

# SENTRON VL Series Product Specifications

VL 630 Frame  
630 Amperes

## Electronic Releases

**ETU TRIP RELEASE**

Ampere Rating $I_N$ 630	$I_r$ 252 - 630	3VL5763 -	A	3 6 - 0AA0
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3 = 3 poles

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

**All VL630 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 $I_N$ 630	$I_r$ 252 - 630	3VL5763 -	B	4 6 - 0AA0
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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 $I_N$ 630	$I_r$ 252 - 630	3VL5763 -	C	6 - 0AA0
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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

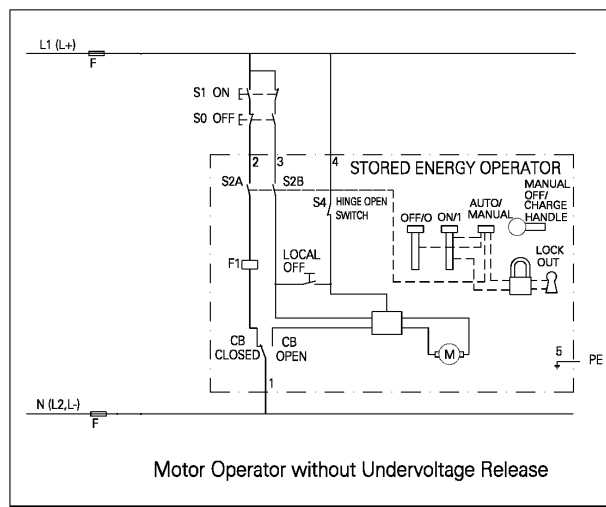
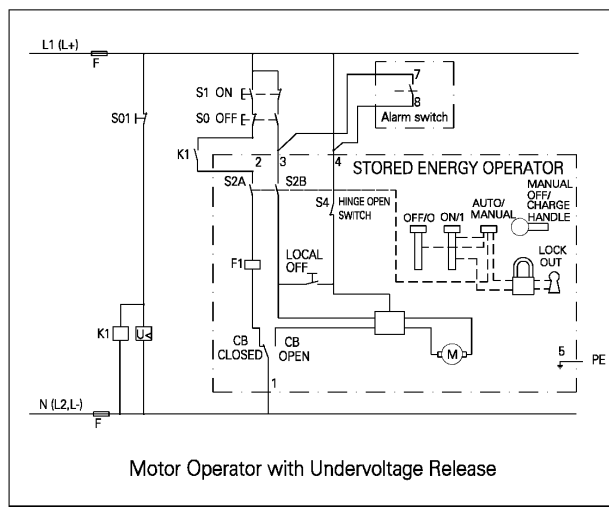
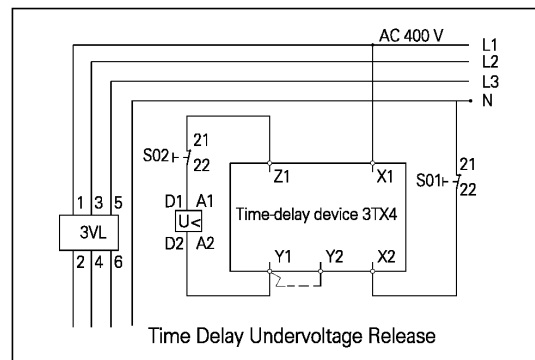
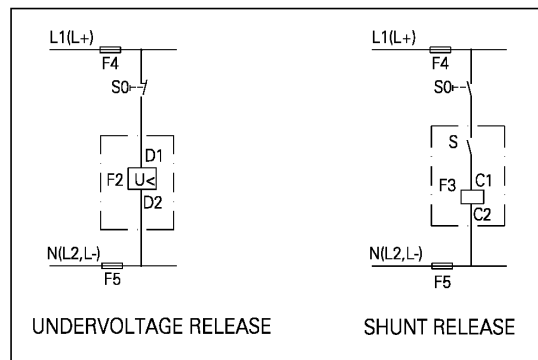
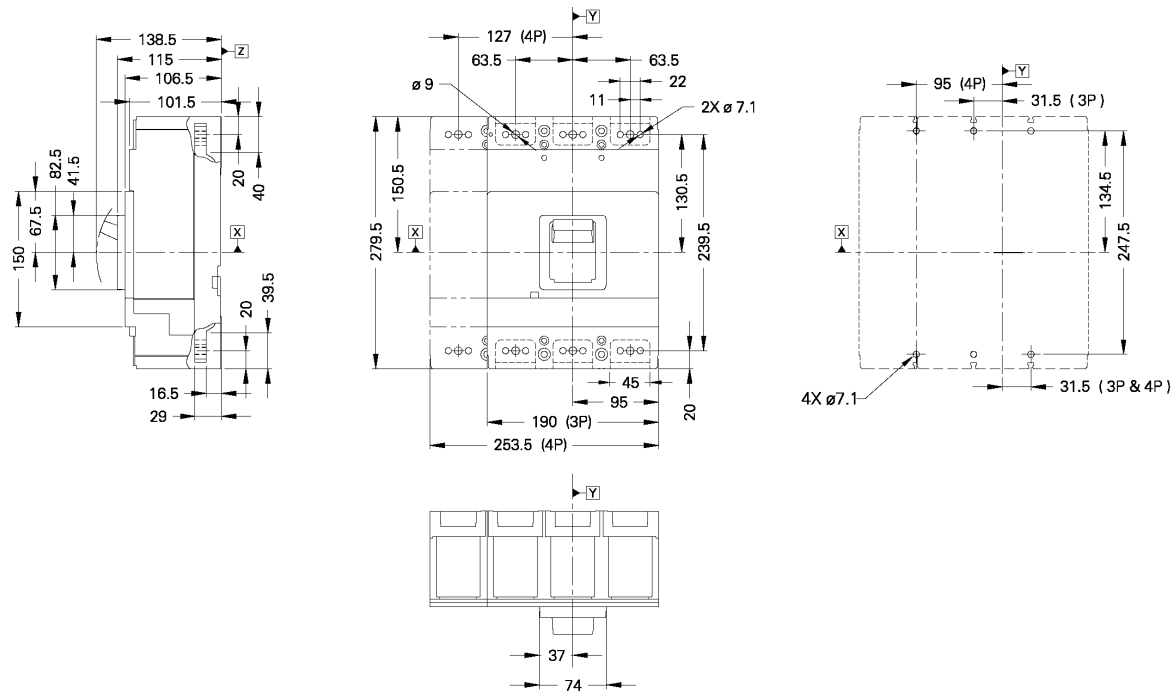
**Hand held test kit for electronic trip releases**

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

**VL630**



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

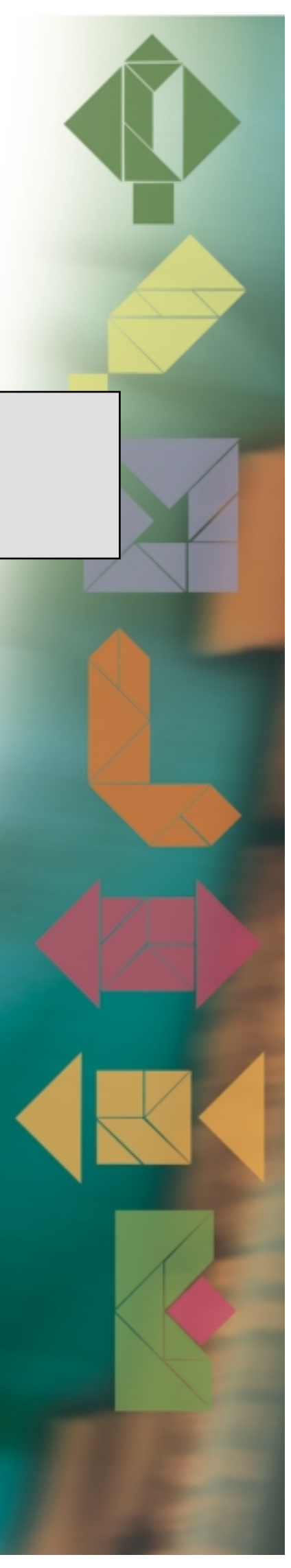
Siemens Aktiengesellschaft

Order No. E20001-P285-A000-X-0000  
 Dispostelle 27604/SEK 30191  
 SEVL.52.9.01 PA



**SIEMENS**

**SENTRON® VL630  
Specifications**



# SENTRON VL Series Product Specifications

VL630 Frame  
630 Amperes

## Specifications:

### Category A

IEC 60947-2

EN60947

3-4 Poles

315-630 Amperes, 220/240Vac, 380/415Vac, 690Vac

50-60hz.

U<sub>i</sub> 750Vac

U<sub>imp</sub> 8kV

Type	I <sub>N</sub>	U <sub>E</sub>	I <sub>CU</sub>	I <sub>CS</sub>	I <sub>CM</sub>
VL630N	315-630A	220/240~ 380/415~ 690~	65kA 45kA 20kA	65kA 45kA 10kA	143kA 94.5kA 42kA
VL630H	315-630A	220/240~ 380/415~ 690~	100kA 70kA 30kA	75kA 70kA 15kA	220kA 143kA 63kA
VL630L	315-630A	220/240~ 380/415~ 690~	200kA 100kA 35kA	150kA 75kA 17kA	440kA 220kA 73.5kA

### Endurance

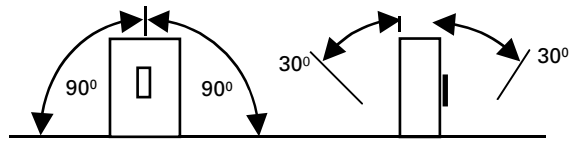
10,000 operations @ 600 per/hour

### Watts loss (power loss)

at maximum rated current I<sub>N</sub>

3 phase symmetrical load for line protection---230 watts--T/M  
160 watts--ETU/LCD

### Permissible mounting position



**Reverse feed**--All VL630 frame circuit breakers are suitable for reverse feed applications.

**Breaker shipping weight 3 pole = 18.1 lbs. / 8.4kg.**

**4 pole = 23.8lbs. / 11kg.**

**Adj. thermal overload 80 to 100% x I<sub>N</sub>**

**Adj. short circuit releases I<sub>i</sub>**

I <sub>N</sub>	Short circuit release I <sub>i</sub>
315	1575 - 3150
400	2000 - 4000
500	2500 - 5000
630	3250 - 6500

### 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--93%

@ 70°C--86%

## Catalog Information

Ampere  
Rating

I <sub>N</sub>	I <sub>r</sub>	3VL5731 -	3VL5740 -	3VL5750 -	3VL5763 -	6 - 0AA0	6 - 0AA0	6 - 0AA0	6 - 0AA0
315	250 to 315								
400	315 to 400								
500	400 to 500								
630	500 to 630								

Thermal/magnetic circuit-breaker

All VL630 circuit-breakers are shipped with factory supplied Nut Keeper Plates for both incoming and outgoing terminals. Customer determines need for termination devices.

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

D = Thermal/magnetic protection---3 poles

E = Thermal/magnetic protection---4 poles

3 = 3 poles  
4 = 4 poles w/left pole (N) switching

C = Adjustable thermal overload & short-circuit releases  
(N) pole protected when using with 4 pole  
(N) pole = 60% protected

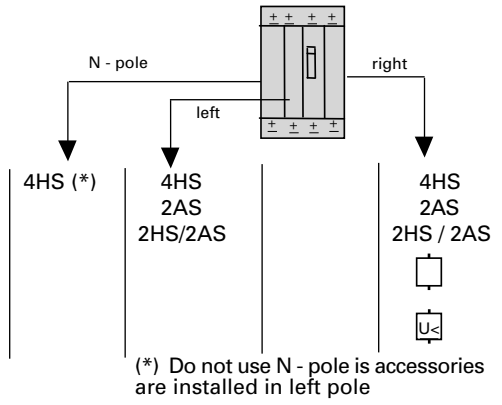
E = Non-adjustable circuit-breaker I<sub>N</sub> = 630A only

K = Starter protection only -- I<sub>N</sub> = 315A, 630A---3 pole only

J = 4 pole (N) without protection

**Internal accessories:**

Maximum internal accessory combinations



**Switch kits:**

	Catalog Number
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**

	Catalog Number	Power Consumption
48 - 60Vac	3VL9800-1SM00	300 to 480va
110 - 127Vac	3VL9800-1SR00	302 to 352va
208 - 277Vac	3VL9800-1ST00	330 to 349va
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**

	Catalog Number	Power Consumption
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 - 250dc	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 —3VL9400-3HE00
  - 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 kit(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

Changeover 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		Power		with cylinder lock installed	Power
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-----	3VL9615-8HA00	

### Front busbar extensions

requires the use of a Nut Keeper Plate for each pole

#### Straight

1 piece-----	3VL9500-4EA00
1 set = 3 pieces -----	3VL9500-4EC30
1 set = 4 pieces -----	3VL9500-4EC40

#### Flared

1 set = 3 pieces -----	3VL9500-4ED30
1 set = 4 pieces -----	3VL9500-4ED40

### Rear terminals:

#### Flat bus

1 piece-----	3VL9500-4RG00
Kit = 3 pieces-----	3VL9500-4RH30
Kit = 4 pieces-----	3VL9500-4RH40

### Terminal connectors:

Aluminum body

1 piece-----	3VL9500-4TG00
1 set = 3 pieces-----	3VL9500-4TG30
1 set = 4 pieces-----	3VL9500-4TG40

Wire range for Aluminum body only

2 pieces of cable 95 - 120mm<sup>2</sup>

Bolted bus-bar connected-----1 piece 40mm wide x 10mm 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	3VL9500-4PA30
4 pole	3VL9500-4PA40

#### Front connected

3 pole	3VL9200-4PC30
4 pole	3VL9200-4PC40

### 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 VL630

Catalog no. 3VL9600-4PJ00

### Position signaling switch

to indicate connected or unconnected position of plug-in or draw-out assembly. Kit consist 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 3VL9500-8SA40