

# socomec

## Innovative Power Solutions

### Disconnect Switches



#### Compact UL 98 Non-Fusible Switches 30 - 100 Amp Range

- Touch safe
- DIN-rail or back-plate mounted
- Direct or external operation handle
- Double breaking per pole



#### UL 98 Non-Fusible Heavy Duty Switches 100 - 600 Amp Range

- Fully visible disconnection
- High thermal and dynamic withstand
- High electrical and mechanical endurance



#### UL 508 Non-Fusible Switches 16 - 100 Amp Range

- Compact and modular
- Direct or external operation
- DIN-rail or base mount
- Suitable as motor disconnect



#### UL 508 Enclosed Non-Fusible Switches 30 - 60 Amp Range

- 1 removable ground terminal
- Ability to add 1 power pole and 1 auxiliary contact
- NEMA/UL type 1, 3R, 12, 4, 4X
- Suitable as motor disconnect



#### UL 489 Compact Fusible Disconnect Switches 30 Amp Rating

- Front operation
- Touch safe covers
- Voltage sensing terminals
- Up to 200kA SCCR



#### UL 98 Manual Multipolar Load Switches 100 - 250 Amp Range

- Ideal for photovoltaic applications
- 600VDC per UL 98 / CSA
- 1000VDC per UL98B
- Up to 1000VDC per UL IEC 60947-3 characteristics



- #### UL 98 Fusible Disconnect Switches 30 - 600 Amp Range
- Front and side operation
  - Touch safe covers
  - Up to 200kA SCCR
  - Double break contact



To obtain the most current agency approval information, see the Agency Approval Checklist section on the specific part number's web page at [www.AutomationDirect.com](http://www.AutomationDirect.com)

# Disconnect Switches

## Introduction

### **UL®/CSA® Standards for Disconnect Switches**

#### **UL 98 – Enclosed and Deadfront Switches (CSA C22.2 No. 4)**

These requirements cover enclosed or deadfront switches, with or without provision for fuses, at 600V or less. These products are used as disconnecting means without restrictions; they are heavy-duty products requiring 2 inches (50mm) minimum of creepage distance between phases, which gives maximum safety for users and installation. The short-circuit withstand of these products goes up to 200kA.

#### **UL 489 – Molded Case Switches (CSA C22.22 No. 5)**

These requirements cover molded case circuit breakers, molded case switches and fused molded case switches, rated at 600V or less and 6000A or less.

### **NFPA® 79 Electrical Standard for Industrial Machinery**

The following types of machines are identified as industrial machinery:

- Metalworking machine tools, including machines that cut or form metal
- Plastics machinery
- Wood machinery, including woodworking, laminating and sawmill machines
- Assembly machines
- Material handling machines, including industrial robots and transfer machines
- Inspection and testing machines, including coordinate measuring and in-process gauging machines

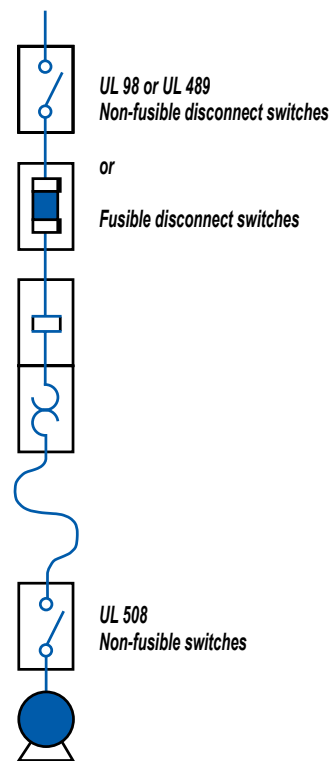
### **UL® Standards for Electrical Machinery**

#### **UL 508 – Industrial Control Equipment (CSA C22.2 No. 14)**

These requirements cover manual, magnetic and solidstate starters and controllers, overload relays, pushbuttons, selector switches and control lights. These products are smaller, requiring only a creepage distance between phases of 0.50 inch (12.7 mm). Their use as a disconnecting means is limited to local disconnection of motors. These products can be used as a disconnect means only when they have been additionally tested "suitable as motor disconnect." This additional testing ensures that the switch has a proper closing capacity on a short circuit.

UL 508 devices **cannot** be used as main disconnect of an electrical panel, e.g., at the entrance of control panels. A manual motor controller marked "suitable as motor disconnect" shall be installed only on the load side of the branch circuit protective device [UL 508A 30.3.3 and NEC 430.109 (6)].

#### **Typical Control Panel**



### **Meeting the requirements of UL508A and NFPA79**

#### **The disconnect shall be operable independent of the door position.**

The disconnect must be operable, by qualified persons, independent of the door position without the use of accessory tools or devices.

**Note:** NFPA 79; Paragraph 5.3.3.1 (5).

An operating mechanism for the disconnecting means shall be operable independent of the door position without the use of accessory tools or devices.






**Note:** UL 508A; Paragraph 66.6.3 c.

# Non-Fusible Disconnect Switches



## Selection Guide

- Which application?
- Which function?
- Which operation handle?
- Which type of breaking?

Machine Control			Power Distribution	
UL 98 Compact Non-Fusible Disconnect Switches	UL 508 Non-Fusible Disconnect Switches*	UL 508 Non-Fusible Enclosed Disconnect Switches	UL 98 Non-Fusible Disconnect Switches	UL 98B DC Non-Fusible Disconnect Switches
				
<a href="#">22013003</a> <a href="#">22013006</a> <a href="#">22003010</a>	<a href="#">22003000</a> , <a href="#">22003001</a> <a href="#">22003002</a> , <a href="#">22003003</a> <a href="#">22003004</a> , <a href="#">22003006</a> <a href="#">22003008</a>	<a href="#">22143503</a> <a href="#">22243503</a> <a href="#">22243506</a>	<a href="#">27003011</a> , <a href="#">27004011</a> <a href="#">27003021</a> , <a href="#">27004021</a> <a href="#">27003041</a> , <a href="#">27003060</a>	<a href="#">27DC3011</a> <a href="#">27DC4011</a> <a href="#">27DC3021</a> <a href="#">27DC4021</a>

Applications					
Main switchboard		✓	✓	✓	✓
Distribution panel		✓	✓	✓	✓
Emergency disconnect		✓	✓	✓	✓
Local safety disconnect (padlockable)		✓	✓	✓	✓
Photovoltaic disconnect					✓
Enclosed switches		✓	✓	✓	✓
Functions					
3/4 pole non-fusible disconnect switch		✓	✓	✓	✓
Characteristics					
Operation	Manual (rotating)	✓	✓	✓	✓
Direct operation handle	Front	✓	✓	✓	✓
External operation handle	Front	✓	✓	✓	✓
	Right side	✓	✓		
Indication of breaking	Positive break indication	✓	✓	✓	✓
Switch body	Modular	✓	✓		

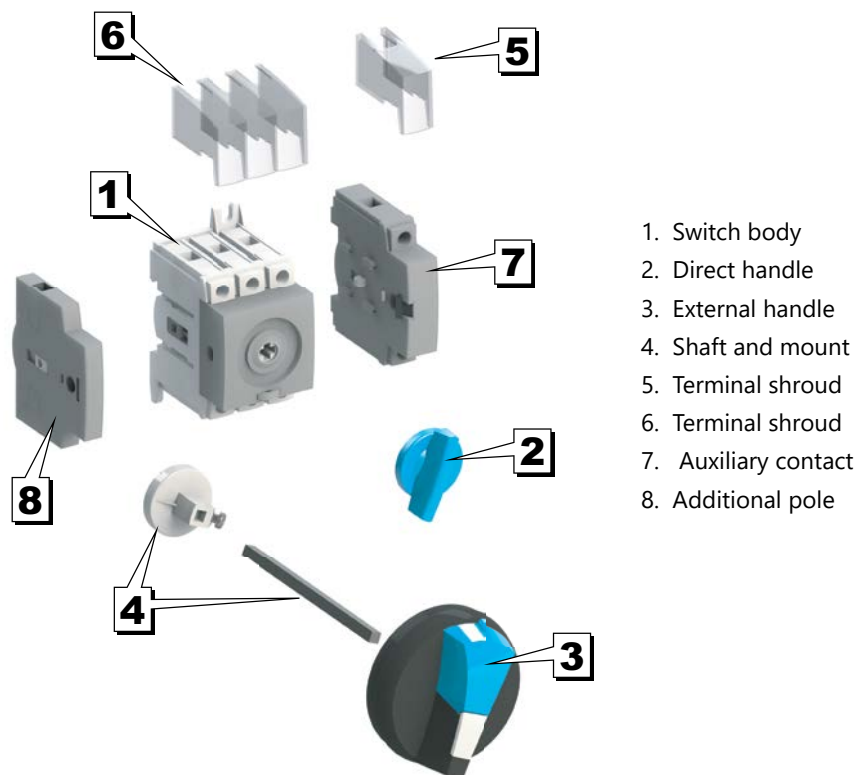
\* Note: These part numbers are direct replacements for previous part numbers with a "-UL" suffix. They have identical technical specs, form, fit and function. There is no change in agency approvals, the UL mark, listing, or File numbers E173959 and E201138.

# Non-Fusible Disconnect Switches

## Assembly of Accessories

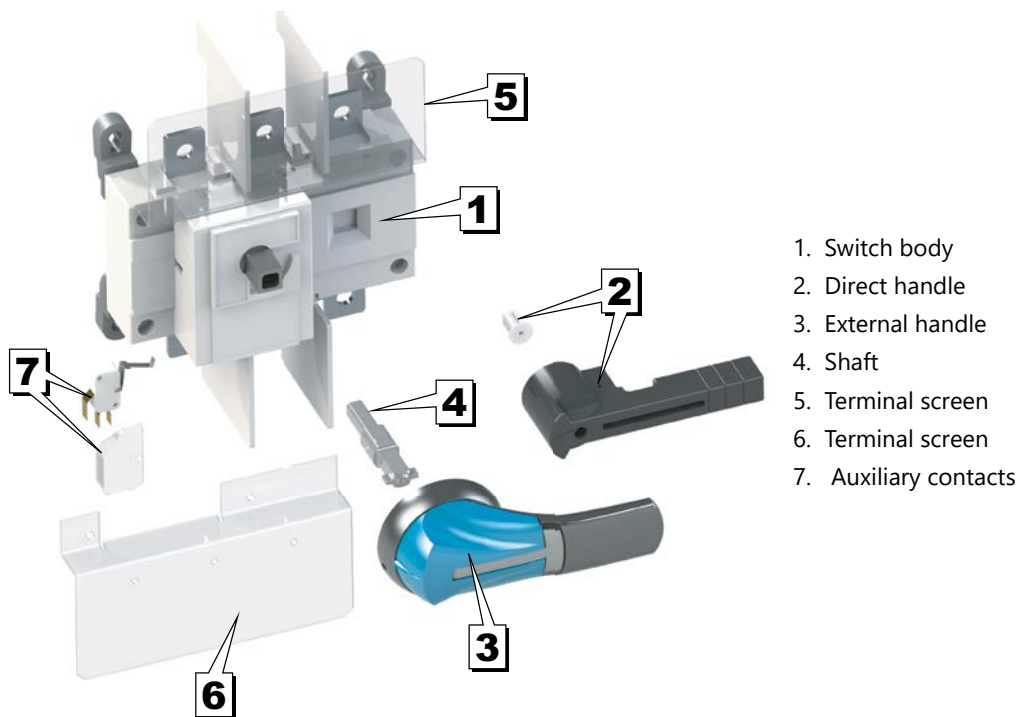


### Non-fusible 16 - 100A Disconnect Switches Accessories



1. Switch body
2. Direct handle
3. External handle
4. Shaft and mount
5. Terminal shroud
6. Terminal shroud
7. Auxiliary contact
8. Additional pole

### Non-fusible 100 - 600A Disconnect Switches Accessories



1. Switch body
2. Direct handle
3. External handle
4. Shaft
5. Terminal screen
6. Terminal screen
7. Auxiliary contacts