

# Which switch is right for you?

## Mersen Disconnect Switches

FERRAZ SHAWMUT IS NOW MERSEN

**Mersen**



### UL 98 Rated Disconnect Switches used for:

- Service entrance or main panel disconnects up to 600 VAC, 800 A
- "Make and Break" power circuit applications on load
- NFPA 79 Solutions
- Motion disconnecting means NEC 430.101 - 403.113



### UL 98 Rated Disconnect Switches

The AUTOMATIONDIRECT power products line now includes 600 VAC / 250 VDC heavy-duty fusible and non-fusible electrical disconnects from Mersen. The SC and FB series meet UL 98 standards and are UL, CSA, CE and IEC rated. The series is designed with the most up-to-date power disconnect technology available - "make and break" power circuits on load. In addition, a wide array of handles is available, meeting OSHA padlocking requirements, NEMA configurations, defeater options and NFPA 79 requirements. These switches have been tested and approved for use in the most demanding applications, including "service entrance".

#### SC series

- Non-fusible rotary disconnect switches
- Makes/Breaks loads up to 800 amps
- Front operated
- Visible blade contacts
- Line side shrouding comes standard with switch

#### Ratings

- 600 VAC, 250 VDC
- 30, 60, 100, 200, 400, 600, and 800 amperes
- Up to 200 kA short circuit rating when Class CC, J, or L fuses are used externally

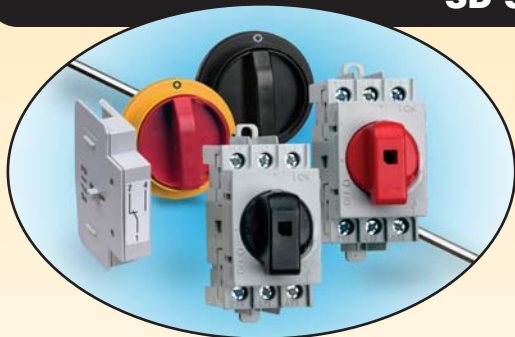
#### Approvals

- All SC series switches meet UL 98 requirements
- UL Listed Guide WHTY, File E191605
- CSA C22.2 # 4 Class 4652 04, File 703166
- IEC 947-3 as a load break disconnect
- CE mark

#### FB series

- Fusible rotary disconnect switches
- Makes/Breaks loads up to 200 amps
- Front operated
- Uses Class CC and Class J fuses
- Line side shrouding comes standard with switch
- Touch safe fuse covers standard with switch
- Can be used in "reverse" applications where the mains are fed in on the load side

## SD Series Load Switches



### UL 508 Rated Load Switches used for:

- Disconnect (device without on-load making and breaking capacity)
- Switches at installation head or for resistive circuits (heating, lighting, except discharge lamps, etc.)
- Switches in secondary circuits or reactive circuits (capacitor banks, discharge lamps, shunt motors, etc.)

### UL 508 Rated Load Switches

The SD series, our non-fused load-break disconnects allow breaking and disconnecting of equipment loads up to 600 VAC, at nominal currents from 16A to 125A. **These disconnect switches are UL listed as Manual Motor Controllers and are commonly used as motor isolation disconnects in junction boxes local to the motor.** When upstream short-circuit protection is provided, they may be used as enclosure disconnects.

- Loads from 16 to 125 amps
- High breaking capacity
- Double break contacts
- High electrical and mechanical endurance
- Resistant to damp heat
- IP20 degree of protection
- HACR (heating, air conditioning and refrigeration) rated
- 35mm DIN rail mountable or panel mounting
- Modular 45mm frame
- Remote handles with door interlock feature can be locked with up to three padlocks in the OFF position

#### Ratings

- 600 VAC • IP 20
- 16 to 125 amps

#### Approvals

- UL 508/cUL File: UL E226699
- IEC/EN File No. 60947/1-3
- CE mark

# Mersen quality at AutomationDirect prices

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## Overview

Our power products line includes 600 VAC/250 VDC heavy-duty fusible and non-fusible disconnects from Mersen. Meeting UL 98 standards, the SC Series and FB Series are designed with the latest disconnect technology available, "make and break" power circuits under load, and are UL, CSA, CE and IEC rated. A wide array of handles is available, meeting OSHA padlocking requirements, NEMA configurations, defeater options and NFPA 79 requirements.

The SC Series switches have been tested and approved for use in the most demanding applications, such as "service entrance" and main panel disconnects. These heavy duty SC Series switches are available in 30-800 amp ratings; switches up to 400 amps are equipped with visible blade contacts. The available defeatable pistol handles automatically re-latch when the panel door is closed, eliminating the need for tools to reset the latch.

The FB Series of fusible disconnects use double break contacts per pole, up to 200 amps, isolating the fuse while the switch is in the OFF position. To reduce or eliminate the danger of accidental contact with live, energized parts, these fusible disconnects are supplied with fuse covers and line side shrouding as a standard safety feature. Used with class CC or J fuses (available from AutomationDirect), the FB SERIES switches provide dependable circuit protection.

As defined in the NFPA 79 standard, section 5.3.3.1 and 6.2.3.1.2, these disconnect switches fully comply with all of the following requirements:

- Isolate the electrical equipment from the supply circuit and have one "OFF" (open) and one "ON" (closed) position only
- Have an external operating means
- Be provided with a permanent means permitting it to be locked in the "OFF" (open) position only independent of door position
- Be operable, by qualified persons, independent of the door position without accessory tools or devices

All the disconnect switches' contacts work independently of the speed and force of the operator. Switches up to 400 amps use silver-tipped contact technology providing the following advantages:

- Best solution for harsh environments
- High on-load break characteristics
- Longer mechanical and electrical life
- Maintenance free switches without grease

Switches above 400 amps use a self-cleaning moving technology that provides high short-circuit withstand.

In the case of welded contacts due to an overload or short circuit condition, the disconnects provide operational features to safeguard the user. As long as the force applied to the handle is not greater than 3 times the standard operational force, the handle will NOT be able to reach the "OFF" position unless the contacts are truly open. This is in accordance with the IEC 947-3 standard.

**UL 508  
NFPA 79 Compliant Solutions  
IEC 947-3**



# Mersen Non-Fusible Disconnects SC Series

## Overview

Mersen SC Series disconnect switches are heavy duty, manually operated, non-fused disconnect switches, designed using the latest disconnect switch technology available. SC Series switches meet UL98 standards with a product that “makes and breaks” power circuits on load. These switches have been tested and approved for use in the most demanding applications, including “service entrance”. Visible blade contacts are standard in SC Series switches up to 400A. Choose from a wide array of handles meeting OSHA padlocking requirements, NEMA configurations, defeater options and NFPA 79 requirements.

## Features

- Service entrance rated
- Compact footprints
- Front operated switches
- Visible blade contacts up to 400A
- Line side shrouding supplied with switch
- Defeatable pistol handles automatically re-latch when panel door is closed - no tool necessary to reset latch
- External or direct operation handles

## Ratings

- 600 VAC, 250 VDC
- 30, 60, 100, 200, 400, 600, and 800 amperes
- Up to 200 kA short circuit rating when Class CC, J, or L fuses are used externally

## Approvals

- All SC Series switches meet UL 98 requirements
- UL Listed Guide WHTY, File E191605
- CSA C22.2 # 4 Class 4652 04, File 703166
- IEC 947-3 as a load break disconnect
- CE mark

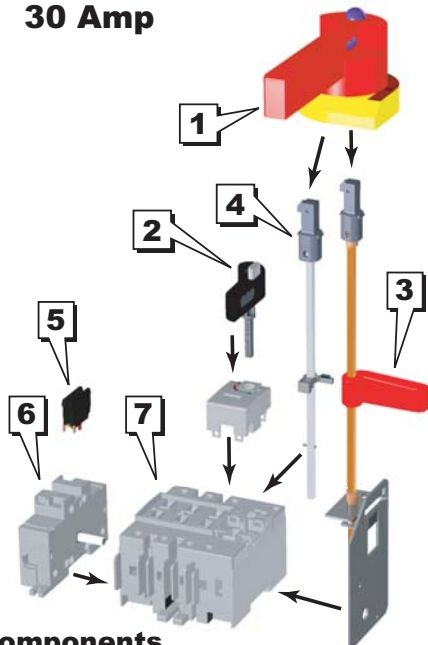
## Applications

- Service entrance or main panel disconnects up to 600 VAC, 800 A
- “Make and Break” power circuit applications on load
- NFPA 79 Solutions

SC Series Range: Non-Fusible Disconnect Switches							
<b>Ampere Rating</b>	<b>30</b>	<b>60</b>	<b>100</b>	<b>200</b>	<b>400</b>	<b>600</b>	<b>800</b>
<b>Catalog Number: 3 Pole</b>	SCV30	SCV60	SCV100	SCV200	SCV400	SC600	SC800

## Components

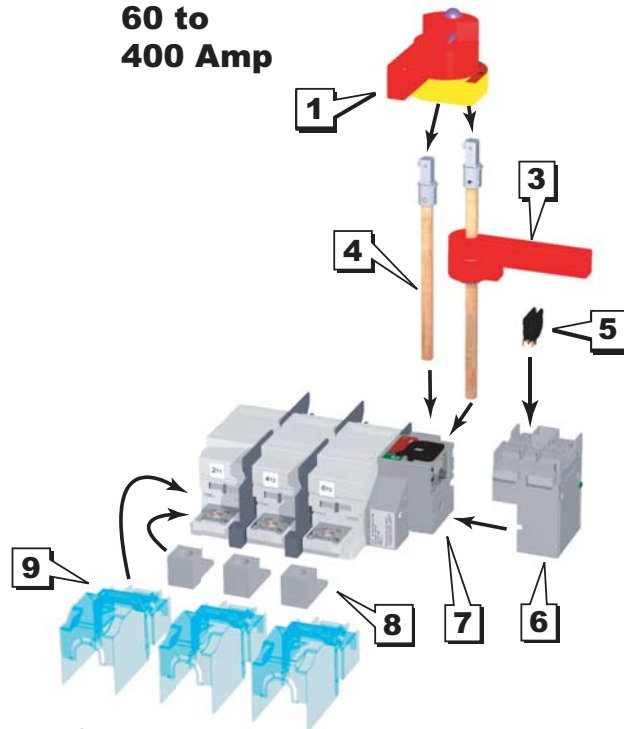
### 30 Amp



#### Components

- 1 – External Door Handle
- 2 – Direct Mount Handle Option
- 3 – NFPA 79 Compliant Handle Option
- 4 – Standard Shaft

### 60 to 400 Amp



- 5 – Auxiliary Contact Block
- 6 – Auxiliary Contact Holder
- 7 – Disconnect Switch Body

- 8 – Terminal Lugs
- 9 – Terminal Shroud

# Non-Fusible Disconnects

## SC Series Selection Guides

SC Series Front-operated Non-Fusible Disconnects					
Switch Body Part Number	Price	Weight lb(kg)	Ampere Rating	Hp @ Voltage	Interrupt Capacity (kA)*
SCV30	<-->	3.9(1.79)	30	15 Hp @ 480V	50
SCV60	<-->	4.0(1.80)	60	30 Hp @ 480V	200
SCV100	<-->	5.5(2.50)	100	60 Hp @ 480V	200
SCV200	<-->	7.6(3.40)	200	125 Hp @ 480V	200
SCV400	<-->	17.2(7.80)	400	250 Hp @ 480V	200
SC600	<-->	18.7(8.50)	600	400 Hp @ 480V	200
SC800	<-->	19.6(8.90)	800	500 Hp @ 480V	100

\* When fused separately

Mersen Non-Fusible Disconnects Component Selection Guide				
Part Number	Price	Weight lb(kg)	Description	Use with
SD200-5	<-->	0.2(0.09)	Operator shaft, type D, 7.9" (200 mm) length, 5x5 mm thick (purchase handle separately)	SCV30
SD320-5	<-->	0.3(0.14)	Operator shaft, type D, 12.6" (320 mm) length, 5x5 mm thick (purchase handle separately)	SCV30
SG120-5	<-->	0.15(0.07)	Operator shaft, type G, 4.7" (120 mm) length, 5x5 mm thick (purchase handle separately)	SCV30
SG200-10	<-->	0.3(0.14)	Operator shaft, type G, 7.9" (200 mm) length, 10x10 mm thick (purchase handle separately)	SCV60 thru SCV400
SG200-5	<-->	0.2(0.09)	Operator shaft, type G, 7.9" (200 mm) length, 5x5 mm thick (purchase handle separately)	SCV30
SG320-10	<-->	0.5(0.23)	Operator shaft, type G, 12.6" (320 mm) length, 10x10 mm thick (purchase handle separately)	SCV60 thru SCV400
SG320-5	<-->	0.2(0.09)	Operator shaft, type G, 12.6" (320 mm) length, 5x5 mm thick (purchase handle separately)	SCV30
SG400-10	<-->	0.7(0.32)	Operator shaft, type G, 15.7" (400 mm) length, 10x10 mm thick (purchase handle separately)	SCV60 thru SCV400
SH400-15	<-->	2.1(0.95)	Operator shaft, type H, 17.7" (450 mm) length, 15x15 mm thick (purchase handle separately)	SC600, SC800
HADB1	<-->	0.1(0.05)	Direct operation handle	SCV30
HADB6	<-->	0.4(0.18)	Direct operation, optional handle, 12.415" (315.314 mm) long padlocking on the switch, NFPA 79 compliant	SCV30
HADB8	<-->	0.4(0.18)	Direct operation, optional handle, 12.415" (315.314 mm) long padlocking on the switch, NFPA 79 compliant	SCV60 thru SCV400
HDPB	<-->	0.2(0.09)	Black Pistol handle, NEMA 12, 2.48" (63 mm) long, Type D, defeatable and lockable	SCV30
HDPR	<-->	0.2(0.09)	Red and yellow Pistol handle, NEMA 12, 2.48" (63 mm) long, Type D, defeatable and lockable	SCV30
HGPB	<-->	0.5(0.23)	Black Pistol handle, NEMA 12, 2.78" (70.6 mm) long, Type G, defeatable and lockable	SCV30
HGPB4	<-->	0.6(0.27)	Black Pistol handle, NEMA 4X, 2.78" (70.6 mm) long, Type G, defeatable and lockable	SCV30
HGPB4L	<-->	0.7(0.32)	Black long Pistol handle, NEMA 4X, 4.98" (126.49 mm) long, Type G long, defeatable and lockable	SCV60 thru SCV400
HGPBL	<-->	0.6(0.27)	Black long Pistol handle, NEMA 12, 4.98" (126.49 mm) long, Type G long, defeatable and lockable	SCV60 thru SCV400
HGPR	<-->	0.6(0.27)	Red and yellow Pistol handle, NEMA 12, 2.78" (70.6 mm) long, Type G, defeatable and lockable	SCV30
HGPR4	<-->	0.6(0.27)	Red and yellow Pistol handle, NEMA 4X, 2.78" (70.6 mm) long, Type G, defeatable and lockable	SCV30
HGPR4L	<-->	0.6(0.27)	Red and yellow long Pistol handle, NEMA 4X, 4.98" (126.49 mm) long, Type G long, defeatable and lockable	SCV60 thru SCV400
HGPRL	<-->	0.6(0.27)	Red and yellow long Pistol handle, NEMA 12, 4.98" (126.49 mm) long, Type G long, defeatable and lockable	SCV60 thru SCV400
HHPB4SC	<-->	1.3(0.59)	Black Pistol handle, NEMA 4X, 7.48" (190 mm) long, Type H, defeatable and lockable	SC600, SC800

Mersen Non-Fusible Disconnects Accessories Selection Guide				
Part Number	Price	Weight lb(kg)	Description	Use with
ACHCD	<-->	0.2(0.09)	Auxiliary contact holder (accommodates up to 4 auxiliary contacts)	SCV30
ACH	<-->	0.2(0.09)	Auxiliary contact holder (accommodates up to 8 auxiliary contacts)	SCV60 thru SCV400
ACHSC	<-->	0.1(0.05)	Auxiliary contact holder (accommodates up to 4 auxiliary contacts)	SC600, SC800
AC3	<-->	0.1(0.05)	Auxiliary contact for SC Series non-fused disconnect switches. <b>One N.O.</b> contact. 10 Amp, 600 VAC	All SC Series switches
AC4	<-->	0.1(0.05)	Auxiliary contact for SC Series non-fused disconnect switches. <b>One N.C.</b> contact. 10 Amp, 600 VAC	All SC Series switches
TL200	<-->	0.4(0.18)	Terminal lug kit, Aluminum, tin-plated, 3/0 to #6, 6 lugs per kit	SCV200
TL400	<-->	5.0(2.27)	Terminal lug kit, Aluminum, tin-plated, 600Mcm to #2, 6 lugs per kit	SCV400
TL600	<-->	5.0(2.27)	Terminal lug kit, Aluminum, tin-plated, (2) 600Mcm to #2, 6 lugs per kit	SC600
TL800	<-->	10.0(4.5)	Terminal lug kit, Aluminum, tin-plated, (3) 600Mcm to #2, 6 lugs per kit	SC800
TS200SC*	<-->	0.7(0.32)	Terminal shroud kit - 3 pole, Use with 200 amp non-fusible switch. For line or load side.	SCV200
TS1200SC*	<-->	0.7(0.32)	Terminal screen kit - 3 pole, Use with 800 amp non-fusible switch. For line or load side.	SC800

# Mersen Non-Fusible Disconnects

## SC Series - Build a Complete Switch

### 30 Amp

#### STEP 1

Choose a switch body



DIN-rail mountable

#### Switch body

Switch Body	Ampere Rating	Hp @ Voltage	Interrupt Capacity (kA)
SCV30*	30	15 Hp @ 480V	50

\*Note: Lugs, shrouds, and screens are integrated into this switch

#### STEP 2

Choose a handle



#### Short handles

Short Handle	
HDPB	Pistol, Black, NEMA 1, 3R, 12, Type D
H DPR	Pistol, Red/yellow, NEMA 1, 3R, 12, Type D



#### Standard handles

Standard Handle	
HGPB	Pistol, Black, NEMA 1, 3R, 12, Type G.
HGPB4	Pistol, Black, NEMA 4, 4X, Type G,
HGPR	Pistol, Red /yellow, NEMA 1, 3R, 12, Type G
HGPR4	Pistol, Red /yellow, NEMA 4, 4X, Type G

#### Direct handles

Direct Mount Handle	
HADB1	Direct mount, Black. No shaft required.

\*Note: Switch Handle will not switch to "test" position with Aux contacts and ACHCD holder installed. Handle will switch to "ON" position.

#### NFPA 79 compliant handle

NFPA 79 Compliant Handle	
HADB6	NFPA 79-compliant, allows operation and padlocking the switch when door is open. Red. No shaft required.

#### STEP 3

Choose a shaft



#### Short handle shafts

Shaft for Short Handle	
SD200-5	Type D, 7.9" (200 mm) long
SD320-5	Type D, 12.6" (320 mm) long



#### Standard handle shafts

Shaft for Standard Handle	
SG120-5	Type G, 4.7" (120 mm) long
SG200-5	Type G, 7.9" (200 mm) long
SG320-5	Type G, 12.6" (320 mm) long

Shaft not used with Direct Handle

Select a standard handle.

Note: Short handle cannot be used with NFPA79-compliant handle.

#### STEP 4

Choose your Accessories

Accessories	Description	Use With
ACHCD	Auxiliary contact holder (accommodates up to 4 auxiliary contacts). <b>REQUIRED</b> when using AC3 or AC4.	SCV30
AC3	Auxiliary contact. <b>One N.O.</b> contact. 10 Amp. 600 VAC <b>REQUIRES</b> ACHCD . Please purchase separately.	SCV30
AC4	Auxiliary contact. <b>One N.C.</b> contact. 10 Amp. 600 VAC <b>REQUIRES</b> ACHCD . Please purchase separately.	SCV30



ACHCD



AC3



AC4

# Mersen Non-Fusible Disconnects

## SC Series - Build a Complete Switch

### 60 Amp to 400 Amp

#### STEP 1

Choose a switch body



#### Switch body

Switch Body	Ampere Rating	Hp @ Voltage	Interrupt Capacity (kA)
SCV60*	60	30 Hp @ 480V	200
SCV100*	100	60 Hp @ 480V	200
SCV200**	200	125 Hp @ 480V	200
SCV400***	400	200 Hp @ 480V	200

\*Note: Lugs, shrouds, and screens are integrated into this switch.

\*\*Note: Line side screen included with this switch. Use TL200 lugs and TS200SC screen, sold separately, for load side.

\*\*\*Note: Screens and shrouds are integrated into this switch. Use TL400 lugs, sold separately.

#### STEP 2

Choose a handle



#### Standard handles

Standard Handle	
HGPBL	Pistol, Long Black, NEMA 1, 3R, 12; 4.98" long, Type G
HGPB4L	Pistol, Long Black, NEMA 4, 4X, 4.98" long, Type G
HGPRL	Pistol, Long Red/yellow NEMA 1, 3R, 12; 4.98" long, Type G
HGPR4L	Pistol, Long Red/yellow NEMA 4, 4X, 4.98" long, Type G



#### NFPA 79 compliant handle

NFPA 79 Compliant Handle	
HADB8	NFPA 79-compliant, allows operation and padlocking the switch when door is open. Red. No shaft required.

#### STEP 3

Choose a shaft



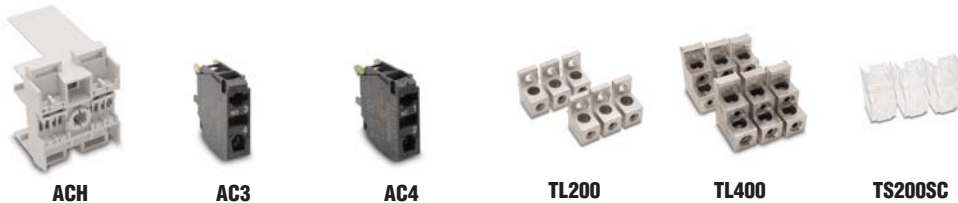
#### Standard handle shafts

Shaft for Standard Handle	
SG200-10	Type G, 7.9" (200 mm) long
SG320-10	Type G, 12.6" (320 mm) long
SG400-10	Type G, 15.7" (400 mm) long

Select a standard handle

#### STEP 4

Choose your Accessories



Accessories	Description	Use With
ACH	Auxiliary contact holder (accommodates up to 8 auxiliary contacts). <b>REQUIRED</b> when using AC3 or AC4.	SCV60 thru SCV400
AC3	Auxiliary contact. <b>One N.O.</b> contact. 10 Amp. 600 VAC. <b>REQUIRES</b> ACH . Please purchase separately.	
AC4	Auxiliary contact. <b>One N.C.</b> contact. 10 Amp. 600 VAC. <b>REQUIRES</b> ACH . Please purchase separately.	
TL200	Terminal lug kit, Aluminum, tin-plated, 3/0 to #6, 6 lugs per kit	SCV200
TL400	Terminal lug kit, Aluminum, tin-plated, 600Mcm to #2, 6 lugs per kit	SCV400
TS200SC	Terminal shroud kit, - 3 pole, Use with 200 amp non-fusible switch. For line or load side. 3 shrouds per kit.	SCV200

# MERSEN Non-Fusible Disconnects SC Series - Build a Complete Switch

600 Amp to 800 Amp

## STEP 1

Choose a switch body



### Switch Body

Switch Body	Ampere Rating	Hp @ Voltage	Interrupt Capacity (kA)
SC600*	600	400 Hp @ 480V	200
SC800**	800	500 Hp @ 480V	100

\*Note: Line side screen included with this switch. Use TL600 lugs, sold separately.

\*\*Note: Line side screen included with this switch. Use TL800 lugs and TS1200SC screen, sold separately, for load side.

## STEP 2

Choose a handle



### Long Handle

Long Handle	
HHPB4SC	Black, NEMA 4, 4X; 7.48" long, Type H.

## STEP 3

Choose a shaft



### Shaft for Long Handle

Shaft for Long Handle	
SH400-15	Type H, 17.7" (450 mm) long

## STEP 4

Choose your Accessories



ACHSC



AC3



AC4



TL600



TL800



TS1200SC

Accessories	Description	Use With
ACHSC	Auxiliary contact holder (accommodates up to 4 auxiliary contacts). <b>REQUIRED</b> when using AC3 or AC4.	SC600 thru SC800
AC3	Auxiliary contact. <b>One N.O.</b> contact. 10 Amp. 600 VAC. <b>REQUIRES</b> ACHSC. Please purchase separately.	SC600 thru SC800
AC4	Auxiliary contact. <b>One N.C.</b> contact. 10 Amp. 600 VAC. <b>REQUIRES</b> ACHSC. Please purchase separately.	SC600 thru SC800
TL600	Terminal lug kit, Aluminum, tin-plated, (2) 600Mcm to #2, 6 lugs per kit	SC600
TL800	Terminal lug kit, Aluminum, tin-plated, (3) 600Mcm to #2, 6 lugs per kit	SC800
TS1200SC	Terminal screen kit - 3 pole, Use with 800 amp non-fusible switch, For line or load side. 1 screen per kit.	SC800