BP

1/2" inside diameter (12.7mm).

31245, 5/8" ID BP

5/8" inside diameter (15.9mm).
Mounting hole diameter .203" (5.2mm).

31246, 3/4" ID BP

3/4" inside diameter (19.1mm).
Mounting hole diameter .203" (5.2mm).

Steel Cleats

PVC Coated

Plastic coated for corrosion resistance.

31200*, 1/4" ID

1/4" inside diameter (6.4mm),
mounting hole diameter 13/64" (5.2mm).



31201*, 3/8" ID

3/8" inside diameter (9.5mm),
mounting hole diameter 13/64" (5.2mm).

31202*, 1/2" ID

1/2" inside diameter (12.7mm),
mounting hole diameter 13/64" (5.2mm).

31203*, 5/8" ID

5/8" inside diameter (15.9mm),
mounting hole diameter 17/64" (6.7mm).

31204*, 3/4" ID

3/4" inside diameter (19.1mm),
mounting hole diameter 17/64" (6.7mm).

31205, 1" ID

1" inside diameter (25.40mm),
mounting hole diameter 17/64" (6.7mm).

Plated Steel

3160*, 1/4" ID

1/4" inside diameter (6.4mm),
mounting hole diameter 13/64" (5.2mm).

3161, 3/8" ID

3/8" inside diameter (9.5mm),
mounting hole diameter 13/64" (5.2mm).



3162*, 1/2" ID

1/2" inside diameter (12.7mm),
mounting hole diameter 13/64" (5.2mm).

3163*, 5/8" ID

5/8" inside diameter (15.9mm),
mounting hole diameter 17/64" (6.7mm).

3164*, 3/4" ID

3/4" inside diameter (19.1mm),
mounting hole diameter 17/64" (6.7mm).

K1 TEMPERATURE SWITCHES

All items are self-grounding, normally Off. Heavy duty, corrosion-resistant. Switches utilize PTF or NPTF dryseal thread which requires no sealant. Switches close a ground circuit to indicator lights or other warning devices that warn of a 'hot' or 'cold' condition. Cannot be used with gages. .250" blade (6.4mm) terminal except where noted.

84229

On at 246° to 266°F. 3/8" -18 Thread.

3/8" -18 dryseal thread mounting stem (NPTF).
Mounting hex flat 13/16". Stud terminal. (118.9 – 130.0°C).

Replaces: Delco F1853, Ford C8GY, D1FZ, D6AZ, E43Z-10884A, Motorcraft SW-663, SW-983, SW-1344, SW-1344.



84236

On at 251° to 283°F. 1/2" -14 Thread.

1/2" -14 dryseal thread mounting stem (PTF-SAE short).
Mounting hex flat 15/16". (122.0 – 139.4°C).
.250" blade terminal.

Replaces: Delco 1993445, 1993496, 1994061, D1867, D1879, GMC 6489179, 6489395, 6489766, 6490694, 6490970, 25036512, Motorcraft SWG-1187, SWG-1340.



84248 ★

On at 253° to 273°F. 3/8" -18 Thread.

3/8" -18 dryseal thread mounting stem (NPTF). Mounting hex flat 13/16". (122.8 – 133.9°C). .250" blade terminal.

Replaces: Delco D-1896, GMC 8992347, 8993427, 25036035, 042, 139, 300, 371, 452, 468, 535, Motorcraft SWG-2051.



K2 OIL PRESSURE SWITCHES

SPST, Grounded, Normally On

Self-grounding SPST Normally On (except 86302-02). Contacts open at rising pressure, close at falling pressure. Heavy duty construction. Weather-resistant. Plated steel case. Molded moisture-repellent insulators. Conservative burst pressure: 750 psi (5171.1 kPa).

8606 ★

Off at: 2 - 6 psi. 1/8" -27 Thread.

Normally On, Off at: 2 - 6 psi
(13.8 – 41.4 kPa). .250" blade terminal.
1/8" -27 mounting stem.



Replaces: AMC 1539889, 3142826, Chrysler 4169629, Delco 499581, 534598, 1359289, 1408319, 1508319, 668, 1598319, 1994214, 1998713, 3200422, 3818783, 5653196, 397, 462, D-2471, Ford DORY-9278-A, International 280891-C91, 356079-C, 425491-R91, 31428266, Motorcraft Sw-334, SWG-334, SWE-1030, Trucks: Chevrolet 85-89, Dodge 85-86, GMC 85-89, International 59-67, 78-80.

8609

Off at: 4.5 - 7.5 psi. 1/8" -27 Thread.

Normally On, Off at: 4.5 - 7.5 psi (31.0 – 51.7 kPa). 8-32 stud terminal. 1/8" -27 mounting stem.



8610

Off at: 4.5 - 7.5 psi. 1/8" -27 Thread.

Same as 8609, but with combination blade and stud terminal.



86263*

Off at: 2.5 - 5 psi. 1/4" -18 Thread.

Normally On, Off at: 2.5 - 5 psi (17.2 – 34.5 kPa). .250" blade terminal. 1/4" -18 mounting stem.

Replaces: Chrysler 4379037, Delco 1370748, 1508648, D-1805, Motorcraft SW-611, SWG-611.



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

SPST, Insulated, Normally Off

86272

On at: 2 - 6 psi. 1/8" -27 Thread.

On at 2 - 6 psi (13.8 - 41.4 kPa).

Mounting stem: 1/8"-27 dryseal thread.

Replaces: Delco 45784, 10012967, 10018158, 10002798, 25036001, Motorcraft SWG-1702.



86284

On at: 2 - 6 psi. 1/8" -27 Thread.

On at 2 - 6 psi (13.8 - 41.4 kPa).

Mounting stem: 1/8"-27 dryseal thread.

Replaces: AMC 5758695, Delco 10001858, 14004902, 25036279, 533, D-1818, International 1324244-R91, Motorcraft SWG-1709.



DPST, One Grounded, One Insulated Circuit

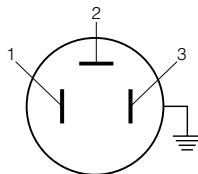
86279*

10 x 1mm Thread.

Mounting stem: 10x1mm taper pipe thread. Operation: circuit

1 - terminal 2 normally closed to ground, opens at 4 - 6 psi (27.6 - 41.4 kPa); circuit 2 - terminals 1 & 3 normally open, close at 5 - 7 psi (34.5 - 48.3 kPa).

Replaces: AMC 3250466, Chrysler 4186353, 4267021, 5209953, CH-2489, Motorcraft SWX-1707.



86281

1/8" -27 Thread.

Mounting stem: 1/8"-27 dryseal thread. Operation: circuit 1 - terminal 2 normally closed to ground, opens at 2 - 8 psi (13.8 - 55.2 kPa); circuit 2 - terminals 1 & 3 normally open, close at <11 psi (75.9 kPa).

Replaces: AMC 331347, Chrysler 3747431, Delco 14057554, Jeep 4186352, Motorcraft SWG-1708.



86283*

3/8" -18 Thread.

Mounting stem: 3/8"-18 dryseal thread. Operation: circuit 1 - terminal 2 normally closed to ground, opens at 4 - 7 psi (27.6 - 48.3 kPa); circuit 2 - terminals 1 & 3 normally open, close at 6 - 9 psi (41.4 - 62.0 kPa).

Replaces: Chrysler 3747430, 3747722, 4205921, CH-2490, Motorcraft SWC-1710.



K3 AIR PRESSURE & VACUUM SWITCHES

For dependable operation of low air pressure warning systems. Sealed contact design to prevent short circuits caused by moisture and contaminants. SPST Normally On. Contacts open at rising pressure.

8604

Off at: 55 - 65 psi. 1/4" -18 Thread.

Mounting stem: 1/4"-18 dryseal thread 15/32" long. Insulated. Normally closed, open at 55 - 65 psi (379.2 - 448.2 kPa). 8-32 screw terminal.



8640 ★

Off at: 60 - 70 psi. 1/4" -18 Thread.

Mounting stem: 1/4" -18 dryseal thread. Normally closed, open at 60 - 70 psi (413.7 – 482.6 kPa). 8-32 stud terminal.

Replaces: Chrysler 1787025, 1788700, Delco 3750911, 3929518, Ford B6Q, B8Q-18737A, C5TZ-2A574A, International 194702-R91, Motorcraft SW-377.



8646

Off at: 60 - 70 psi. 1/4" -18 Thread.

Mounting stem: 1/4" -18 dryseal thread. Normally closed, open at 60 - 70 psi (413.7 – 482.6 kPa). 8-32 screw terminal.

Replaces: Chrysler 1787025, Mack 1MR-1169AP1, White 495537.



Normally On, SPST

*Contacts open at rising vacuum, contacts close at falling vacuum.
Mounting stem: 1/8" -27 dryseal thread. Operating range: 9 - 12 inches of mercury, break (30.5 – 40.6 kPa).*

8641, Self-Grounding

Replaces: AMC 3157693, 3202448, International 196198-R91.



9253, Insulated ★

Replaces: AMC 3156149, Chrysler 1770093, CH-2569, Ford C2TA-11516-A.



Normally Off, SPST

92007, On at 7 - 13" Hg

Insulated. Contacts close at rising vacuum, contacts open at falling vacuum.

Operation: Make at 7 - 13 inches of mercury, (23.7 - 44.0 kPa).
Mounting stem: 1/8" -27 dryseal thread.



K4 FUEL PUMP SWITCH

8647, Normally Off, Electric Fuel Pump Switch ★

Operation: Contacts close at 3.5 - 6.5 psi (44.9 - 24.2 kPa)
Mounting stem: 1/8" -27 dryseal thread 1 1/32" long.
.250" blade terminals. Insulated contacts.

Replaces: Chrysler 1841416, 2510026, International 217552-R-91.



types of thread

Information on most threads can be found in the ANSI standards, the SAE Handbook, and the National Institute of Standards and Technology Handbook H-28.

UNC is the most commonly used thread on general-purpose fasteners. UNC threads are deeper than UNF threads and are easier to assemble without cross threading. Manufacturing tolerances can be larger than for finer threads, allowing for higher plating tolerances. Because of their looser fit, UNC threads are usually easier to remove when corroded.

UNF thread has a larger minor diameter than UNC thread, which gives UNF fasteners slightly higher load-carrying and better torque-locking capabilities than UNC fasteners of the same material and OD. UNF threads have a smaller lead angle that allows for finer tension adjustment. They also have more stringent manufacturing tolerances than UNC threads.

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

K5 WARNING DEVICES

Buzzers & Alarms**4099, Universal Buzzer 12V DC** BP ★

Hundreds of uses. For 'door ajar' warning, bus driver alert, low air pressure, temperature, etc. Works with any temperature, pressure, door or momentary switch. Electrical contacts are designed for instant response and uninterrupted signal.

**40151, 24V Buzzer**

Same as 4099, but for 24V DC systems.

40100, Buzzer Pull Switch ★

Attaches to a cord. For use by passengers in buses and rapid transit vehicles. Extra heavy duty construction. Use with Cole Hersee buzzers or buzzer/flashers: 4099, 4112 RC, 4124-RD. SPST Off-Mom. On. Normally Off, pull to On, spring return to Off. For use with systems up to 36V DC. Two screw terminals. Neutral gray enamel finish cover. Operates with a pull cord.

Replaces: Delco 1998723, 18998802, 1998020.

**LVD**

New electronic Low Voltage Disconnect Switch automatically disconnects accessory circuits to maintain starting power, then reconnects them when battery is recharged. See page 39.

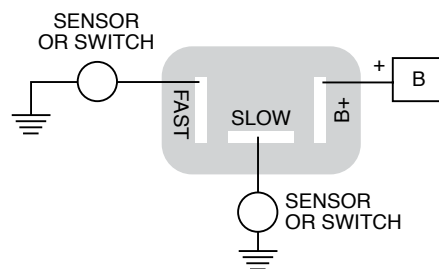
4112-RC, Buzzer/LED "Dual Alarm" BP ★

Rugged combination warning light and buzzer give audible and visible alert. Universal application: use with any electrical switch. Red lens, long-life LED. 1 1/16" (17.46mm) diameter mounting stem, 17/32" (13.88mm) long. Body size: 1 7/8" L x 1" W x 1 11/32" H (47.6 x 25.4 x 34.1mm). Wiring instructions provided. 12V DC.

**4124-RD, Buzzer/LED "Dual Alarm" 24V** BP ★**40212, Dual Rate Electronic Alarm 12V DC** ★

Utilizes advanced integrated circuit surface mount technology. Negative ground. Use with two input sources to warn of two different hazardous conditions. Sounds at two different rates: one sensor triggers a fast-rate alarm, the second actuates a slower rate alarm tone.

Minimum sound level: 90dB. Lightweight molded plastic housing. Solid-state circuitry. Size: 2.005" L x 1.185" W x .930" H (50.4 x 30.3 x 23.6mm). Plugs into Cole Hersee Sealed Beam Connector 3032 or 3029, Delphi (Packard) 12033871, or accepts individual connectors for 1/4" (6.4mm) blades.



K6 PILOT LIGHTS

LED Pilot Lights



With rugged light-emitting diode light source that ensures long hours of service. Never needs bulb replacement. Mounting hole: 0.546" diameter (13.9mm). Quick connect .250" (6.4mm) terminals are polarized for ease of wiring. Body length 1.248" (31.7mm), maximum bezel diameter 0.630" (16.0mm). Fits into panels .020" through .300" thick (0.5 to 7.6mm). Nickel-plated washer and hexnut. Also available in 24V- Contact Cole Hersee.

PL-612-R, Red Lens, 12V

PL-612-G, Green Lens, 12V

PL-612-B, Blue Lens, 12V

PL-612-A, Amber Lens, 12V



Incandescent Pilot Lights

Corrosion-resistant construction. Spring-actuated brass contacts assure proper contact with the bulb. 16AWG (1.0mm²) insulated stranded copper leads, 8" (203mm) long. Many items are available with custom imprinting: contact Cole Hersee

Single Contact, Insulated

SMOOTH LENS

Plastic socket.

PL-6-RC, With Small 5/16" Lens, Chrome Bezel

Red lens. Chrome-plated brass bezel, 7/8" (22.2mm) diameter. 3/4" (19.1mm) diameter mounting stem, 11/16" (17.5mm) long, 3/4-32 UN-2A. 5/16" (7.9mm) diameter lens. 12V #56 bulb supplied.



PL-2, Series with Small 3/16" Lens

12V #53 bulb supplied. 3/16" (4.76mm) diameter lens. 5/16" (7.9mm) diameter mounting stem, 3/8" (9.5mm) long. Plated brass bezel, satin finish, 1/2" (12.7mm) diameter.

PL-2-AC*, Amber Lens

PL-2-BC, Blue Lens

PL-2-GC, Green Lens

PL-2-RC, Red Lens



PL-118 Series, rear mounting

Mount through rear of the panel. Satin finish or black aluminum bezel, 15/16" (23.8mm) diameter. 12V #1893 bulb supplied. 5/8" (15.9mm) diameter lens. 11/16" (7.5mm) diameter mounting stem, 1/4" (6.4mm) long. Available with custom imprinting: contact Cole Hersee.

PL-118-AC, Satin Bezel, Amber Lens

PL-118-GC, Satin Bezel, Green Lens

PL-118-RC, Satin Bezel, Red Lens

PL-118-AC001, Black Bezel, Amber Lens

PL-118-GC001, Black Bezel, Green Lens

PL-118-RC001, Black Bezel, Red Lens



PL-116 Series, Front Mounting

Mount from the front of the panel, fasten from the back. Satin finish or black aluminum bezel, 15/16" (23.8mm) diameter. 12V #1893 bulb supplied. 5/8" (15.9mm) diameter lens. 3/4" (19.1mm) diameter mounting stem, 3/8" (9.5mm) long. Available with custom imprinting: contact Cole Hersee.

PL-116-AC*, Satin Bezel, Amber Lens

PL-116-GC, Satin Bezel, Green Lens

PL-116-RC, Satin Bezel, Red Lens

PL-116-GC001*, Black Bezel, Green Lens

PL-116-RC001, Black Bezel, Red Lens



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

PL-20, Series with Extra Wire for Ground

12V #53 bulb supplied. 17/32" (13.5mm) diameter lens. 3/4" (19.1mm) diameter mounting stem, 11/16" (17.5mm) long. Chrome-plated brass bezel, 7/8" (22.2) diameter. Available with custom imprinting: contact Cole Hersee.

PL-20-AC, Amber Lens**PL-20-BC*, Blue Lens****PL-20-GC, Green Lens****PL-20-RC, Red Lens** ★**FACETED LENS****PL-36, Series with Honeycomb Lens, Stainless Bezel**

Lenses have honeycomb pattern on the internal side, smooth on the outside. Satin finish stainless steel bezel, 3/4" (19.1mm) diameter. 1/2" (12.7mm) diameter mounting stem, 3/8" (9.5mm) long. 5/16" (8.0mm) diameter lenses. 12V #53 bulb supplied.

PL-36-AC, Amber Lens**PL-36-BC, Blue Lens****PL-36-GC, Green Lens****PL-36-RC, Red Lens** ★**Single Contact, Grounding**

Self-grounding to metal panels.

SMOOTH LENS**PL-1, Series with Wsmall 3/16" Lens, Chrome Bezel**

12V #53 bulb supplied. 3/16" (4.8mm) diameter lens. 5/16" (7.9mm) diameter mounting stem, 3/8" (9.5mm) long. Chrome-plated brass bezel, satin finish, 1/2" (12.7mm) diameter.

PL-1-BC, Blue Lens**PL-1-GC, Green Lens****PL-1-RC, Red Lens****PL-5-RC, with Small 5/16" Lens, Chrome Bezel**

Red lens. Chrome-plated brass bezel, 7/8" (22.2mm) diameter. 3/4" (19.1mm) diameter mounting stem, 11/16" (17.5mm) long. 5/16" (7.9mm) diameter lens. 12V #53 bulb supplied.

**PL-19, Series with Chrome Bezel**

12V #53 bulb supplied. 17/32" (14.5mm) diameter lens. 3/4" (19.1mm) diameter mounting stem, 11/16" (17.5mm) long. Chrome-plated brass bezel, 7/8" (22.2mm) diameter. Available with custom imprinting: contact Cole Hersee.

PL-19-AC, Amber Lens**PL-19-BC, Blue Lens****PL-19-GC, Green Lens****PL-19-RC, Red Lens****solenoids**

Solid state and electromechanical solenoids – See Section E.

FACETED LENS

PL-85 Series

12V #67 bulb supplied. 15/16" (23.8mm) diameter lens, gasket-sealed. 7/8" (22.2mm) diameter mounting stem, 3/4" (19.1mm) long. Plated brass bezel, 1 1/4" (31.8mm) diameter. Faceted outer lens surface.

PL-85-AC, Amber Lens

PL-85-GC, Green Lens

PL-85-RC, Red Lens ★



PL-35-RC, With Honeycomb Lens, Stainless Bezel

Red lens with honeycomb pattern on the internal side, smooth outer surface. Satin finish stainless steel bezel, 3/4" (19.1mm) diameter. 1/2" (12.7mm) diameter mounting stem, 3/8" (9.5mm) long. 12V #53 bulb supplied. 5/16" (8.0mm) diameter lenses.



Double Contact

PL-86 Series Large 15/16" Lens

Insulated. 12V #68 bulb supplied. 15/16" (23.8mm) diameter faceted lens, gasket-sealed. 7/8" (22.2mm) diameter mounting stem, 3/4" (19.1mm) long. Plated brass bezel, 1 1/4" (31.8mm) diameter.

PL-86-AC, Amber lens

PL-86-GC, Green lens

PL-86-RC, Red lens ★



PL-16 Series with Smooth Lens

Marine construction. 16AWG (1.0mm²) insulated stranded copper leads, 8" (203mm) long. Many items are available with custom imprinting: contact Cole Hersee Double Contact. Metal socket.

17/32" (13.5mm) diameter lens. Chrome-plated brass bezel, 1 1/8" (28.6mm) diameter. 7/8" (22.2mm) diameter mounting stem, 1 1/8" (28.6mm) long. 12V #68 bulb supplied. Moisture-repellent insulator. Available with custom imprinting: contact Cole Hersee.

PL-16-AC, Amber Lens

PL-16-GC, Green Lens

PL-16-RC, Red Lens



M-326 Series with Faceted Lens

Marine construction. 16AWG (1.0mm²) insulated stranded copper leads, 8" (203mm) long. Many items are available with custom imprinting: contact Cole Hersee Double Contact. Metal socket.

15/16" (23.8mm) diameter lens, gasket-sealed. Plated brass bezel, 1 1/4" (31.8mm) diameter. 7/8" (22.2mm) diameter mounting stem, 1 1/4" (31.8mm) long. 12V #68 bulb supplied. Moisture-repellent insulator.

M-326-AC, Amber Lens

M-326-GC*, Green Lens

M-326-RC, Red Lens BP





economical

Illuminated tip toggle switches M-54111-01 and M-54111-02 combine the properties of a switch and a pilot light. Switch tips are illuminated White when Off – which makes it easier to locate in the dark.

When the switch is On, the tip is illuminated Red.

More economical than a switch and pilot light combination, the illuminated switches are simpler to wire. See page 28.

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

K7 HOODED PANEL LAMPS

For illumination of maps or other items, with minimal interference of driving visibility. Hood can be rotated to direct the light beam (except DL-75-12V, which has a fixed hood). 16AWG (1.0mm²) insulated stranded copper leads, 8" (203mm) long, except where noted.

Single Contact, Self-Grounding

Self-grounding in metal panels.

DL-13, Wide-Aperture, Chrome Hood

Bright chrome-plated brass hood with wide aperture. Mount through the panel. 11/16" (17.5mm) diameter mounting stem, 3/8" (9.5mm) long. Accommodates single-contact bayonet bulb. Suggested lamps (not included): #63 (6V), #67 (12V), #623 (24V).

**DL-21, Wide-Aperture, Black Hood**

Same as DL-13, but with black finish steel hood.

**DL-3, Small Aperture**

Bright chrome-plated brass hood with low illumination aperture. 3/8" (9.5mm) diameter mounting stem, 23/32" (18.3mm) long. Bulb not included. Suggested lamps: #51 (6V), #53 (12V), #356 (24V).

**Double Contact, Insulated**

Chrome-plated brass construction for exposed applications.

M-458, Through-Panel Mount

Bright chrome-plated brass hood. 11/16" (17.46mm) diameter mounting stem, 3/8" (9.5mm) long. Bulb not included: suggested lamps: #64 (6V), #68 (12V), #1252 (24V).

**M-451, Flange Mount, with Switch BP**

Bright chrome-plated brass hood. Flange mounting, with two 9/64" (3.6mm) diameter mounting holes, 1 3/16" (30.16mm) on centers. Two screw terminals. Integral On-Off switch in the stem. Bulb not included: suggested lamps: #64 (6V), #68 (12V), #1252 (24V).

**Multi-Purpose Utility Light with Fixed Hood****DL-75-12V**

Snap-in mounting. Brass socket. One 18AWG (0.8mm) wire lead, 30" long (793mm), with blade terminal. Snaps into 1 1/4" (31.8mm) holes in panels .150" to .250" (3.8 to 6.4mm) thick. One spring prong is eliminated for indexing in keyed holes. Gasket-sealed lens and weatherproof sleeve. Frosted non-glare lens. Chrome-plated brass bezel/hood 1.52" (38.7mm) diameter. Supplied with 12V #67 bulb.



K8 LAMP SOCKETS & ACCESSORIES

Bayonet Base Sockets

Sockets accept incandescent or LED bulbs with corresponding bases. 16AWG (1.0mm²) insulated stranded copper leads, 8" (203mm) long, except where noted.

Single contact sockets accept BA15s base lamps.
Suggested lamp numbers: 63, 67, 81, 87, 93, 97, 103, 209, 1073, 1129, 1133, 1141, 1156.

Double contact sockets accept BA15d base lamps.
Suggested lamp numbers: 64, 68, 82, 88, 90, 210, 1004, 1076, 1130, 1142, 1158, 1176, 1178.

Double contact indexed sockets accept BA15z base lamps.
Suggested lamp numbers: 1154, 1157, 1157A, 1157NA, 1534, 2057, 2057NA, 2357, 2357NA.

Standard Base

SINGLE CONTACT

26145
For back-up, tail, stop, turn signal and cornering. Ground wire.
Replaces: GMC 8909518, International 57121C91, Motorcraft LS-22.



DOUBLE CONTACT, INDEXED

Indexed with J-slots.

26152
For back-up, marker, park, turn signal and cornering.
Replaces: GMC 8919916, 12013813.



Wedge Base

Accept lamp socket BA9 base lamps, lamp numbers 158, 161, 168, 194, 194A, 194NA (amber bulb).

25104
For side marker, tail, cornering and license plate.
Replaces: AMC 4489535, Ford D0DZ-15A434B, D4JZ-13410E, D5VY-15A442A, D7AZ, DD7FZ-13412A, E1FZ-13410A, GMC 6294015, 6298886, 6298892, 6298935, 8918527, International 4189977C91, Motorcraft LS-18.



25103*
For side marker, tail, turn signal and license plate.
Replaces: Chrysler 3513686, 4055028.



Nut & Lockwasher Mounting

Screw terminals. 11/16" -32 mounting stem.
Nut and lockwasher are included.

2106*, Double Contact
Socket accepts BA15d base bulb.



2316, Double Contact
11/16" (17.5mm) outside diameter. Screw terminals. Can be used with 2911 brass sleeve for quicker socket assembly or replacement. Socket accepts BA15d base bulb.



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

26100, Double Contact, Brass Socket ^{BP}

1 1/16" (17.5mm) outside diameter. Molded plastic insulator. Socket accepts BA15d base bulb.

**Snap-In Mounting**

Plated steel, snap-in mounting sockets.

2611*, Single Contact

Mounting fits 3/4" (19.0mm) diameter hole. Socket accepts BA15s base bulb.

**2612, Double Contact**

Mounting fits 3/4" (19.0mm) diameter hole. Socket accepts BA15d base bulb.

2670*, Double Contact

Mounting fits 7/8" (22.2mm) diameter hole. Socket accepts BA15d base bulb.

Bracket Mounting

Plated steel.

2609, Single Contact, Side Bracket

Plated steel side bracket, with one 3/16" (4.8mm) hole. Socket accepts BA15s base bulb.

**2610, Double Contact, Side Bracket**

Plated steel side bracket, with one 3/16" (4.8mm) hole. Socket accepts BA15d base bulb.

3575, Single Contact, Bottom Bracket

Plated steel bottom bracket, with two 13/64" (5.2mm) holes, 1/2" (12.7mm) on centers. Socket accepts BA15s base bulb.

**Miniature Base Sockets**

Plated steel sockets

Accept BA9 base lamps.

Suggested lamp numbers: 51 (6V), 53 (12V), 356 (24V).

Snap-In Mounting

Single contact, snaps in to 5/8" (15.9mm) diameter hole. 8" (203.0mm) wire lead. Sockets accept BA9 base bulb.

2505

Also available: socket with spacer rings to fit other panel thicknesses. Consult Cole Hersee.

**2506**

Ground lead is attached to the shell.

**interactive catalog**

Check the Cole Hersee website at www.colehersee.com. You can do an interactive search for the exact item you need by going to 'Product Catalog'. And there's an abundance of other product information, such as technical drawings and specs.

Wedge Base Sockets

Molded plastic shell, brass contacts. Twist lock into slotted hole. Accept lamp numbers 158, 161, 168, 192, 193, 193E, 194, 194A, 194NA (amber bulb).

25100, Fits 1/2" Hole

Fits 1/2" (12.7mm) diameter slotted hole.



25101*, Fits 5/8" Hole

Fits 5/8" (15.9mm) diameter slotted hole.



Lamp Socket Accessories

1624, Accessory Plug

Single contact. Permits the use of a 12V double wire circuit from a standard automotive accessory plug. .822" (20.9mm) diameter.



1449*, GMC Lamp Socket Plug

For GMC vehicle tail lamps. Single contact. .800" (15.2mm) diameter.



Pigtail Assemblies

Cole Hersee supplies pigtail assemblies for replacement and OEM applications. For different lead lengths, colors and materials, please contact Cole Hersee. Leads are made from high quality 16AWG (1.0mm²) thermoplastic jacketed wire. Phenolic washers insulate the assemblies.

2560, Single Contact

Fits the following sockets: 2601, 2609, 2611, 2645, 2670, 3575, 26003, 26041.



2564, Double Contact, Standard

Ears in line with contacts. Fits the following sockets: 2602, 2608, 2610, 2612, 26041.



2561*, Single Contact Miniature

Fits the following sockets: 2504, 2505, 2506, 2526, 2520.



relays & microrelays



See pages 45-47

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

L1 NEUTRAL SAFETY SWITCHES

Heavy-duty switches for applications to 36V DC.

Normally Off Ball Switches

SPST. On with ball depressed, spring return to Off. Silver contacts. 35A at 12V DC, 20A at 24V DC, except where noted. Moisture-resistant insulators, corrosion-resistant metal housings.

9242 ★

Two screw terminals. Mounting stem 9/16" -18 UNF-2A thread, 5/16" (7.9mm) long.



Replaces: International 863187-R91.

9242-01

Same as 9242, but with brass gasket/washer.

9242-07*, Self-Grounding

Same as 9242 except one terminal is grounded to the switch housing and terminal insulator is sealed against moisture and dirt.



Replaces: John Deere AT71501.

9242-04, With Delphi (Packard) Connector

22" (559mm) harness includes 2-pole Delphi (Packard) connector 2984855, with two female blade terminals 6288106. Mounting stem 9/16" -18 UNF-2A thread, 5/16" (7.9mm) long. Plasticized housing provides protection against moisture and dirt. Internal gasket seal. Replaces: GMC 702733.

**92102**

15A at 12V DC. Two-button head accepts standard female blade terminals, and will mate with Delphi (Packard) 2-pole connector 2962679, or equivalent. Mounting stem 9/16" -18 UNF-2A thread, 21/32" (16.7mm) long.

**92107-04**

20A at 12V DC. Two-screw terminals. Mounting stem 3/4" -16 UNF-2A thread, 31/64" (12.3mm) long.

**9162**

35A at 12V DC. Two female bullet terminals. Mounting stem 3/4" -16 UNF-2A thread, 31/64" (12.3mm) long.



Replaces: Chrysler 1527835, Clark 73631.

9162-03

Same as 9162, except with gasket on the mounting stem.

Replaces: Massey 181140M94.

Normally On Ball Switches

SPST. Off with ball depressed. Spring return to On. Silver contacts. 5A at 12V DC, 3A at 24V DC, except where noted. Moisture-resistant insulators, corrosion-resistant metal housings.

9224 ★

Two screw terminals. Mounting stem 3/4" -16 UNF-2A thread, 31/64" (12.3mm) long, with aluminum gasket/washer.



Replaces: Clark 224620

92105

Two female bullet terminals. Mounting stem 3/4" -16 UNF-2A thread, 31/64" (12.3mm) long, with aluminum gasket/washer.



give warning

Looking for a pilot light or audible warning? See page 80.

L2 BACK-UP SWITCHES

SPST, normally Off. On with plunger depressed, spring return to Off.

9134

35A at 12V DC. Silver contacts.
Transmission-mounted, extra heavy-duty.
Compact design for mounting in areas
where space is limited. Two female bullet
terminals. 9/16" -18 thread mounting stem,
5/16" (7.9mm) long.

Replaces: Chrysler 1343998,
2198779, Motorcraft SW-410

**91113** ★

20A at 12V DC. Silver contacts.
Transmission-mounted, extra heavy-duty.
Compact design for mounting in areas
where space is limited. Two screw
terminals. 9/16" -18 thread mounting
stem, 5/16" (7.9mm) long.

Replaces: Autocar 8E-01360, Brockway
128537, Diamond Reo 560-65, Kenworth
AT-91-69 Mack 1MR-1320, Oshkosh 13320-F1, White 1743529.

**75125, Back-up Alarm Switch**

SPST. Normally Off. Spring lever actuated to On, spring return
to Off. Two screw terminals. Two 13/64" (5.2mm) diameter
mounting holes, 1/2" (12.7mm) on centers. 5" (127mm) lever.

**9052**

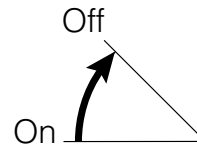
10A at 12V DC. Two screw terminals. 7/16" (7.9mm) diameter
mounting stem, 7/16" -20 (7.9mm) long, with two flats for mount-
ing in double-D hole. 1/2" (12.7mm) long button-head plunger.

Replaces: Ford B9AF, C0AF, 51-A15520A, Jeep 710412,
721028, Motorcraft SW-410.

**Lever-Actuated Switch****8486-05**

10A at 12V DC. SPST, Normally Off, contacts Open. Lever-actu-
ated to On, spring return to Off. Two bullet terminals. Two 10-32
tapped mounting holes, 5/8" (15.9mm) on centers. 2 7/8"
(73.0mm) long lever.

Replaces: John Deere AM38713

**83377, Protective Boot**

For Neutral Safety and Back-up Lamp Switches.
Molded of durable PVC to resist moisture and dirt. Internal ring
forms a seal with the groove around the switch housing.

Fits Cole Hersee switches with a 1 1/8" (28.6mm) hex
housing: 9134, 9162, 9224, 9242, 9242-07, 92102, 92103,
92105, 92107-04.



L3 OVERDRIVE KICKDOWN SWITCHES**SPST, Normally On**

Off with plunger depressed, spring return to On.

9096-02

15A at 12V DC. With special diaphragm/mounting bracket, sealed to protect the mounting shaft. Plasticized body protects against moisture and dirt. Two 16AWG wire leads, 3" (76.2mm) long with female bullet terminals. Insulator sleeves protect the connections. 13/64" (5.2mm) diameter mounting holes, 1 1/2" (38.1mm) on centers. 1/4" (6.4mm) long plunger.

**SPST, On - Momentary On****9106-02***

10A at 12V DC per circuit. Two circuits: No.1 normally On, No.2 On with plunger depressed, spring return to No.1. Four screw terminals. 7/16" -20 (7.9mm) diameter mounting stem, 7/8" (22.2mm) long with flat on stem for mounting in D-shaped hole. Gasket-sealed terminal insulator. Plunger: 7/32" (5.6mm) long.

Replaces: Chrysler 1479527, Jeep 717589.

**L4 FOOT-OPERATED TURN SWITCHES**

Through-floorboard mounting. Depress to On, spring return to Off. Two switches are needed for left and right turn signals. Sealed switches are plastic coated, providing protection against moisture dust and road-splash. 7/8" (9.5mm) diameter stem. Three 1/4" -20 tapped mounting holes, 3/4" (19.0mm) and 1 3/4" (44.4mm) on centers. 12A at 12V DC.

7792, Sealed, with Screw Terminals**7785, Sealed, with Wire Leads****rotary dimmers**

See page 56 for rotary electronic dimmer switches.

L5 STOPLAMP SWITCHES

SPST, Normally Off. Contacts close at rising pressure. Operate at 60 to 120 psi (414 to 827 kPa). Thread is NPTF dryseal thread for use without a sealant.

Hydraulic**8626** ★

Two 6-32 screw terminals. 1/8" -27 thread mounting stem, 11/32" (8.73mm) long.

Replaces: Delco 476S, 4760, FWD 4760, 4765, GMC 403936, 476592, 1316600, Ford 100810B, 510C, Mack 5CG-114, 11MR-1152, Motorcraft SW-311, Wagner FC-1201, FC5106, White 58012-F, 443106, 1319522.

**8628**

Two female bullet terminals. 1/8" -27 thread mounting stem, 11/32" (8.73mm) long.

Replaces: AMC 99469, Chrysler 1450341, Delco 4766, Ford 91A-13480, Jeep 647801, Motorcraft SWC-312, Wagner FC-5550, FC-6370.

**8629** ★

Two male bullet terminals. 1/8" -27 thread mounting stem, 11/32" (8.73mm) long.

Replaces: AMC 300356, 3145198, 3192194, 4488306, Delco 4766, 4733, D850, Ford B8A, B9SF, C1AZ-13480A, GMC 1320938, 1328118, 1997725, Jeep 70034, 201466, 647801, Motorcraft SW-24, Wagner FC-6780, FC-7715, 179-318, AC5812W.

**Mechanical****8645**

SPST Normally On. Spring return to On. 1/2" -20 thread mounting stem, 3/8" long. Plunger 11/32" long.

**8715** ★

SPST Normally On. Spring return to On. Moisture-resistant plastic body and plunger. 1/2" diameter mounting stem, 1 5/32" long.

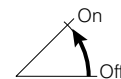
Replaces: AMC 3189147, 3194569, 4488295, 5352620, 9770419, Chrysler 2809033, Delco D864, D866, D868, D873, U850, U851, U852, D885, Ford C8ZZ-13480A, C7TZ, D2TZ-13480B, GMC 536289, 1261219, 1362835, 959, 1993509, 1998192, 196, 667, 3631535, 3889606, 3889607, 3952426, 9772188, 9776994, 14074323, 25524844, International 312739C91, 358560C91, Motorcraft SWG-535, SW-691A, SW-1512, VW 175957656A, Wagner FC-32200, FC-32085, FC-66780.

**8486, Lever Actuated (R)**

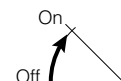
SPST Normally On. Spring return to On. When viewed from the terminals, the lever projects to the right (see also 8487). Lever is 2 7/8" overall length. Two tapped 10-32 mounting holes, 5/8" on centers.



Replaces: Delco D851, D853, D855, GMC 1997901, 1997915, 1997922, Motorcraft SWG-317, Wagner FC-21630.

**8487, Lever Actuated (L)**

SPST Normally On. Spring return to On. When viewed from the terminals, the lever projects to the left. Otherwise, the switch is identical to 8486.



Replaces: Delco D852, D854, DR-2401, GMC 1997913, 1997921, Motorcraft SWG-318, 319, Wagner FC-21632.

8466, For Push or Pull Operation

Normally Off. Push or pull to On, spring return to Off. 11/32" long plunger with 9/64" diameter hole for attachment of cable or actuating device. Four 13/64" diameter mounting holes. 1 1/2" L x 2" W center to center.

**L6 VOLTAGE REDUCERS****68003, For 4A Maximum Load**

1.5 Ohm resistance, 25W. Allows the use of 6V accessories in 12V electrical systems. The resistor coil is embedded into the ceramic insulator for effective heat dissipation. Voltage reducers can be wired singly in series or in parallel. For use with low amperage load accessories. Two screw terminals with lockwashers. 7/16" -28 thread mounting stem. Size: 2" x 2 9/16" x 1 1/2."



SPST, SPDT, DPST, DPDT Switches

SP and DP refer to single pole and double pole, ST and DT refer to single throw and double throw.

Pole refers to the number of circuits controlled by the switch: SP switches control only one electrical circuit. DP switches control two independent circuits (and act like two identical switches that are mechanically linked). Do not confuse 'pole' with 'terminal'. The DPST switch, for example, has four terminals, but it is a DP, not a 4P switch.

Throw refers to the extreme position of the actuator: ST switches close a circuit at only one position. The other position of the handle is Off. DT switches close a circuit in the Up position, as well as the Down position (On-On). A DT switch can also have a center position (frequently On-Off-On).

The following switch diagrams illustrate the most common types of toggle and rocker switch.

SPST On-Off



SPDT On-On

Only one of the loads can be energized at a time.



SPDT On-Off-On

Only one of the loads can be energized at a time.



DPST On-Off

Both load terminals can be energized at the same time. They are independent of each other and could be of different voltages.



DPDT On-On

Functions like two separate SPDT switches operated by the same actuator. Only two loads can be On at a time.



DPDT On-Off-On

Functions like two separate SPDT switches operated by the same actuator. Only two loads can be On at a time.



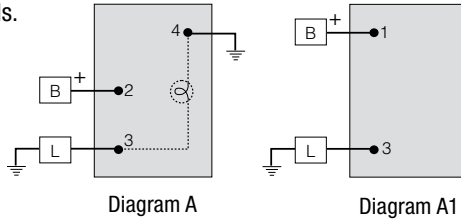
SP & DP Switches

Diagrams represent both momentary contact or maintained contact switches.

Switches without Pilot Lights

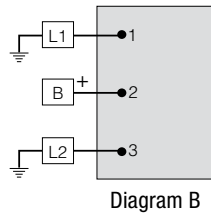
SPST OFF-ON

Two terminals.



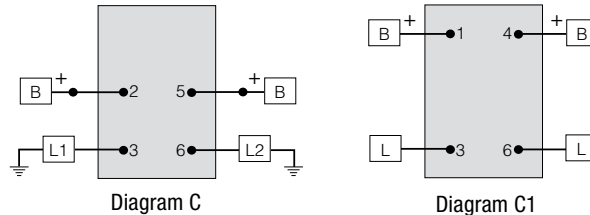
SPDT ON-OFF-ON

Three terminals.



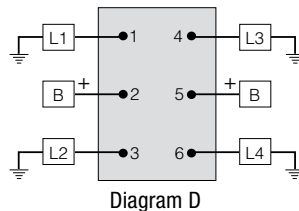
DPST OFF-ON

Four terminals.



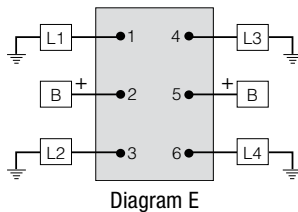
DPDT ON-ON

Six terminals.



DPDT ON-OFF-ON

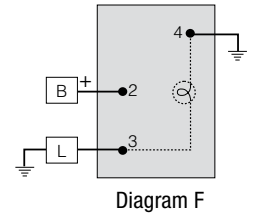
Six terminals.



Switches with One Pilot Light

SPST OFF-ON, DEPENDENT

Dependent illumination.
Three terminals.



SPST OFF-ON, INDEPENDENT

Independent illumination. Four terminals. To convert an independent switch into dependent, connect a jumper wire from terminal 3 to terminal 6, and connect terminal 4 to ground.

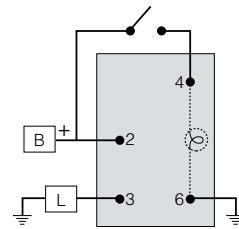


Diagram G1
Independent illumination

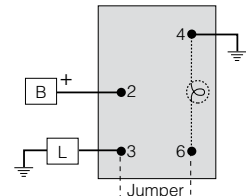
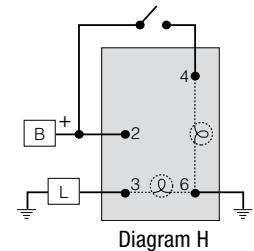


Diagram G2
Independent illumination
switch converted to dependent

Switches with Two Pilot Lights

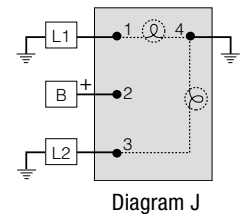
SPST OFF-ON, DEPENDENT & INDEPENDENT

Four terminals.



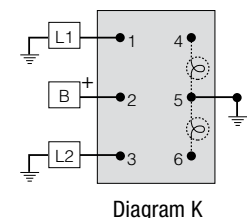
SPDT ON-OFF-ON, OR ON-ON, DEPENDENT

Four terminals.



SPDT ON-OFF-ON, OR ON-ON, INDEPENDENT

Four terminals.



SP & DP Switches with 8 Terminal Locations

Some switches have a maximum of eight possible locations for terminals. Switches of this type include M-58031 Series and 58326 Series Rocker Switches. Diagrams represent both momentary contact or maintained contact switches.

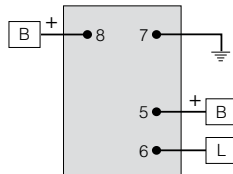


Diagram L

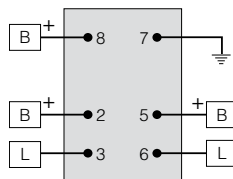


Diagram M

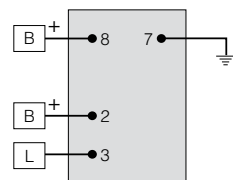


Diagram N

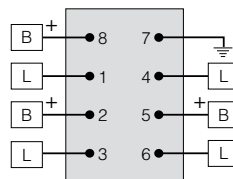


Diagram O

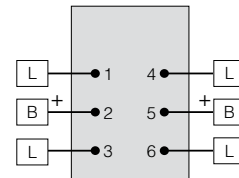


Diagram P

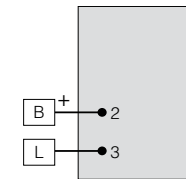


Diagram Q

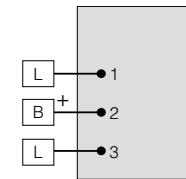


Diagram R

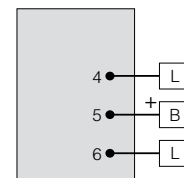


Diagram S

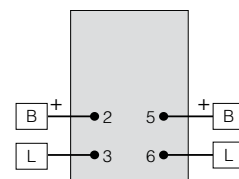


Diagram T

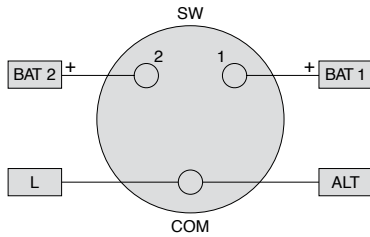
Battery Selector & Master Disconnect Switches

Key to diagrams: L = starter & load, SW = Battery Selector & Master Disconnect Switch, BAT = battery, ISO = Battery Isolator, COM = common, ALT = alternator REG = Regulator

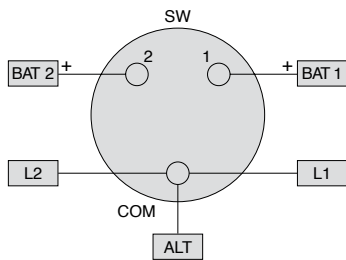
M-750 & M-751

Download instruction form IF-63 from our website.

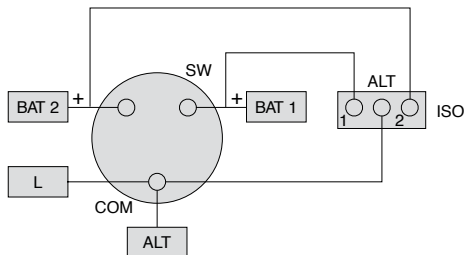
ONE ENGINE AND TWO BATTERIES



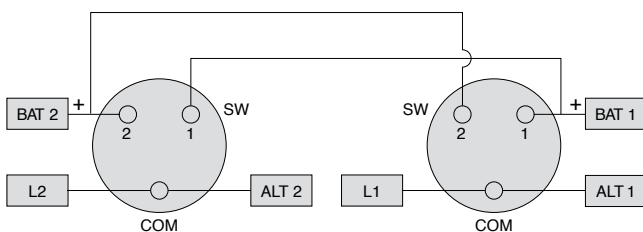
TWO ENGINES AND TWO BATTERIES



ONE ENGINE, TWO BATTERIES, WITH BATTERY ISOLATOR



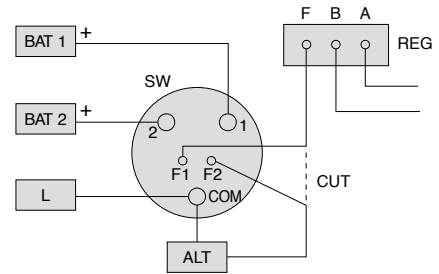
TWO ENGINES, TWO BATTERIES, TWO SWITCHES



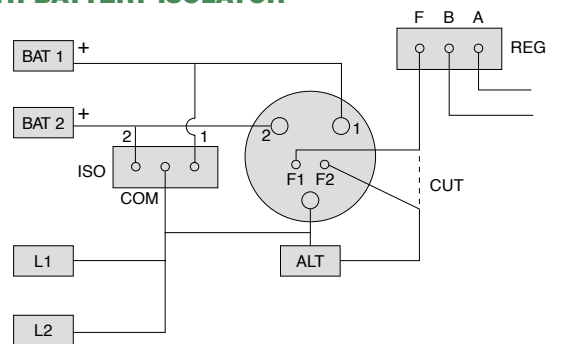
M-752 & M-753

Download instruction form IF-130 from our website.

ONE ENGINE AND TWO BATTERIES



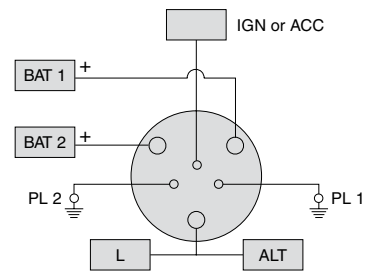
TWO ENGINES AND TWO BATTERIES, WITH BATTERY ISOLATOR



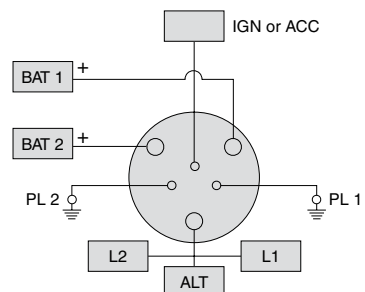
M-754 & M-754-01, M-755 & M-755-01

Download instruction form IF-121-1 from our website.

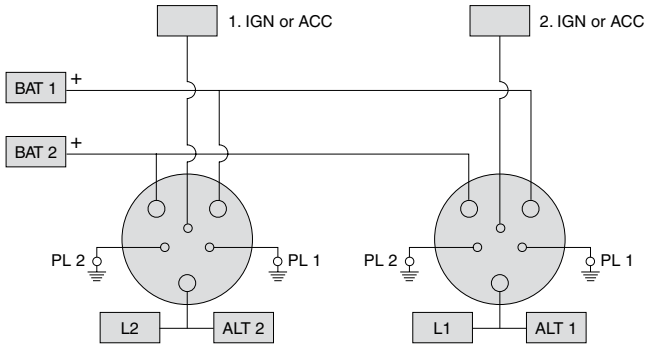
ONE ENGINE AND TWO BATTERIES



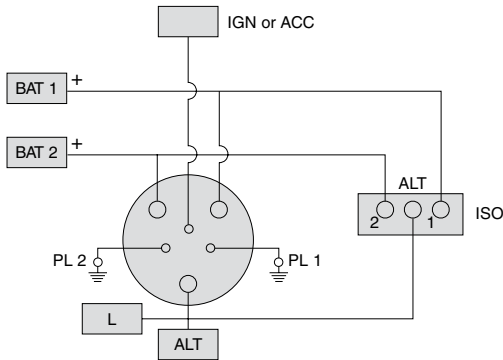
TWO ENGINES AND TWO BATTERIES



TWO ENGINES, TWO BATTERIES, TWO SWITCHES



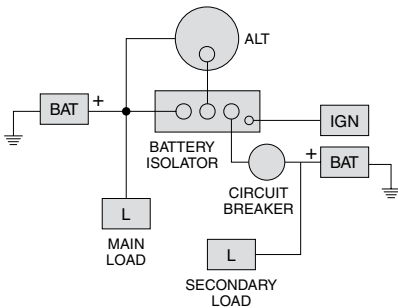
ONE ENGINE AND TWO BATTERIES, WITH BATTERY ISOLATOR



Battery Isolators

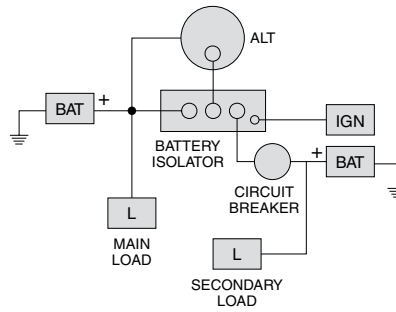
4-Stud Type

48092, 48122 and 48162.



3-Stud Type

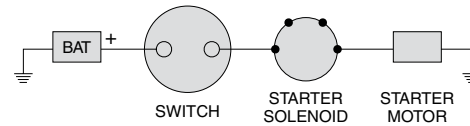
48070, 48080, 48090, 48120, 48160, and 48161.



Master Disconnect Switches

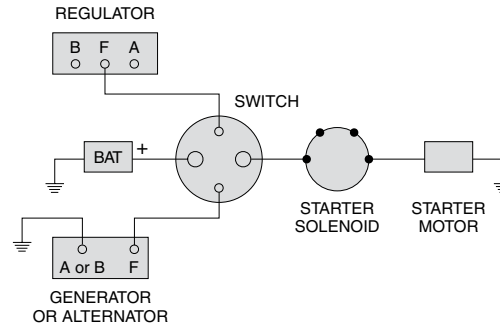
SPST Switches

Download instruction form IF-126 from our website.



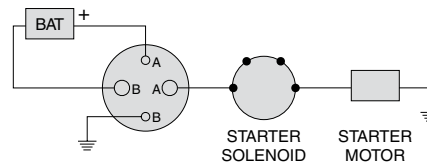
DPST Switches

Download instruction form IF-109 from our website.



75912 Switch

For two high current loads.

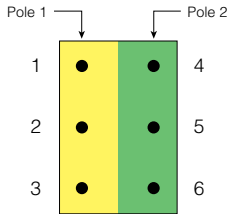


How to Identify a Switch

You can find out the type of rocker or toggle switch by a quick visual inspection.

Look at the back of the switch, where the terminals are. Notice that there are six possible terminal positions.

Toggle and rocker switches are designed so that each vertical set of terminals makes up one pole.

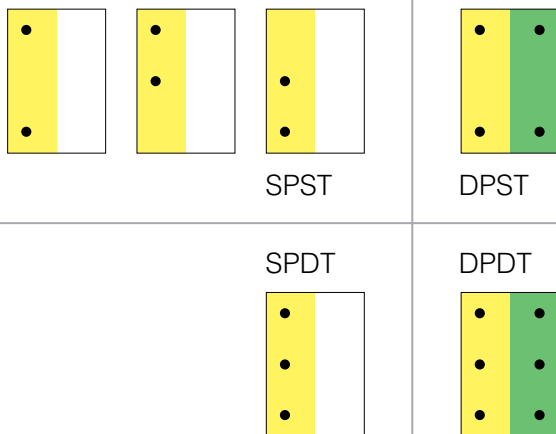


You can see immediately that a switch with three vertically-organized terminals must be a SPDT. Now check the actuator (rocker or toggle handle) to see if the switch is 2-position or 3-position.

If it only has two terminals, it must be a SPST, the simplest of all switch configurations. Notice that the two terminals are organized vertically (never side-by-side). Terminals can be located at 1 and 2, 1 and 3, or 2 and 3/6.

If it has terminals at 1, 3, 4 and 6, it must be a DPST. You can see that it utilizes the left side (pole 1) and right side (pole 2) of the switch — two poles (DP).

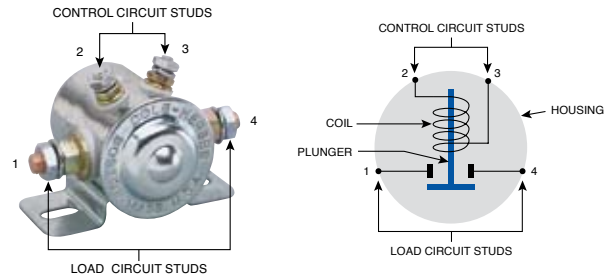
If it has six terminals, it's a DPDT. Check the actuator to see if the switch is 2-position or 3-position.



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.

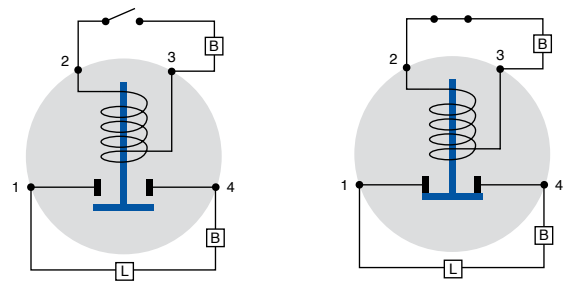
Solenoids are commonly used to control starter and winch motors, and they have many other uses on vehicles of all kinds



A typical 4-stud solenoid

4-stud solenoid diagram

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.



Solenoid in its normal state
Control circuit and load circuit open

Energized solenoid
Control circuit and load circuit closed

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

Trailer Connector Wiring Colors

Colors are not universal, so it's wise to check proprietary instructions, and to make an electrical test. The following colors are very commonly used.

4-POLE

Green - Right turn and brake lights
 Yellow - Left turn and brake lights
 Brown - Taillights and clearance lights
 White - Ground

5-POLE

In addition to the above.
 Red - Backup lights

6-POLE

Typical coding convention for 6-pole circuits

Wire Color	Coductor Number	Cole Hersee Terminal Marking	Function
White	1	GD	Ground return to towing vehicle
Brown	2	TM	Clearance, side marker, and identification lamps
Yellow	3	LT	Left turn signal and hazard lamps
Red	4	S	Stop lamps and antilock device
Green	5	RT	Right turn signal and hazard lamps
Black or Blue	6	A	Continuous ABS power/Auxiliary

Tail lamp load goes with marker circuit 2.

7-POLE

Brown - Right turn and brake lights
 Red - Left turn and brake lights
 Green - Taillights and clearance lights
 Yellow - Auxiliary
 White - Ground
 Blue - Electric trailer brakes
 Black - Auxiliary Power/Battery Charge

SAE coding convention for 7-pole connectors

Wire Color	Coductor Number	Cole Hersee Terminal Marking	Function
White	1	W	Ground return to towing vehicle
Black	2	BK	Clearance, side marker, and identification lamps
Yellow	3	Y	Left turn signal and hazard lamps
Red	4	R	Stop lamps and antilock device
Green	5	G	Right turn signal and hazard lamps
Brown	6	BR	Tail and license plate lamps
Blue	7	BL	Continuous ABS power/Auxiliary

Trailer Connector Wiring

Properly installed tractor-trailer connectors are critical to the safe performance of a rig, which are routinely subjected to vibration, extreme weather conditions, as well as mechanical forces. We highly recommend that a trained technician performs the installation. It is the responsibility of the end-user to take into account the mounting location and environment, conductor type, size, flexibility and other installation parameters.

Review the assembly procedure before assembly. A common error is to not slide a clamp, boot or housing onto the cable before connecting the wires. Recommended tools: screwdriver (preferably with torque limiter); soldering iron (preferably a solder pot), solder and flux; wire stripper and cutter; and ruler.

Cut the cable, and strip the jacket to the recommended length.

Strip the wires to the recommended length, and tin them. Maintain a tight strand bundle before tinning, so that there are no loose strands. Re-tin if necessary. This makes it easier to insert the wires into the terminal, and helps to properly position the tinned strands at the right depth.

Slide the housing, spring coil or boot over the cable.

Properly insert and position the tinned conductor into each terminal. Locate the tinned portion under the terminal screw before tightening the screw. Tighten the termination screws to the appropriate torques.

Inspect the terminated connection for cut or loose strands, fragments of wire insulation between the terminal/conductor connection, bent terminals, loose or stripped terminal screws and other visible problems.

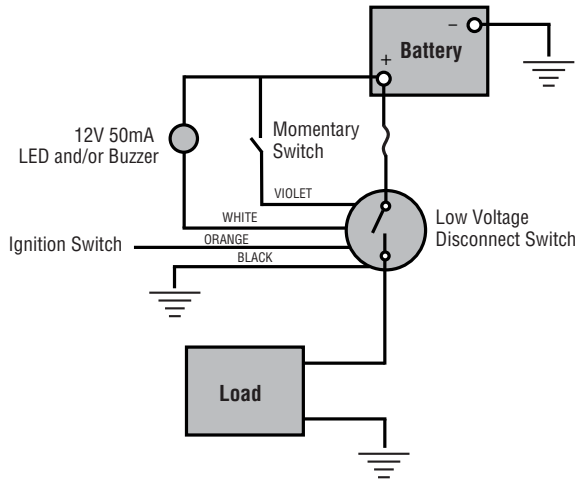
Check that the correct connections have been made, by re-checking that the conductor jacket color matches the insulator coding.

Carefully slide the insulator into the connector housing, making sure that the insulator is fully seated. Don't twist or lever the terminated conductor after it has been inserted and locked into the insulator. This may damage the terminal and put stress on the terminated connection.

Finally tighten the housing screw or cable clamp.

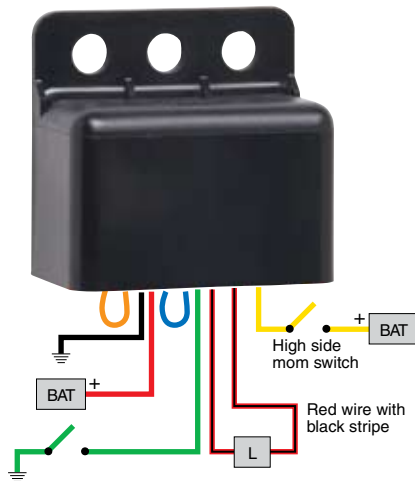
Wiring for SureStart™ Automatic Low Voltage Disconnect Switch 48510

See page 39.



Wiring for Series 48800 Timers/Dimmers

Microprocessor unit handles up to 20A peak load. Power wires are 16AWG, control wires 18AWG, loops 22AWG. System voltage 12V DC (9 – 16V). Case size: 1.36" H (not including flange) x 1.97" W x 1.03" D (34.4 x 49.9 x 26.2mm). Flange is 0.32" H x 1.97" W (7.94 x 49.9mm). Mounting holes are 0.28" diameter (7.2mm), 0.56" on centers (14.3mm).



AWG conversion

American Wire Gauge (AWG) is a US standard set of non-ferrous wire conductor sizes. Non-ferrous' usually implies copper, but it includes aluminum and other metals and alloys.

The "gauge" refers to the diameter. Typical household wiring is AWG number 12 or 14. Telephone wire is much thinner at 22, 24, or 26. The higher the gauge number, the smaller the diameter and the thinner the wire and the less current it will safely carry. Thicker wire carries more current because it has less electrical resistance over a given length. Thus larger wire is used with high currents and when the voltage drop along its length must be minimized. For example: High output alternator wiring might be 2 AWG and the starter cable for a mid-sized engine 1 or 0 AWG.

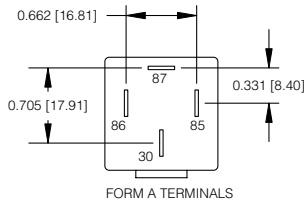
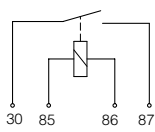
The metric equivalent is simply the diameter expressed in millimeters, and thus can be easily measured with calipers.

AWG	mm	AWG	mm	AWG	mm
26	0.128	16	1.308	6	13.292
25	0.162	15	1.652	5	16.755
24	0.205	14	2.088	4	21.137
23	0.255	13	2.629	3	26.653
22	0.322	12	3.302	2	33.606
21	0.411	11	4.156	1	42.384
20	0.516	10	6.271	0	53.454
19	0.653	9	6.626	00	67.399
18	0.823	8	8.350	000	84.004
17	1.039	7	10.544	0000	104.091

Relay Schematics & Terminal Layouts

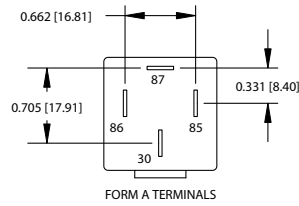
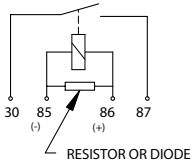
Other configurations are available by special order. See page 46.

Form A (SPST)

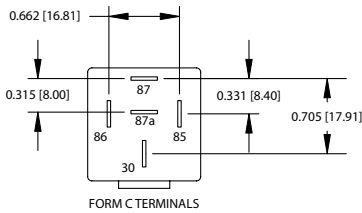
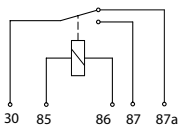


40A Type has .250" terminals. 70A Type has .375" terminals.

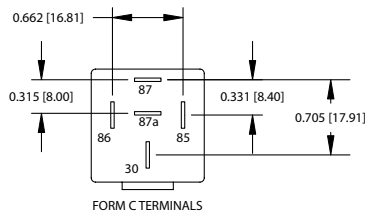
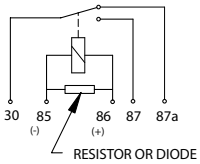
Form A (SPST) with suppression



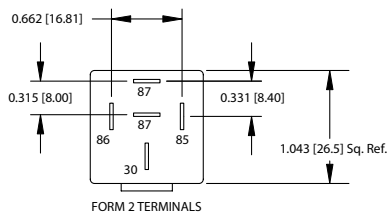
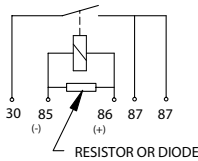
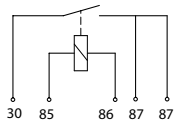
Form C (SPDT)



Form C (SPDT) with suppression



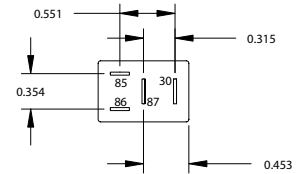
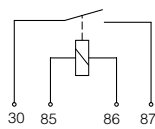
Form 2 (SPST) with suppression



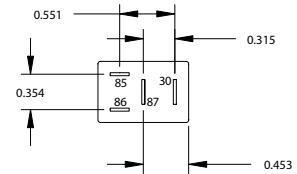
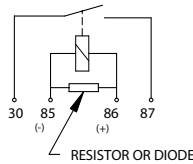
MicroRelay Schematics & Terminal Layouts

Other configurations are available by special order. See page 46.

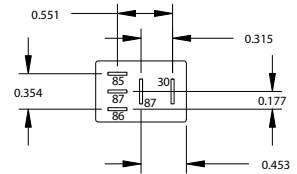
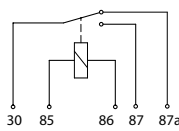
Form A (SPST)



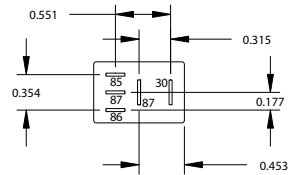
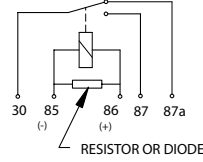
Form A (SPST) with suppression



Form C (SPDT)



Form C (SPDT) with suppression





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