Littelfuse®

Manual Battery Disconnect Switches

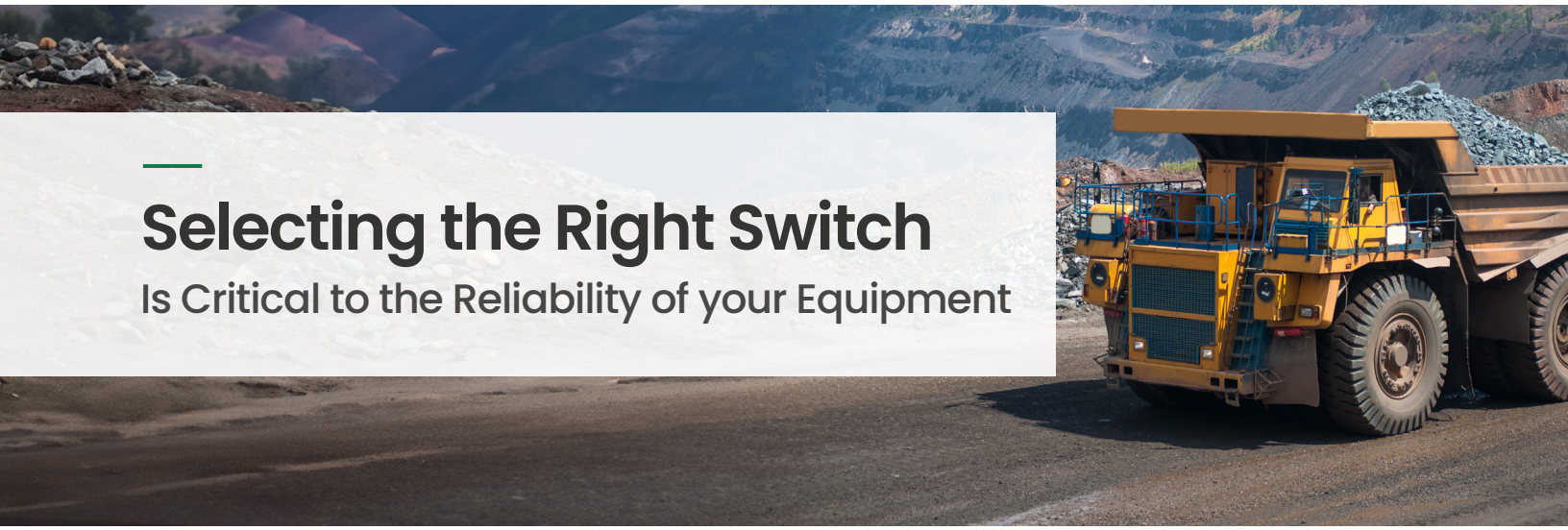
Selecting the Right Product For Your Application

Protect and Control DC Electrical Circuits

Including:

Cole Hersee® A Littelfuse Brand

menber's A LITTELFUSE BRAND



Selecting the Right Switch

Is Critical to the Reliability of your Equipment

The Importance of a Battery Disconnect Switch

Battery disconnects are installed in an electrical system allowing the operator to completely disconnect electrical current running through a vehicle or piece of equipment. Being able to isolate the flow of electricity has many safety, security, and cost saving benefits.

Short-Circuit Protection

Road salt corrosion is becoming an increasingly common problem. In the event corrosion leads to a short circuit resulting in a fire, a battery switch can be activated to prevent further damage to the vehicle or injury to occupants. On an unattended vehicle, chaffed or damaged wires can short circuit causing a thermal event that can destroy the equipment, vehicles around it, or the building where it is parked.

Safety and Security

Mechanics can ensure a vehicle electrical system is shut down by operating a battery switch. With the addition of built-in or accessory lock out tag out, the mechanic can ensure the vehicle cannot be energized or started during service. Another benefit of lockout/tagout is that owners can secure a switch with a padlock making it difficult for thieves, vandals, or unauthorized users to operate the equipment.

Save Costs

Parasitic loads (power consumed even when the equipment is shut off) can drain a battery on equipment stored for long periods of time. By disconnecting the battery, the electrical system will not have any parasitic loads that can drain the battery and cause premature failure. Using a battery switch can help prevent costly battery replacements and ensure that the battery is fully charged for the next job.

Selecting the Correct Amperage Rating

Deciding which switch to select for your vehicle can be a confusing process. The primary consideration for selection is the output of the alternator, which should be the highest continuous output on the vehicle.

The intermittent duty capacity should be calculated for the maximum potential draw on the battery bank. The battery disconnect switch should be able to withstand the full discharge of the battery bank for about 10 seconds. If properly selected, and in the event of a short circuit, the switch can survive and shut off power to prevent further damage. If the switch cannot withstand a full short, the contacts could weld shut and the switch will not be able to operate and protect the system.

Differences Between Poles and Throws

The differences between a single pole switch or a double pole switch are often not very clear and requirements vary based on the application. Pole refers to the number of circuits controlled by a switch and throw refers to the extreme positions of the actuator.

Pole

Single-pole switches are designed to control one circuit, whereas double-pole switches are designed to control two circuits simultaneously or serially. When discussing master battery disconnect switches, single poles are the most common. They are designed to cut off the battery by disconnecting either the positive or ground to cut off the battery from the electrical circuit.

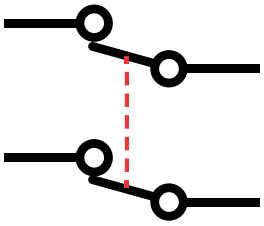
Double-pole switches are chosen based on the amperage of each individual circuit. Some battery switches are designed for one high-current circuit and one lower-current auxiliary circuit. These are commonly used in applications that require an alternator field disconnect.

Single-Pole, Single-Throw Switch

Double-pole switches can also be used to control two high-current circuits. Examples of two high-current circuits include those with multiple voltages (12, 24, or 36), high-amperage current that is split between two circuits, and applications that disconnect both positive and ground simultaneously to completely isolate the battery. An isolated battery is the safest type of installation because this method eliminates any chance of accidental shorting.

Throw

Single-throw switches close a circuit at only one position. Double-throw switches close a circuit in two positions. Double-throw switches are not commonly used for battery circuits and are more common in low-current applications. However, certain switches have more than two throws, such as the M-750 series switches. These battery selector switches are triple-throw, meaning they create a circuit in three different positions.



Double-Pole, Single-Throw Switch

Littelfuse Collaborates with OEM

to Overcome Electrical Challenges in Freezing Environments

Littelfuse High-Amp Sealed Battery Switch Prevents Vehicle Failures in Harsh Environments

A municipal fleet manager faced challenges with their equipment during snow removal in freezing environments and sought assistance from a leading OEM skid steer manufacturer. The equipment was experiencing intermittent total loss of electrical power in the field, but the issue couldn't be replicated or identified by the service shop mechanics.

Upon involvement of the OEM, it was discovered that the non-sealed battery switch originally fitted to the equipment was allowing moisture to accumulate inside, leading to freezing over the contacts and temporary loss of continuity. The frozen layer on the contacts would melt off in the climate-controlled shop, making it difficult to pinpoint the cause.

To address this issue and prevent future electrical failures due to harsh environments and moisture ingress, the OEM collaborated with Littelfuse for a solution. Littelfuse assembled a team comprising sales, engineering, and quality representatives, who visited the OEM headquarters to thoroughly understand the situation. After assessing the electrical parameters, Littelfuse identified several switches in their product range that could serve as drop-in or retrofit replacements.

The critical requirement for the application was the environmental properties of the switch. Littelfuse's battery disconnect switches, designed for heavy-duty vehicles in demanding environments, not only met but exceeded the OEM's requirements with higher IP ratings. After evaluating various options, the 75920 series emerged as a drop-in replacement. The OEM successfully replaced switches across the entire fleet without any modifications to the equipment or the Littelfuse part. Subsequently, the OEM incorporated the 75920 series into all new equipment production as a running change, ensuring a more reliable finished product for their customers.

This case highlights how expertise in electrical systems and applications can reduce maintenance costs, eliminate downtime, and enhance safety when selecting the right switch for specific applications. A proactive approach to electrical system designs, incorporating Littelfuse's expertise and a wide selection of switches, is recommended for OEMs, upfitters, or aftermarket installers integrating battery disconnect switches into their electrical systems.

Quick Specs

75920 Series

Voltage:	6V min, 36V max
Continuous Current:	300A
Intermittent Current:	3000A x 15 sec
Ingress Protection:	IP68
Terminal Sizes:	3/8-24" or M10
Terminal Materials:	Brass or Stainless Steel
Circuity:	SPST
Notes:	Built-In Lock Out Tag Out
Aditional Information:	**Littelfuse.com/75920**

75930/75940 Series

75930

75940

Voltage:	32V DC
Continuous Current:	200A with 90mm^2 cables, 300A with 120mm^2 cables
Inrush Current:	500A per 60s at 23°C, 1,000A per 15s at 23°C
Intermittent Current:	1000A x 15 sec
Circuitry:	75930 - DPST 75940 - SPST
Ingress Protection:	IP67/IPx9K
Terminal Size:	3/8-24' or M10
Terminal Material:	Stainless Steel
Notes:	Built-In Lock Out Tag Out
Aditional Information:	**Littelfuse.com/75930** **Littelfuse.com/75940**

24505 Kit - Lockout / Tagout

24505 Series

The 24505 Series Battery Disconnect Switch Lockout Lever Kit allows you to use a padlock (not included) to securely lock a Cole Hersee brand lever-actuated metal case master battery disconnect switch in the OFF position. Disconnect switch lockout is required for certain applications to comply with lockout/tagout safety regulations.

24505
Lockout lever kit

24505-03
Lockout lever kit

24505-03
Lockout lever kit

24505-04
Lockout lever kit

80101-B
Lever

80101-D
Lever

PART NUMBERS BULK	PART NUMBERS BOXED	PART NUMBERS RETAIL	DESCRIPTION
24505	24505-BX	–	Metallic Lockout Lever Kit for 7.9 mm (5/16") Shackle Size
24505-01	–	–	Metallic Lockout Lever Kit for 7 mm Shackle Size
24505-02	–	24505-02-BP	Red Lockout Lever Kit for 7.9 mm (5/16") Shackle Size
24505-03	–	24505-03-BP	Yellow Lockout Lever Kit for 7.9 mm (5/16") Shackle Size
24505-04	–	24505-04-BP	Chrome Lockout Lever Kit for 7.9 mm (5/16") Shackle Size
80101-B	80101-B-BX	–	Manual Battery Disconnect Switch Lever with Chrome-Plated Finish
80101-D	–	–	Manual Battery Disconnect Switch Lever with Black Polyester Powder-Coated Finish

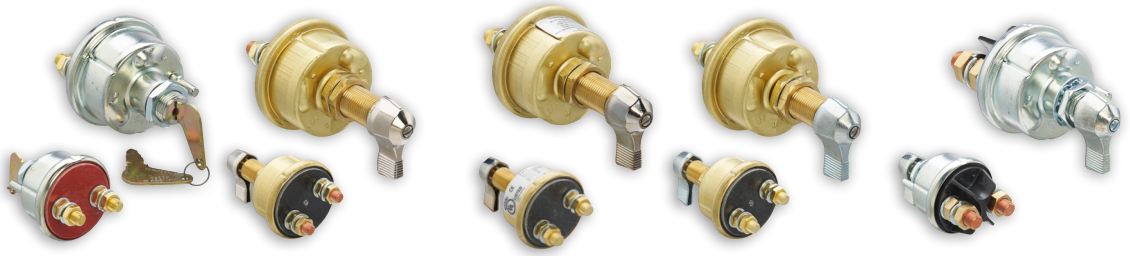
For use with Cole Hersee lever actuated master disconnect switches with a 3/4" diameter (19.1mm) mounting stem.

SERIES	PART NUMBERS	BROCHURE PAGE NUMBER
2484 Series	Single Pole: 484, 2484-A, 2484-06, 2484-09, 2484-16, 75900	7
	Double Pole: 75903, 75904, 75904-01	9
M-284 Series	M-284, M-284-A, M-284-01, M-284-02	6
M-290 Series	M-290, M-290-01, M-290-05	9
Heavy-Duty Single-Pole Series	75908, and 75908-BX	6
75920 Series	75920, 75920-05, 75920-10, 75921-10	7
75930 Series	75930-01, 75930-02, 75930-03	9
75940 Series	75940-01, 75940-02, 75940-03	7

Switch Selection Guide

Single Pole

DESCRIPTION	08098700	08098780	08099080	08080200	2484	2484-16
Battery Inputs	1	1	1	1	1	1
Continuous Rating	100A	150A	150A	150A	20A	175A
Intermittent Rating	–	–	–	–	125A	800A x 15 sec.
Voltage	12-24V DC	12-24V DC	12-24V DC	12-24V DC	6V DC; 12V DC	6-36V DC
Terminal Size	M8	M10	M10	M10	3/8"-24	3/8"-24
Terminal Material	Copper	Copper	Copper	Silver Plated Copper	Copper	Brass
Terminal Hardware	Zinc-plated Steel	Brass	Zinc-plated Steel	Brass	Brass	Brass
Sealing	IP4X	IP4X	IP43	IP65	–	–
Actuator	Key	Key	Key	Knob	Lever	Lever
Removable Key	•	•	•	–	–	–
Lockout-Tagout	–	–	–	–	with 24505 kit	with 24505 kit
Notes	–	–	• Weatherproof boot	• Push-to-off	• UL listed • Continuous Ratings 40A at 6V & 20A at 12V • Intermittent Ratings 250Aat 6V & 125A at 12V	• UL listed • Silver contacts



DESCRIPTION	2484-19	M-284	M-284-01	M-284-02	75908
Battery Inputs	1	1	1	1	1
Continuous Rating	175A	175A	175A	175A	300A
Intermittent Rating	1000A x 30 sec.	1000A x 15 sec.	800A x 15 sec.	1000A x 15 sec.	2000A x 30 sec.
Voltage	6-36V DC	6-36V DC	6-36V DC	6-36V DC	12V DC
Terminal Size	3/8"-24	3/8"-24	3/8"-24	3/8"-24	1/2"-20
Terminal Material	Brass	Copper	Brass	Brass	Copper
Terminal Hardware	Brass	Brass	Brass	Brass	Brass
Sealing	Splashproof	–	–	Splashproof	Splashproof
Actuator	Hencol key (83353)	Chrome Lever	Chrome Lever	Lever	Lever
Removable Key	•	–	–	–	–
Lockout-Tagout	with 24505 kit	with 24505 kit	with 24505 kit	with 24505 kit	with 24505 kit
Notes	• Indexing pin • Silver Contacts • O-ring in stem • Gasket seal in case	• Extra long mounting stem	• Silver contacts • Ignition protected • Extra long mounting stem	• Silver contacts • O-ring in stem • Gasket seal in case • Extra long mounting stem	• Indexing pin • Gasket seal in case

Switch Selection Guide

Single Pole

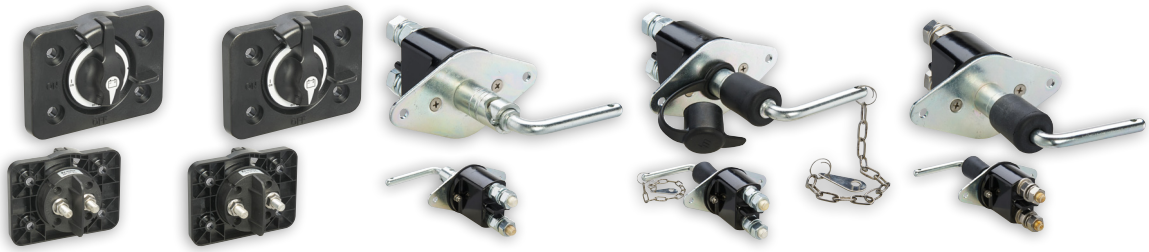
DESCRIPTION	2484-A	2484-06	2484-09	2484-02	2484-03
Battery Inputs	1	1	1	1	1
Continuous Rating	175A	175A	175A	175A	175A
Intermittent Rating	1000A x 15 sec.	1000A x 15 sec.	1000A x 15 sec.	1000A x 15 sec.	1000A x 15 sec.
Voltage	6-36V DC	6-36V DC	6-36V DC	6-36V DC	6-36V DC
Terminal Size	3/8"-24	3/8"-24	3/8"-24	3/8"-24	3/8"-24
Terminal Material	Brass	Brass	Brass	Brass	Brass
Terminal Hardware	Brass	Brass	Brass	Brass	Brass
Sealing	–	Splashproof	–	–	Splashproof
Actuator	Lever	Lever	Lever	Hencol key (83353)	Hencol key (83353)
Removable Key	–	–	–	•	•
Lockout-Tagout	with 24505 kit	with 24505 kit	with 24505 kit	with 24505 kit	with 24505 kit
Notes	• Silver contacts	• Silver contact • O-ring in stem • Gasket seal in case	–	• Indexing pin • Silver contacts	• Indexing pin • Silver contacts • O-ring in stem

DESCRIPTION	75920	75920-05	75920-10	75921-10	75940-01	75940-02	75940-03
Battery Inputs	1	1	1	1	1	1	1
Continuous Rating	400A @ 12V 300A @ 24V 200A @ 36V	400A @ 12V 300A @ 24V 200A @ 36V	400A @ 12V 300A @ 24V 200A @ 36V	400A @ 12V 300A @ 24V 200A @ 36V	300A	300A	300A
Intermittent Rating	3000A x 15 sec.	3000A x 15 sec.	3000A x 15 sec.	3000A x 15 sec.	1000A x 15 sec.	1000A x 15 sec.	1000A x 15 sec.
Voltage	12-36V DC	12-36V DC	12-36V DC	12-36V DC	32V DC	32V DC	32V DC
Terminal Size	3/8"-24	3/8"-24	3/8"-24	M10	M10 x 120mm²	M10 x 120mm²	M10 x 120mm²
Terminal Material	Tin Plated Copper	Tin Plated Copper	Tin Plated Copper	Tin Plated Copper	Tin Plated Copper	Tin Plated Copper	Tin Plated Copper
Terminal Hardware	Brass	Brass	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
Sealing	IP68*	IP68*	IP68*	IP68*	IP67/IPx9K	IP67/IPx9K	IP67/IPx9K
Actuator	Knob	Knob	Knob	Knob	Knob	Knob	Knob
Removable Key	–	–	–	–	–	–	–
Lockout-Tagout	•	•	•	•	•	•	•
Notes	• Indexing pin • *Thermal cycling followed by immersion (1m)	• Indexing pin • International I/0 marks • *Thermal cycling followed by immersion (1m)	• Indexing pin • *Thermal cycling followed by immersion (1m)	• Indexing pin • Additional Handle Options: 75920-01 (Yellow) 75920-02 (Black) • *Thermal cycling followed by immersion (1m)	• 200A with 90mm² Cables on Main • 10A with 2.5mm² Cables on Aux	• 200A with 90mm² Cables on Main • 10A with 2.5mm² Cables on Aux	• 200A with 90mm² Cables on Main • 10A with 2.5mm² Cables on Aux

Switch Selection Guide

Single Pole

DESCRIPTION	08098400	08098800	08098881	08098882	880062
Battery Inputs	1	1	1	1	1
Continuous Rating	250A	250A	250A	250A	300A (1x 4/0 cable)
Intermittent Rating	600A x 120 sec.	600A x 120 sec.	600A x 120 sec.	600A x 120 sec.	1250A (1x 4/0 cable) x 30sec.
Voltage	24V DC	24V DC	24V DC	24V DC	48V DC Max.
Terminal Size	M10	M10	M10	M10	3/8"-16
Terminal Material	Silver Plated Copper	Silver Plated Copper	Silver Plated Copper	Silver Plated Copper	Tin Plated Copper
Terminal Hardware	Zinc-plated Steel	Zinc-plated Steel	Zinc-plated Steel	Zinc-plated Steel	Stainless Steel
Sealing	IP65	IP65	IP65/IP69K	IP65/IP69K	
Actuator	Knob	Handle	Handle	Handle	Knob
Removable Key	–	•	•	–	–
Lockout-Tagout	–	–	–	•	–
Notes	–	–	• Actuator Tether • Weatherproof Boot	• Weatherproof Boot	• Ignition protected



DESCRIPTION	880064	880154	08098900	08098980	08098981
Battery Inputs	1	1	1	1	1
Continuous Rating	300A (1x 4/0 cable)	600A (2x 4/0 cable)	350A	350A	350A
Intermittent Rating	1250A (1 x 4/0 cable) x 30 sec.	2500A (1 x 4/0 cable) x 30 sec.	1500A x 120 sec.	1500A x 120 sec.	1500A x 120 sec.
Voltage	48V DC Max.	36V DC Max.	12-24V DC	12-24V DC	12-24V DC
Terminal Size	3/8"-16	3/8"-16	M12	M12	M12
Terminal Material	Tin Plated Copper	Tin Plated Copper	Silver Plated Copper	Silver Plated Copper	Silver Plated Copper
Terminal Hardware	Stainless Steel	Stainless Steel	Zinc-plated Steel	Zinc-plated Steel	Stainless Steel
Sealing	–	IP67/ IP69K	IP65	IP65	IP65/IP69K
Actuator	Knob	Knob	Handle	Handle	Handle
Removable Key	–	–	•	•	–
Lockout-Tagout	•	•	–	–	–
Notes	• Ignition protected	• High cranking amps • Ignition protected	–	• Actuator Tether • Weatherproof Boot	• Weatherproof Boot

Switch Selection Guide

Double Pole

DESCRIPTION	75903	75904	75904-01	75904-02	75904-03	M-290	M-290-01	M-290-05
Battery Inputs	2	2	2	2	2	2	2	2
Continuous Rating	125A large studs 20A small studs	125A large studs 20A small studs	125A large studs 20A small studs	125A large studs 20A small studs	125A large studs 20A small studs	125A large studs 20A small studs	125A large studs 20A small studs	125A large studs 20A small studs
Intermittent Rating	1000A x 15 sec. (Large studs)	1000A x 15 sec. (Large studs)	1000A x 15 sec. (Large studs)	1000A x 15 sec. (Large studs)	1000A x 15 sec. (Large studs)	1000A x 15 sec. (Large studs)	1000A x 15 sec. (Large studs)	1000A x 15 sec. (Large studs)
Voltage	6-36V DC	6-36V DC	6-36V DC	6-36V DC	6-36V DC	6-36V DC	6-36V DC	6-36V DC
Terminal Size	two 3/8"-24 two 10-32	two 3/8"-24 two 10-32	two 3/8"-24 two 10-32	two 3/8"-24 two 10-32	two 3/8"-24 two 10-32	two 3/8"-24 two 10-32	two 3/8"-24 two 10-32	two 3/8"-24 two 10-32
Terminal Material	Copper/Brass	Brass	Brass	Brass	Brass	Brass	Brass	Brass
Terminal Hardware	Brass	Brass	Brass	Brass	Brass	Brass	Brass	Brass
Sealing	–	–	–	–	–	–	Splashproof	–
Actuator	Chrome Lever	Chrome Lever	Chrome Lever	Hencol key (83353)	Hencol key (83353)	Chrome Lever	Chrome Lever	Chrome Lever
Removable Key	–	–	–	–	•	–	–	–
Lockout-Tagout	with 24505 kit	with 24505 kit	with 24505 kit	with 24505 kit	with 24505 kit	with 24505 kit	with 24505 kit	with 24505 kit
Notes	–	–	• Indexing pin	• Indexing pin	• Indexing pin	• Silver contacts • Extra long mounting stem	• Silver contacts • O-ring • Extra long mounting stem	• UL Listed • Silver contacts • Extra long mounting stem

DESCRIPTION	75912	75907	08084300	08084400	880175	M-750	75930-01	75930-02	75930-03
Battery Inputs	2	2	2	2	2	2	2	2	2
Continuous Rating	125A	300A	250A	500A	500A per circuit	310A	300A	300A	300A
Intermittent Rating	750A x 15 sec.	2000A x 30 sec.	1000A x 2 sec.	1500A x 2 sec.	2250A x 30 sec. (2 x 4/0 cables)	500A	1000A x 15 sec.	1000A x 15 sec.	1000A x 15 sec.
Voltage	6-36V DC	6-36V DC	24V DC	24V DC	12-24V DC	6-36V DC	32V DC	32V DC	32V DC
Terminal Size	3/8"-24	two 1/2"-20 two 10-32	M10	M12	M12	3/8"	M10 x 120mm^2	M10 x 120mm^2	M10 x 120mm^2
Terminal Material	Brass	Copper	Silver Plated Copper	Silver Plated Copper	Tin Plated Copper	Copper	Tin Plated Copper	Tin Plated Copper	Tin Plated Copper
Terminal Hardware	Brass	Brass	Stainless Steel	Stainless Steel	Stainless Steel	Brass	Stainless Steel	Stainless Steel	Stainless Steel
Sealing	Splashproof	–	IP67/IP69K	IP67/IP69K	IP67/ IP69K	–	IP67/IPX9K	IP67/IPX9K	IP67/IPX9K
Actuator	Chrome Lever	Lever	Handle	Handle	Knob	Knob	Knob	Knob	Knob
Removable Key	–	–	•	•	–	–	–	–	–
Lockout-Tagout	with 24505 kit	with 24505 kit	•	•	•	–	•	•	•
Notes	• Indexing pin • O-ring in stem • Gasket sealing in case • Hencol	• Indexing pin	• Weather-proof boot • Silver contacts	• Weather-proof boot • Silver contacts	• Additional Handle Options: 880175-0001 (Red) 880175-0002 (Yellow)	• M-752 with alternator field disconnect • M-754 with pilot light circuit	• 200A with 90 mm^2 Cables on Main • 10A with 2.5 mm^2 Cables on Aux	• 200A with 90 mm^2 Cables on Main • 10A with 2.5 mm^2 Cables on Aux	• 200A with 90 mm^2 Cables on Main • 10A with 2.5 mm^2 Cables on Aux

Ingress Protection

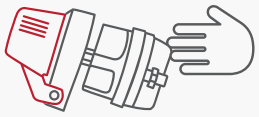
Harsh Environments and Ingress Protection Ratings

Environmental factors play a huge role in a product's ability to do its job and survive the lifetime of the equipment. Ingress Protection, or IP, indicates the degree of protection of a power distribution module. IP ratings are a measure of how resistant a part is to environmental contaminants such as debris, dust, and water. IP rating selections should be based on where the PDM will be mounted and what type of environment the equipment will be used in.

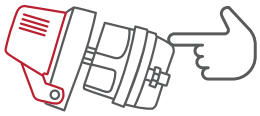
The numbers following IP represent levels of sealing and can range from no sealing (IP00) to protection against dust and continuous immersion in water (IP68). The table below provides a description of the protection at each level.

FIRST DIGIT – SOLID

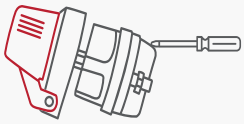
Degree of protection against solid objects



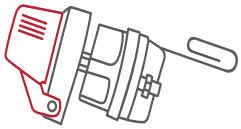
1
Protected against a solid object greater than 50mm.



2
Protected against a solid object greater than 12.5mm.



3
Protected against a solid object greater than 2.5mm.



4
Protected against a solid object greater than 1.0mm.

5
Dust Protected.
Prevents ingress of dust sufficient to cause harm.

6
Dust tight.
No ingress of dust.

Example
IP67

Dust tight. No ingress of dust.
Protected against effects of temporary submersion in water.

SECOND DIGIT – LIQUID

Degree of protection against water

1
Protected against vertically falling water drops.

2
Protected against vertical water drops when enclosure tilted up to 15 degree angle.

3
Protected against spraying water from up to a 60 degree angle.

4
Protected against splashing water.

5
Protected against water jets.

6
Protected against powerful water jets.

7
Protected against the effects of temporary immersion in water between 15cm and 1m for 30 minutes.

8
Protected against the effects of continuous immersion in water under conditions agreed between manufacturer and user.

9k
Protected against close-range high pressure, high temperature spray downs.

Common Applications

Many emergency vehicles have switches mounted in the cab or in a box. In cases like these, splashproof sealing will typically be sufficient.

Marine applications are often subject to unexpected spray and splash. In this case it's a good idea to have a minimum rating of IP66.

For externally mounted switches where spray or splash is a frequent concern, IP67 or better is recommended.

Key Terms and Definitions

Actuator - The part of a switch assembly used by the operator that causes switch contacts to engage or disengage. Actuators include levers, keys, knobs, handles, and T-handles.

Alternator Field Disconnect (AFD) - A safety feature of some disconnect switches. If the output of an alternator is quickly open-circuited the voltage rises to a potentially dangerous level. An AFD disconnects the alternator field so that the magnetic field is turned off, and thus the voltage does not spike.

Amp/Amperage - The strength of an electric current in Amperes (the basic unit of electrical current in the International System of Units).

Circuit - The path over which an electrical charge flows.

Contacts - A pair of metallic components that touch or come apart at the point where the switch throw makes or breaks the circuit. Silver contacts are common because of their high conductivity and low electrical resistance.

Continuous Rating - The rating meant to indicate what the device can handle forever with no interruption. It is usually measured as the amperage that a device can handle for one hour without exceeding the maximum allowed temperature rise at the terminals. Continuous-rated switches may be used as intermittent switches. Also known as a continuous-duty rating.

Hencol Key - Hencol (Henry + Cole) is a Cole Hersee brand name used to describe our non-bitted common keys. Hencol keys are often used for equipment that will have multiple operators. The non-bitted key allows any authorized user with a Hencol key to operate the switch.

Ignition-Protected - Electromechanical switches inevitably tend to create a spark between the contacts. In normal circumstances this is unlikely to be a problem, but in confined situations where fuel vapors may be present (in boats or in mines for example), ignition-protected switches are necessary. ISO 8846 is a marine standard of the International Organization for Standards.

Inrush Rating - The short duration rating of the switch. This rating is meant to reflect the ability of the switch to withstand a short-term, high-current event like starting. A large diesel engine starting in cold weather can draw close to 2000A for about 30 seconds. A switch can have multiple inrush ratings to help match your application

Intermittent Rating - The amount of current the switch can handle for 5 minutes or less with the same temperature rise as above. Intermittent rating of a switch is always higher than continuous rating. Intermittent-rated switches may not be used as continuous-rated switches.

IP Rating - Formally known as an International Protection rating, but often referred to as Ingress Protection, this rating determines the resistance of a device to environmental contaminants

Indexing Pin – Sometimes called a locating pin or anti-rotation pin, this pin aligns the switch with the mounting panel and prevents rotation for switches with through-hole-style mounting.

Lockout/tagout (LOTO) - A safety procedure which ensures that dangerous machines are properly shut off and not able to be started up again prior to the completion of maintenance or servicing work.

Short Circuit - An abnormal low resistance path between two polarities, or polar opposite, circuits. It will likely be accompanied by overheating, an explosion, or fire. A short circuit is also likely to cause damage to components or equipment in that circuit.

Terminals - Describes how a switch is connected to the circuit or device it activates. Battery switches are supplied with metric or standard threaded studs in many materials such as copper, brass, tin-plated brass, or silver-plated brass.

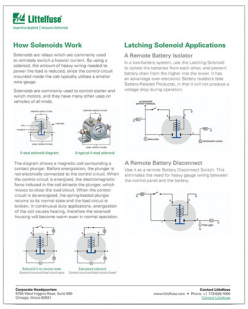
Product Information and Resources

Available at: littelfuse.com/CVP

Littelfuse publishes technical documents to help in the design and selection of products for your electrical systems. To learn more about a specific product or application, visit our online library at:

Littelfuse.com/Commercial-Vehicle-Technical-Center

- Extended Datasheets
- Application Notes
- CAD Drawings
- 2D Outlines
- 3D Models
- Glossary
- FAQ



Littelfuse.com/Catalogs

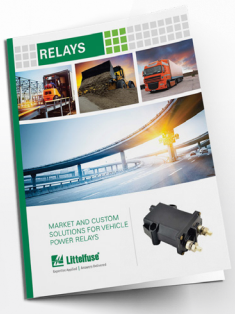
Littelfuse offers digital and printed catalogs and other product brochures. To request a copy, please contact Littelfuse or download the digital version on our website.

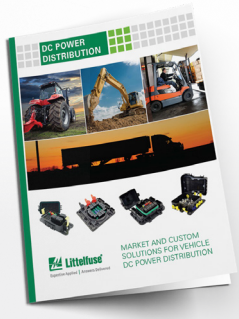
Our product catalogs feature circuit protection, power control and sensing products for OEM and aftermarket applications.

SCAN TO DOWNLOAD
Transportation Product Catalog

Littelfuse.com/ContactUs

Contact Littelfuse support or find a local representative or distributor.





Littelfuse®
Expertise Applied | Answers Delivered

©2024 Littelfuse, Inc.
Specifications, descriptions and illustrative material in this catalog are subject to change without notice.
Visit littelfuse.com for the most up-to-date technical information.

Part Number: CVP230
Rev: 022824