

PowerLine Fusible Disconnect switches



PowerLine
Compact, heavy duty
Fusible disconnect switches
30A – 800A, 600V

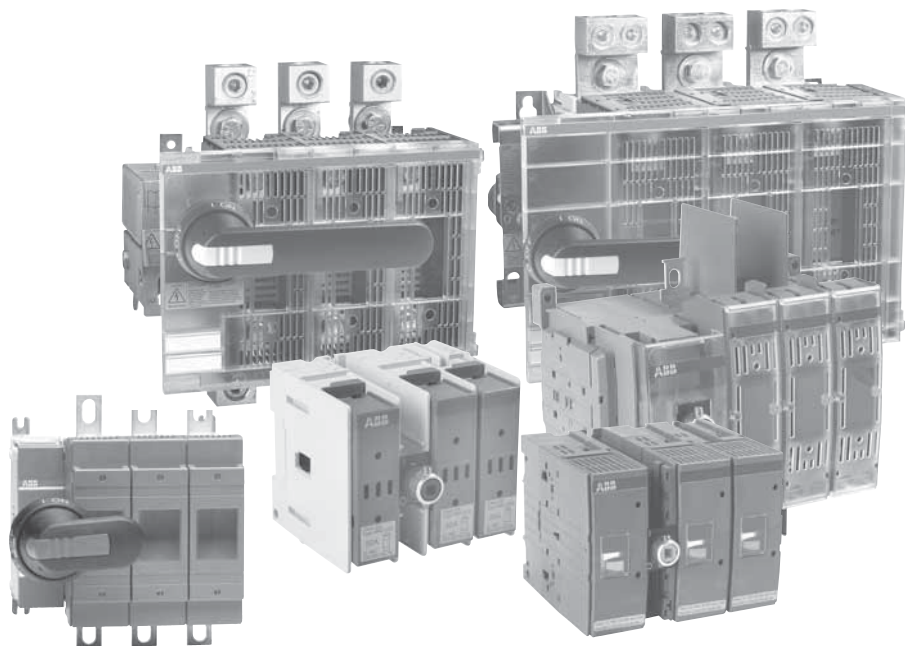
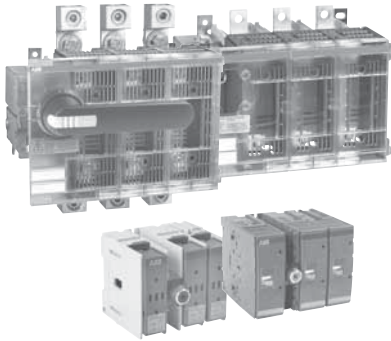


ABB PowerLine includes seven different amperage sizes from 30A to 800A. All PowerLine fusible switches are designed to meet customer requirements in terms of high interrupting capacity and long electrical life while occupying little more panel space than the appropriate fuses. The basic construction provides flexibility and high performance in an extremely compact size. ABB PowerLine switches are a perfect choice to withstand the heat and humidity of the tropics, the extreme cold of the arctic and any rugged industrial environment you may have.

General information

Disconnect
Switches
Fusible



Versatility

ABB PowerLine fusible disconnect switches are designed to offer maximum versatility in many ways.

Broad range

PowerLine is seven amperage sizes from 30A – 800A. All sizes are compact, heavy duty, 600V disconnect switches. Many sizes are available in 2, 3, 4, 6, and 8 pole configurations.

Compact size

The PowerLine's unique compact dimensions allow panel size reduction in new applications or easily retrofits into space-sensitive existing applications. The entire switch occupies little more panel space than the appropriate fuses.

International acceptance

PowerLine fusible switches are available with a wide range of fuse clip options:

UL	USA	CSA	Canada
DIN	Europe	BS	United Kingdom
NFC	France	Ultra-rapid	

As well as the corresponding approvals: UL listed, CSA approved, IEC rated, CE marked, and most other international standards.

UL98 (CSA 22.2 No.4) — UL File # E101914, CSA File #LR58077

For 30A – 800A switches, OH_ pistol grip handles

Suitable for use as motor disconnects or industrial control panel disconnects on service entrance equipment, panelboards, switchboards, industrial control equipment, motor control centers, etc. and are horsepower rated and ampere rated.

IEC

Tested in accordance to IEC 947-1 and 3, IEC 664, IEC 269, and IEC 204

CE

Compliance with the European Machine Directive IEC 204 (EN 60204)



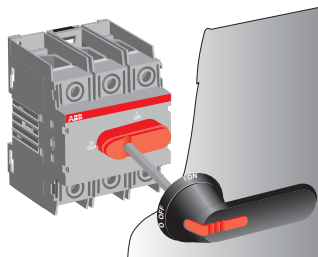
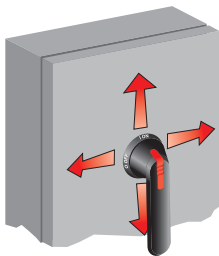
Installation options

Rotary through the door: available in all sizes, 30A – 800A

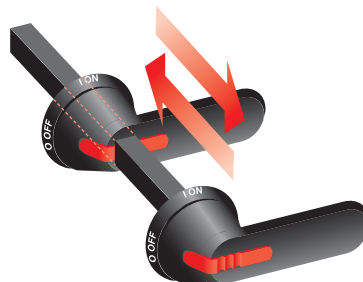
Flange: versions available in 30A to 800A sizes

A rotary disconnect switch may be installed nearly anywhere in a control panel — mounting is not limited to the upper right hand corner of the panel.

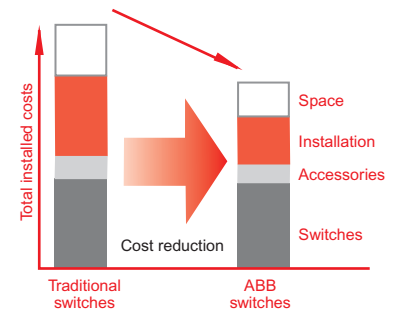
Mount the switch where it conveniently fits in your panel and simply install the handle on the door, in line with the switch. The switch and handle are mechanically linked through an easily adjusted shaft. This allows fast and easy installation into panels of different depths and layouts.



Rotary through the door installation

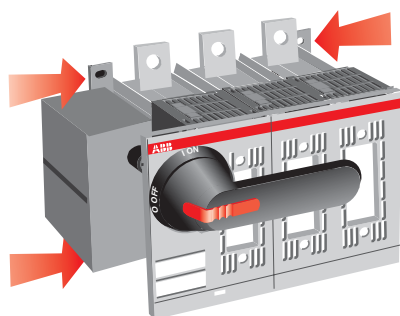
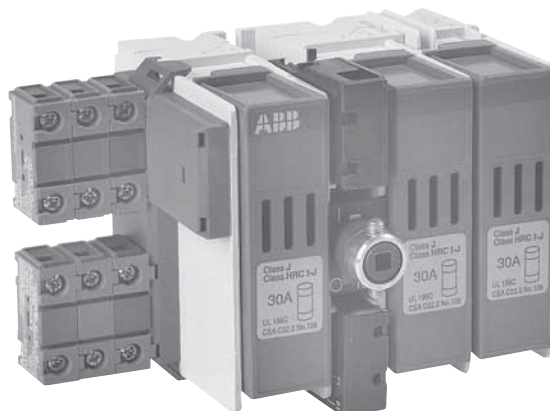


Easily adjusted shaft

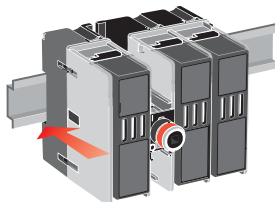


Broad range of accessories

- Handles — UL/NEMA type 1, 3R, 4, 4X, 12 IP 54, 65, 66
- Auxiliary contacts available for every switch size
- Additional terminal poles (neutrals & grounds)
- Terminal shrouds
- 6 & 8 pole mechanisms
- Transfer mechanisms
- Bypass mechanisms
- Mechanical interlock mechanisms
- Electro-mechanical interlock mechanisms
- Motor operators



Base mounting with screws



DIN rail mounting

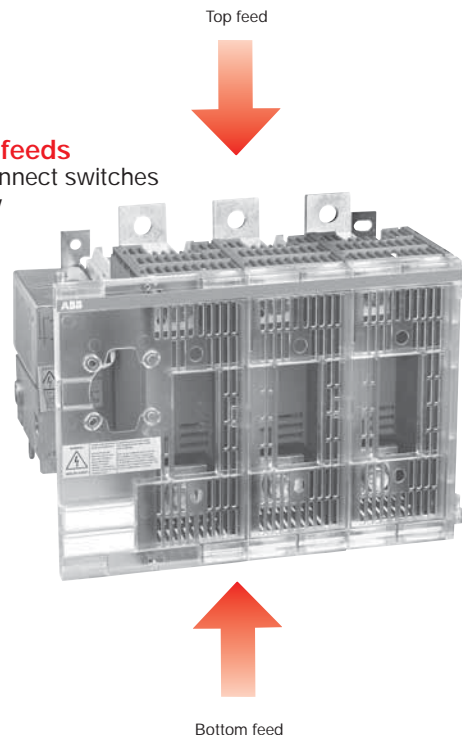
Mounting

PowerLine disconnect switch mounting possibilities:

- DIN rail mounting — OS30, OS60 & OS100
- Base mounting with screws

Incoming power feeds

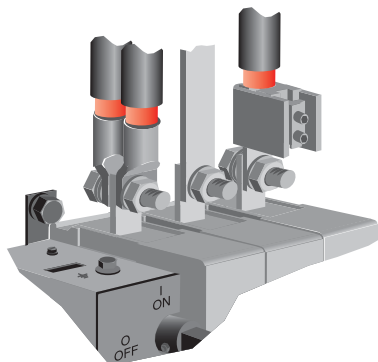
All PowerLine disconnect switches can be used equally well with either top or bottom incoming power feeds.



Terminal connections

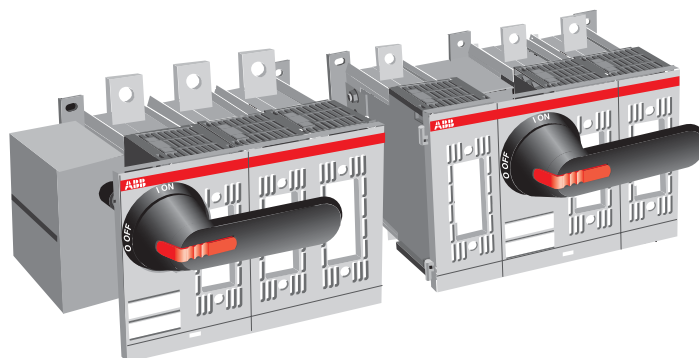
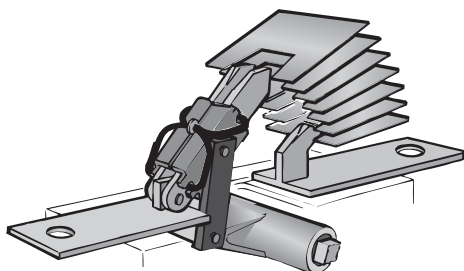
Versatile connecting possibilities, 100A – 800A:

- Ring tongue crimp on lugs
- Direct bus
- Terminal lugs



High performance

The mechanism is quick-make/quick-break, meaning the contacts operate independently of the speed and force at which the handle is operated. This, in combination with unique, patented self-cleaning contacts, provides a long, reliable, electrical life.

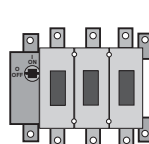


Modular construction^①

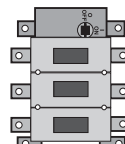
Modular switch construction allows the operating mechanism to be placed at either end of the switch or anywhere in-between, 100A – 800A.

Mounting positions

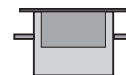
PowerLine disconnect switches may be mounted in any position:



Vertical



Horizontal



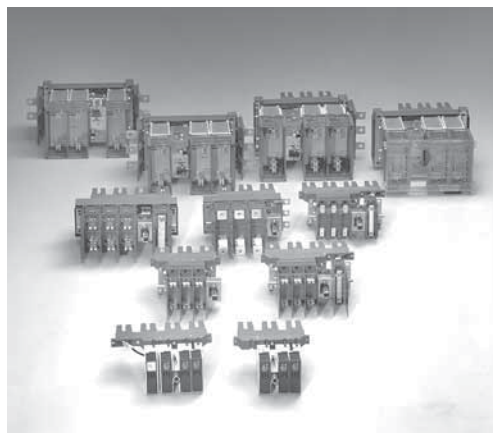
Ceiling



Floor

Unique terminal locations^①

- Side connections
- Rear connections
- Bus stabs



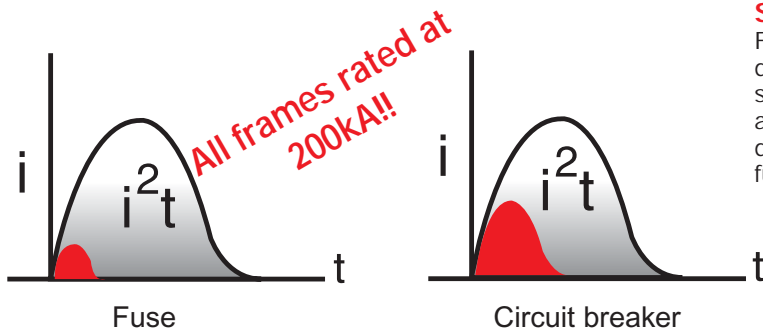
^① Please consult ABB sales office for additional information

General information

Superior short circuit protection

Fuses efficiently limit the peak let-through current, i^2t , during a fault better than any other product, contributing to safety and reliability. Selectivity and coordination are easily accomplished with fused protection. PowerLine fusible disconnect switches accept a wide range of North American fuses:

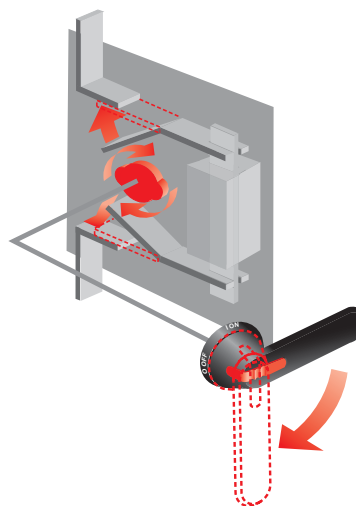
Class CC	30A
Class J	30A – 600A
Class L	800A
Class T	400A – 800A



Superior short circuit protection

Fuse isolation

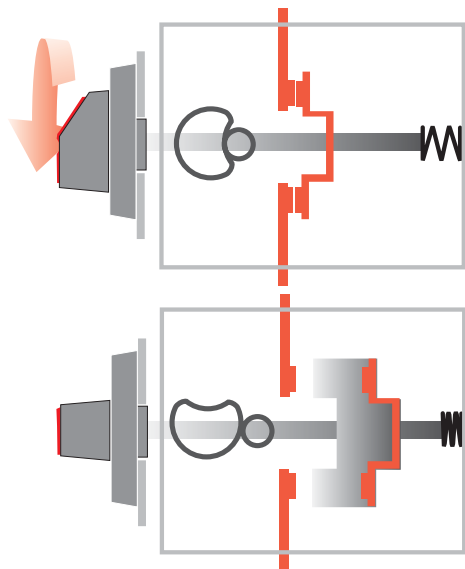
PowerLine switches contain contacts on both sides of the fuse. The fuses are totally isolated in the "OFF" position, reducing the risk of shock to authorized personnel — even if the switch has been back fed.



Fuse isolation

Finger proof

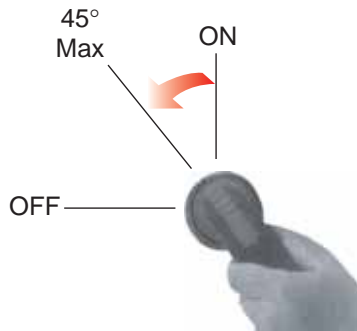
Dead-front construction plus terminal shrouds reduce the risk of touching live parts, improving the safety and reliability of the installation.



Positive opening operation

Positive opening operation

All switches operate according to the "positive opening operation" principle. This means the contacts are opened and closed by a driven mechanism, a solid moving bridge, not merely springs. This provides reliable position indication to the user; if the switch is in the "OFF" position, the contacts are open.



Welded contact protection

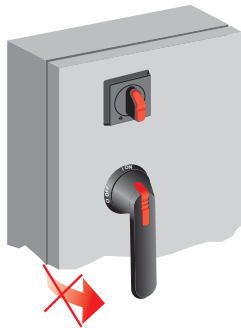
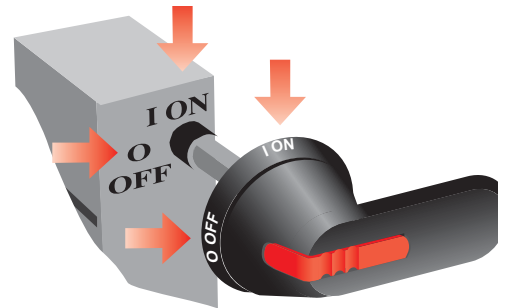
Positive opening operation safeguards users in case of welded contacts due to an overload or short circuit.

The switch can not reach the "OFF" position unless the contacts are truly open. If any or all of the contacts are welded shut, the switch mechanism will only allow the handle to operate a maximum of 45°. This safeguards personnel by:

- alerting them a problem has occurred
- maintaining the door interlock and
- not allowing a padlock to be inserted.

Clear position indication

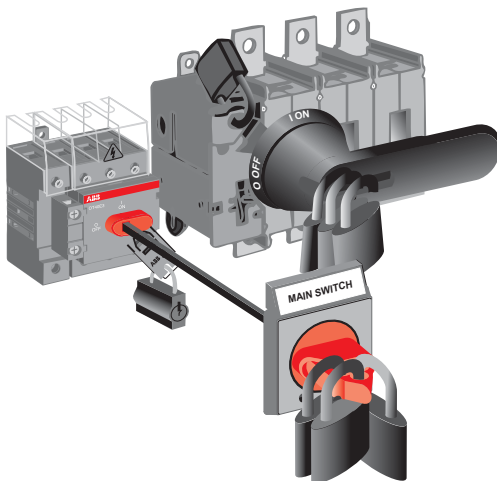
All switches and handles have clear "ON" and "OFF" designations. Whether the door is open or closed, it is possible to simply look at the switch and determine if the switch is "ON" or "OFF".



Door interlock

Door interlock

The handle and shaft provide door interlock, the door can not be opened when the switch is in the "ON" position. NOTE: Some handles provide a method for qualified personnel to circumvent the door interlock. This is commonly referred to as a "defeater" mechanism.



Handle and mechanism padlocked OFF

Padlockable

Handles can be padlocked in the "OFF" position with up to three padlocks; additionally, the switch mechanism can be directly padlocked in the "OFF" position when the door is open. NOTE: Some handles can be ordered with the ability to padlock in both the "ON" & "OFF" positions. Please consult your ABB sales office for ordering information.

Track resistant material

Excellent track resistant material, CTI > 600V, IEC 112, reduces the risk of flashover between phases in even the most severe circumstances.