

# SENTRON VL Series Product Specifications

VL 800 Frame  
800 Amperes

## Electronic Releases

### ETU TRIP RELEASE

Ampere Rating	$I_N$	$I_r$		
800		320 - 800A	3VL6780 -	A 3 6 - 0AA0

3 = 3 poles

1 = Standard interruption  
2 = High interruption  
3 = Very High interruption

**All VL800 circuit-breakers are shipped with factory supplied Nut Keeper Plates for both incoming and outgoing terminals. Customer determines need for termination devices.**

- A = Designates frame only
- B = Line protection with LI functions
- C = Line protection LIG functions residual earth for 3 phase 4 wire systems
- D = Line protection with LIG functions—residual earth for 3 phase 3 wire systems
- E = Line protection with LS functions (instantaneous override)
- G = Line protection with LSG functions—residual earth for 3 phase 3 wire systems
- H = Line protection with LSG functions—residual earth for 3 phase 4 wire systems
- J = Line protection with LIG functions—for earth return systems
- K = Line protection with LSIG functions for earth return systems

### ETU TRIP RELEASE

Ampere Rating	$I_N$	$I_r$		
800		320 - 800A	3VL6780 -	B 4 6 - 0AA0

4 = 4 poles

1 = Standard interruption  
2 = High interruption  
3 = Very high interruption

- A = Line protection with LI functions—(N) pole protected
- B = Line protection with LI functions—(N) pole not protected
- C = Line protection LIG functions—residual earth—(N) pole not protected
- D = Line protection with LIG functions—residual earth—(N) pole protected
- E = Line protection with LS functions—(fixed override)—(N) pole not protected
- F = Line protection with LS functions—(fixed override)—(N) pole protected
- G = Line protection with LSG functions—(fixed override)—(N) pole not protected
- H = Line protection with LSG functions—(fixed override)—(N) pole protected

### LCD TRIP RELEASE

Ampere Rating	$I_N$	$I_r$		
800		320 - 800A	3VL6780 -	C 6 - 0AA0

3 = 3 poles  
4 = 4 poles

1 = Standard interruption  
2 = High interruption  
3 = Very high interruption

- H = Line protection with customer set LI/LS/LSI functions 3 pole only
- J = Line protection with customer set LI/LS/LSI functions 4 pole only
- L = Line protection with LSIG functions for 3 phase 3 wire systems
- M = Line protection with LSIG functions for 3 phase 4 wire systems
- N = Line protection with LSIG functions for 3 phase 4 wire systems—4 pole only
- P = Motor / generator protection with LI functions

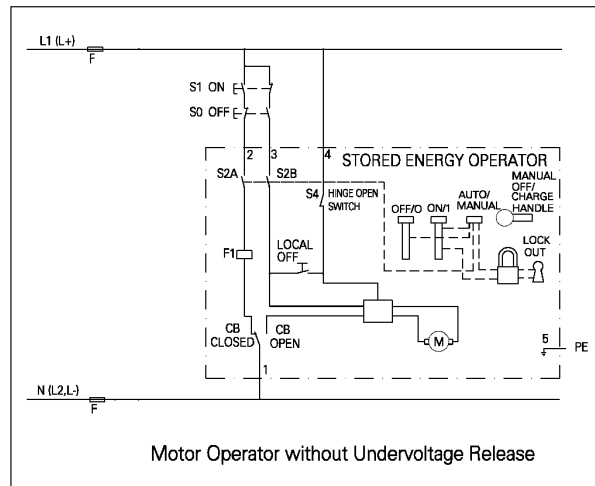
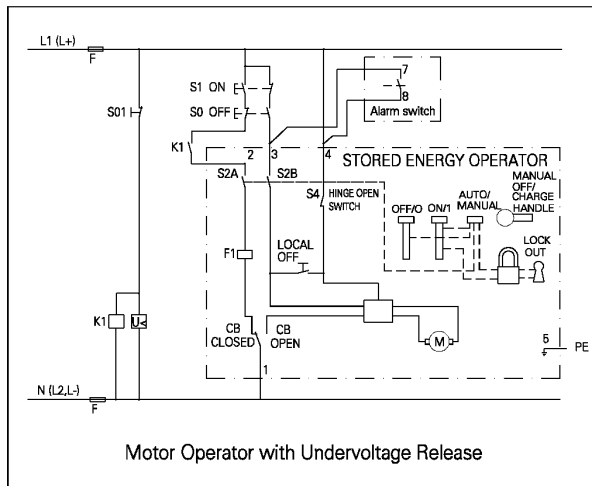
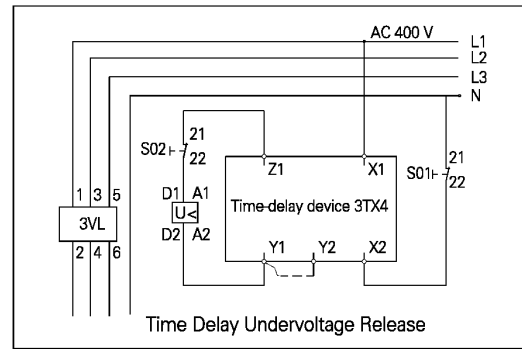
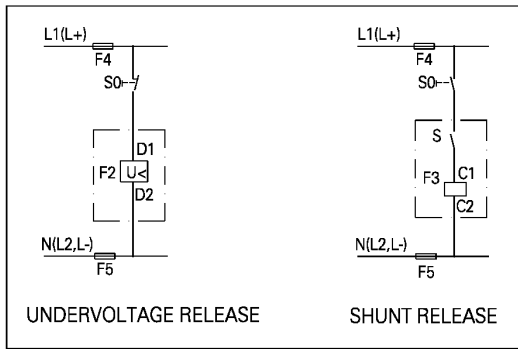
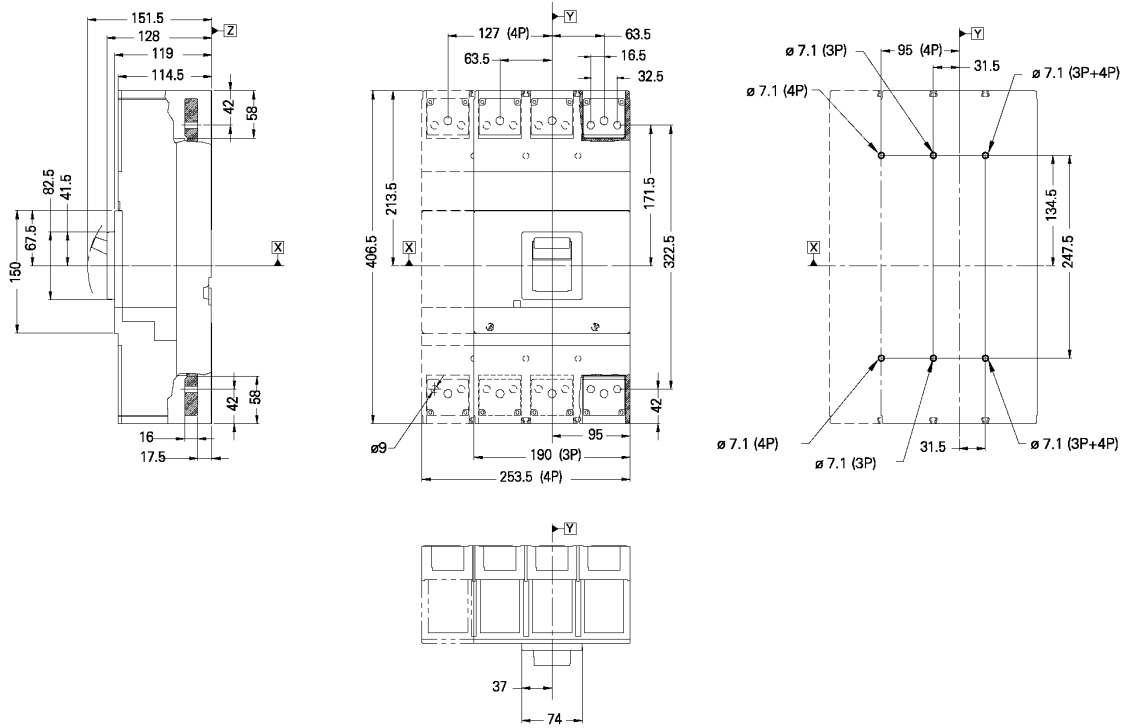
#### **Hand held test kit for electronic trip releases**

Test kit: (battery powered) for ETU/LCD releases, as well as interface with laptop or PC.  
Cat.no 3VL9000-8AK00

#### **Communications adapter:**

Allows for testing of ETU/LCD release as well as parameterization of LCD releases by interface with laptop or PC.  
Cat.no 3VL9000-8AM00

# VL800



Stand: 1/00  
<http://www.siemens.de/sentron-vl>  
<http://www.siemens.de/energieverteilung>  
 Automation and Drives Group  
 Low-Voltage Controls and Distribution  
 P. O. Box 32 40, D-91050 Erlangen, Germany

Subject to change without prior notice 01/00

Siemens Aktiengesellschaft

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 SEVL.52.9.01 PA



# SIEMENS

## SENTRON® VL800 Specifications



# SENTRON VL Series Product Specifications

VL800 Frame  
800 Amperes

## Specifications:

Category A

IEC 60947-2

EN60947

3-4 Poles

800 Amperes, 220/240Vac, 380/415Vac, 690Vac

50-60hz.

$U_i$  750Vac

$U_{imp}$  8kV

## Endurance

5,000 operations @ 60 per/hour

## Watts loss (power loss)

at maximum rated current  $I_N$

3 phase symmetrical load for line protection---250 watts--ETU/LCD

Type	$I_N$	$U_E$	$I_{CU}$	$I_{CS}$	$I_{CM}$
VL800N	800A	220/240~ 380/415~ 690~	65kA 50kA 20kA	65kA 50kA 10kA	143kA 105kA 42kA
VL800H	800A	220/240~ 380/415~ 690~	100kA 70kA 30kA	75kA 70kA 15kA	220kA 143kA 63kA
VL800L	800A	220/240~ 380/415~ 690~	200kA 100kA 35kA	150kA 75kA 17kA	440kA 220kA 73.5kA

## CE Marked

Calibrations for 50°C ambient

## Permissible Load

for various ambient temperatures close to the circuit-breaker, related to the rated current of the circuit-breaker used for line protection.

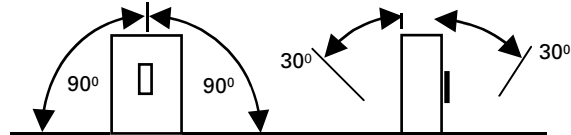
@ 40°C--100%

@ 50°C--100%

@ 60°C--95%

@ 70°C--86%

## Permissible mounting position



**Reverse feed**--All VL800 frame circuit breakers are suitable for reverse feed applications.

**Breaker shipping weight 3 pole = 30 lbs. / 14 kg.**

**4 pole = 39.7lbs. / 19 kg.**

**Adj. Overload 40 to 100% x  $I_N$**

**Adj. Time lag = 2.5 to 30 seconds**

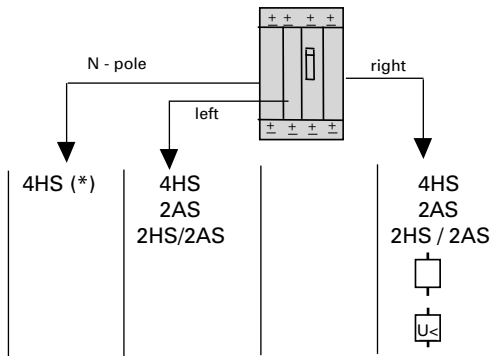
**Adj. Short time release 1.5 to 10 x  $I_N$**

**Adj. Time lag ( $t_{sd}$ ) = 0 to 0.5 seconds**

**Adj. Short circuit releases  $I_i$  1.25 to 11 x  $I_N$**

**Internal accessories:**

**Maximum internal accessory combinations**



(\* ) Do not use N - pole if accessories are installed in left pole

**Switch kits:**

	<b>Catalog Number</b>
4HS (2NO +2NC)	3VL9800-2AC00
2HS (1NO +1NC) + 1AS (1NO)	3VL9800-2AE00

Individual Auxiliary switch:  
 3SB3400-0K (NO contact) | Rated thermal current  $I_{th}$  ---10Amps  
 3SB3400-0J (NC contact) | Rated making capacity-----10Amps

**AC Volts**

Rated operational voltage	24	48	110	230	400	600	
Rate operational current	10	10	10	10	10		(AC-12)
	6	6	6	6	3	1	(AC-15)

**Shunt trip releases**

	<b>Catalog Number</b>	<b>Power Consumption</b>
48 - 60Vac	3VL9800 01SM00	300 to 480va
110 - 127Vac	3VL9800-1SR00	302 to 352va
208 - 277Vac	3VL9400-1ST00	277 to 350va
380 - 600Vac	3VL9800-1SV00	330 to 349va
12Vdc	3VL9800-1SB00	50 watts
24Vdc	3VL9800-1SC00	360 watts
48 - 60Vdc	3VL9800-1SJ00	500 to 820 watts
110 - 127Vdc	3VL9800-1SK00	302 to 353 watts
220 - 250Vdc	3VL9800-1SQ00	348 to 397 watts

**Undervoltage releases**

110 - 127Vac	3VL9800-1UG00	4.5va
208Vac	3VL9800-1UM00	4.5va
220 - 250Vac	3VL9800-1UH00	4.5va
227Vac	3VL9800-1UQ00	4.5va
380 - 415Vac	3VL9800-1UJ00	4.5va
440 - 480Vac	3VL9800-1UK00	4.5va
550 - 526Vac	3VL9800-1UL00	4.5va
600Vac	3VL9800-1UL00	4.5va
12Vdc	3VL9800-1UT00	3.5watts
24Vdc	3VL9800-1UN00	3.5watts
48Vdc	3VL9800-1UP00	3.5watts
60Vdc	3VL9800-1UU00	3.5watts
110 - 127Vdc	3VL9800-1UR00	3.5watts
220 - 250Vdc	3VL9400-1US00	3.5watts

**DC Volts**

Rated operational voltage	24	48	110	230	
Rate operational current	10	5	2.5	1	(DC-12)
	3	1.5	0.7	0.3	(DC-13)

# External Accessories

**Rotary drives**

- Direct drive
  - Standard-----3VL9600-3HA00
  - Emergency Stop-----3VL9600-3HC00
- Rotary drive extended
  - Standard-----3VL9600-3HF00
  - Emergency Stop-----3VL9600-3HG00
  - Without knob-----3VL9600-3HE00
- Door-coupling rotary operating mechanism kit to be used with operator ---3VL9600-3HE00
  - Standard-----8UC6212-1BD22
  - Emergency Stop-----8UC6222-3BD22
- Kit consists of —
  - (1) proper handle with masking plate
  - (1) coupling driver for 8mm shaft
  - (1) 8mm extension shaft 300mm long
  - (1) shaft coupling for 8mm shaft

Cylinder lock kit for field installation:  
 (key removal when circuit-breaker is in the OFF position)  
 Ronis-----3VL9715-8HA00  
 CES-----3VL9711-8HA00

Standard or Emergency stop rotary drive operator auxiliary switch kits(s). Each switch is a change over contact design

- 1 - leading OFF to ON 3VL9600-3AS10
- 2 - leading OFF to ON 3VL9600-3AT10
- 1 - early-break ON to OFF 3VL9600-3AU10
- 2 - early-break ON to OFF 3VL9600-3AW10

Change over switch specifications

- Rated thermal current  $I_{th}$ ----- 2A
- Rated making capacity 2A restive---0.5A inductive
- AC----- pf 0.7
- Rated operational voltage-----220Vac
- Rated operational current----- 2A
- Rated making capacity 2A restive---0.5A inductive

**Walking-beam interlock mechanism:**

Fixed mounted circuit-breakers-----	3VL9600-8LC00
Draw-out/Plug-in mounted-----	3VL9600-8LD00

**Cable interlock system:**

Kit contains operator plates only  
 for two circuit-breakers-----3VL9600-8LA00  
 Recommended 1.0m long cable-----3VL9000-8LH20

# External accessories

## Stored energy operators

Voltage		<u>Power</u>		<u>with cylinder lock installed</u>	<u>Power</u>
24 Vdc	3VL9600-3MJ00	< 500 watts		3VL9615-3MK00	< 500 watts
42-48 Vac/Vdc	3VL9600-3ML00	< 500 watts		3VL9615-3MM00	< 500 watts
60 Vac/Vdc	3VL9600-3MS00	< 500 watts		3VL9615-3MT00	< 500 watts
110-127 Vac/Vdc	3VL9600-3MN00	< 500 watts		3VL9615-3MP00	< 500 watts
220-250Vac/Vdc	3VL9600-3MQ00	< 500 watts		3VL9615-3MR00	< 500 watts
			Ronis cylinder lock kit for field installation-----	3VL9715-8HA00	

## Front busbar extensions:

requires the use of a Nut Keeper Plate for each pole

### **Straight**

1 piece-----	3VL9600-4EA00
1 set = 3 pieces -----	3VL9600-4EC30
1 set = 4 pieces -----	3VL9600-4EC40

### **Flared**

1 set = 3 pieces -----	3VL9600-4ED30
1 set = 4 pieces -----	3VL9600-4ED40

## Rear terminals:

### **Flat bus**

1 piece-----	3VL9600-4RG00
Kit = 3 pieces-----	3VL9600-4RH30
Kit = 4 pieces-----	3VL9600-4RH40

## Terminal connectors:

Aluminum body

1 piece-----	3VL9600-4TG00
1 set = 3 pieces-----	3VL9600-4TG30
1 set = 4 pieces-----	3VL9600-4TG40

Wire range for Aluminum body only

2 pieces of cable    50 - 240mm<sup>2</sup>

Bolted bus-bar connection-----3 pieces 40mm wide x 5mm thick

## Terminal covers:

3 pole extended-----	3VL9600-8CA30
3 pole standard-----	3VL9600-8CB30
4 pole extended-----	3VL9600-8CA40
4 pole standard-----	3VL9600-8CB40

## Inter-phase shield:

1 piece----- 3VL9600-8CE00

## Plug-in socket assembly:

Includes base plate, sockets, busbar cover, mounting screws, base interlock, (does not include inter-phase shields)

### **Rear connected**

3 pole	3VL9600-4PA30
4 pole	3VL9600-4PA40

### **Front connected**

3 pole	3VL9600-4PC30
4 pole	3VL9600-4PC40

## Draw-out assembly:

Includes base plate, sockets, crank handle, base-interlock, necessary shields

### **Rear connected**

3 pole	3VL9500-4WA30
4 pole	3VL9500-4WA40

### **Front connected**

3 pole	3VL9200-4WC00
4 pole	3VL9200-4WC40

## Plug-in socket for accessory voltage supply

each plug-in socket contains 8 positions --maximum of three sockets can be used with the VL800  
Catalog no.    3VL9600-4PJ00

## Position signaling switch

to indicate connected or unconnected position of plug-in or draw-out assembly. Kit consists of 1 change over switch. Each base can accept up to 2 switches.  
Catalog no.    3VL9000-4WL00

## Handle padlocking device:

Catalog no.    3VL9600-3HL00

## Mounting screw kit

4 screws    3VL9600-8SA40