

SENTRON VL Series Product Specifications

VL 250 Frame
250 Amperes

Electronic Releases

ETU TRIP RELEASE

Ampere Rating	I_N	I_r			
200	80 - 200	3VL3720	-	A	3 6 - 0AA0
250	100 - 250	3VL3725	-	A	3 6 - 0AA0

All VL250 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

- 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			
200	80 - 200	3VL3720	-	B	4 6 - 0AA0
250	100 - 250	3VL3725	-	B	4 6 - 0AA0

- 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			
200	80 - 200	3VL3720	-	C	6 - 0AA0
250	100 - 250	3VL3725	-	C	6 - 0AA0

- 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

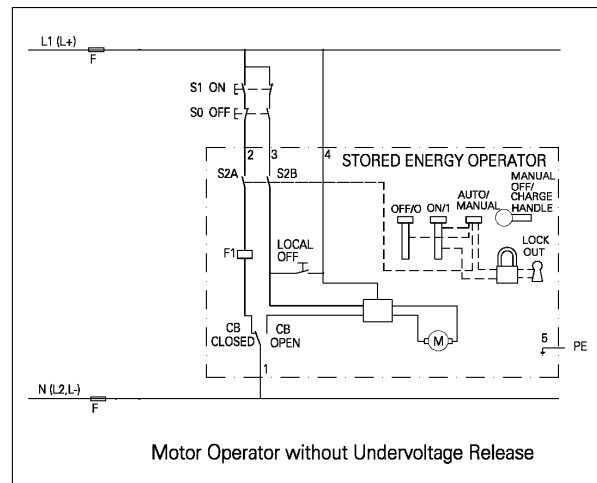
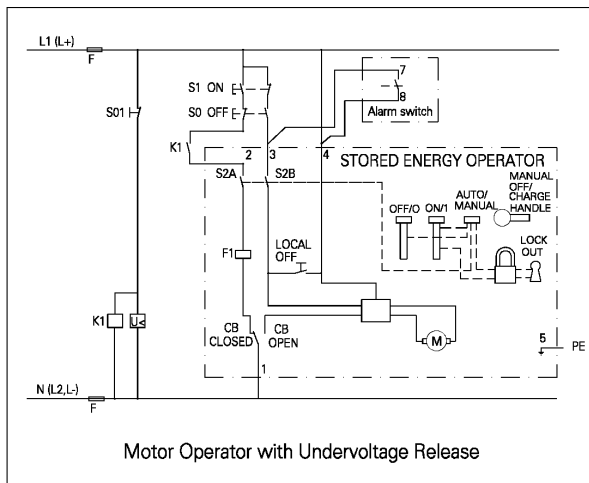
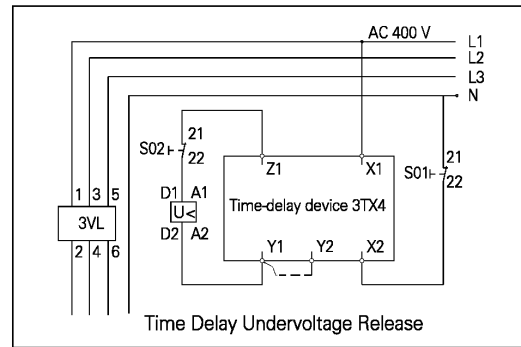
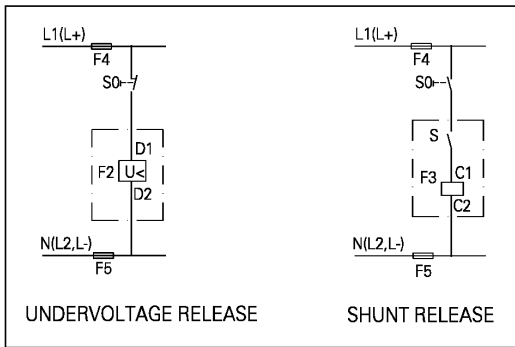
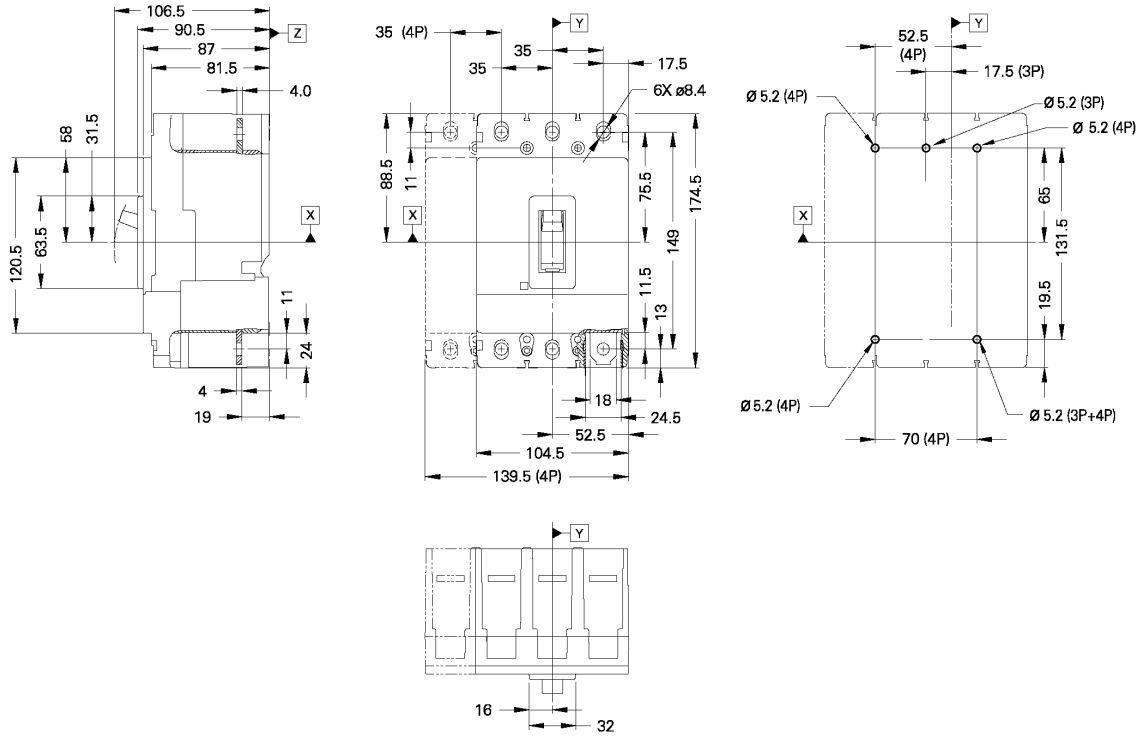
Hand held test kit for electronic trip releases

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

VL250



Stand: 1/00

<http://www.siemens.de/sentron-vl>
<http://www.siemens.de/energieverteilung>

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SIEMENS

SENTRON® VL250 Specifications



SENTRON VL Series Product Specifications

VL250 Frame
250 Amperes

Specifications:

Category A

IEC 60947-2

EN60947

3-4 Poles

125-250 Amperes, 220/240Vac, 380/415Vac,

690Vac

50-60hz.

U_i 750Vac

U_{imp} 8kV

Type	I _N	U _E	I _{CU}	I _{CS}	ICM
VL250N	125-250A	220/240~ 380/415~ 690~	65kA 40kA 14kA	65kA 40kA 7kA	143kA 73.5kA 28kA
VL250H	125-250A	220/240~ 380/415~ 690~	100kA 70kA 18kA	75kA 70kA 9kA	220kA 143kA 36kA
VL250L	125-250A	220/240~ 380/415~ 690~	200kA 100kA 20kA	150kA 75kA 10kA	440kA 220kA 42kA

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%

Endurance

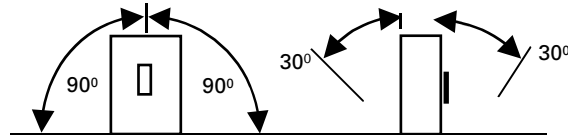
20,000 operations @ 120 per/hour

Watts loss (power loss)

at maximum rated current I_N

3 phase symmetrical load for line protection---80 watts
line protection---60 watts ETU/LCD

Permissible mounting position



Reverse feed--All VL250 frame circuit breakers are suitable for reverse feed applications.

Breaker shipping weight 3 pole = 4.6 lbs. / 2.1 kg.

4 pole = 6.2 lbs. / 2.8 kg.

Adj. thermal overload 80 to 100% x I_N

Adj. short circuit releases I_i

I _N	Short circuit release I _i
125	625-1250
160	800-1600
200	1000-2000
250	1200-2500

Catalog Information

Ampere

Rating

I _N	I _r		
125	100 - 125	3VL3712 -	6 - 0AA0
160	125 - 160	3VL3716 -	6 - 0AA0
200	160 - 225	3VL3720 -	6 - 0AA0
250	200 - 250	3VL3725 -	6 - 0AA0

Thermal/magnetic circuit-breaker

All VL250 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%

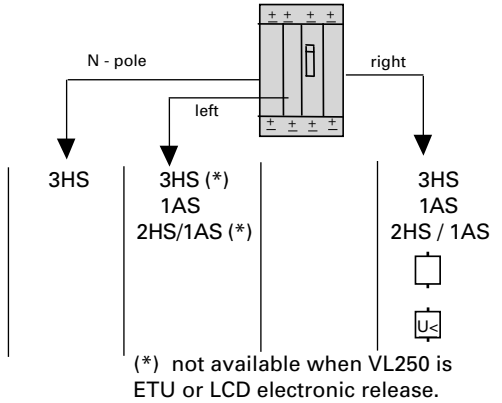
E = Non-adjustable protected circuit-breaker I_N = 250A only

K = Starter protection only -- I_N = 125A, 160A, 250A---3 pole only

J = 4 pole (N) without protection

Internal accessories:

Maximum internal accessory combinations



Switch kits:

	<u>Catalog Number</u>
2HS (1NO +1NC)	3VL9400-2AB00
2HS (1NO +1NC) + 1AS (1NO)	3VL9400-2AD00 (left pole only)
1AS (1NC +1NO) use 1 switch only	3VL9400-2AG00 (left pole only)

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

	<u>Catalog Number</u>	<u>Power Consumption</u>
48 - 60Vac	3VL9400 01SM00	158 to 200va
110 - 127Vac	3VL9400-1SR00	136 to 350va
208 - 277Vac	3VL9400-1ST00	277 to 350va
380 - 600Vac	3VL9400-1SV00	158 to 237va
12Vdc	3VL9400-1SB00	110 watts
24Vdc	3VL9400-1SC00	110 watts
48 - 60Vdc	3VL9400-1SJ00	110 to 172 watts
110 - 127Vdc	3VL9400-1SK00	220 to 254 watts
220 - 250Vdc	3VL9400-1SQ00	97 to 220 watts

Undervoltage releases

110 - 127Vac	3VL9400-1UG00	4.5va
208Vac	3VL9400-1UM00	4.5va
220 - 250Vac	3VL9400-1UH00	4.5va
227Vac	3VL9400-1UQ00	4.5va
380 - 415Vac	3VL9400-1UJ00	4.5va
440 - 480Vac	3VL9400-1UK00	4.5va
550 - 526Vac	3VL9400-1UL00	4.5va
600Vac	3VL9400-1UL00	4.5va
12Vdc	3VL9400-1UT00	3.5watts
24Vdc	3VL9400-1UN00	3.5watts
48Vdc	3VL9400-1UP00	3.5watts
60Vdc	3VL9400-1UU00	3.5watts
110 - 127Vdc	3VL9400-1UR00	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-----3VL9300-3HA00
 - Emergency Stop-----3VL9300-3HC00
- Rotary drive extended
 - Standard-----3VL9300-3HF00
 - Emergency Stop-----3VL9300-3HG00
 - Without knob-----3VL9300-3HE00
- 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 kits(s). Each switch is a change over contact design

1 - leading OFF to ON	3VL9300-3AS10
2 - leading OFF to ON	3VL9300-3AT10
1 - early-break ON to OFF	3VL9300-3AU10
2 - early-break ON to OFF	3VL9300-3AW10

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----- 3VL9300-8LC00
- Draw-out/Plug-in mounted-----3VL9300-8LD00

Cable interlock system:

- Kit contains operator plates only for two circuit-breakers-----3VL9300-8LA00
- Recommended 0.5m long cable-----3VL9000-8LH10

External accessories

Stored energy operators

Voltage		Power		with cylinder lock installed	Power
24 Vdc	3VL9300-3MJ00	< 500 watts		3VL9300-3MK00	< 500 watts
42-48 Vac/Vdc	3VL9300-3ML00	< 500 watts		3VL9300-3MM00	< 500 watts
60 Vac/Vdc	3VL9300-3MS00	< 500 watts		3VL9300-3MT00	< 500 watts
110-127 Vac/Vdc	3VL9300-3MN00	< 500 watts		3VL9300-3MP00	< 500 watts
220-250Vac/Vdc	3VL9300-3MQ00	< 500 watts		3VL9300-3MR00	< 500 watts
			Filli Giussani cylinder lock kit for field installation---	3VL9321-8HA00	

Front busbar extensions

requires the use of a Nut Keeper Plate for each pole

Straight

1 piece-----	3VL9300-4EA00
1 set = 3 pieces-----	3VL9300-4EC30
1 set = 4 pieces-----	3VL9300-4EC40

Flared

1 set = 3 pieces-----	3VL9300-4ED30
1 set = 4 pieces-----	3VL9300-4ED40

Rear terminals:

(round stock)

	Short length (1 piece)	3VL9300-4RA00
	Long length (1 piece)	3VL9300-4RB00
Kit:	(2) short + (1) long (3 pieces)	3VL9300-4RC30
	(2) short + (2) long (4 pieces)	3VL9300-4RF40

(flat terminals)

	Short length (1 piece)	3VL9300-4RK00
	Long length (1 piece)	3VL9300-4RL00
Kit:	(2) short + (1) long (3 pieces)	3VL9300-4RM30
	(2) short + (2) long (4 pieces)	3VL9300-4RN40

Terminal connectors:

Steel wrap around box terminal for VL250 circuit-breakers

1 piece-----	3VL9300-4TC00
1 set = 3 pieces-----	3VL9300-4TC30
1 set = 4 pieces-----	3VL9300-4TC40

Aluminum body box terminal

1 piece-----	3VL9300-4TD00
1 set = 3 pieces-----	3VL9300-4TD30
1 set = 4 pieces-----	3VL9300-4TD40

Wire range

solid wire-----	25 - 150mm
stranded with sleeve end---	25 - 150mm
flexible bus (w x h)	17 x 10mm

Wire range for Aluminum body only

Solid or stranded wire-----	25 - 185mm
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Terminal covers:

3 pole extended-----	3VL9300-8CA30
3 pole standard-----	3VL9300-8CB30
4 pole extended-----	3VL9300-8CA40
4 pole standard-----	3VL9300-8CB40

Inter-phase shield

1 piece-----	3VL9300-8CE00
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Plug-in socket assembly:

Includes base plate, sockets, busbarcover, mounting screws, base interlock, (does not include phase shields)

Rear connected

3 pole	3VL9300-4PA30
RCD load end mounted to 3 pole	3VL9300-4PB00
4 pole	3VL9300-5PA40
RCD load end mounted to 4 pole	3VL9300-4PB40

Front connected

3 pole	3VL9300-4PC30
RCD load end mounted to 3 pole	3VL9300-4PD30
4 pole	3VL9300-4PC40
RCD load end mounted to 4 pole	3VL9300-4PD40

Plug-in socket for accessory voltage supply

each plug-in socket contains 8 positions --maximum of two sockets can be used with VL160

Catalog no.	3VL9300-4PJ00
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Draw-out assembly:

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

Rear connected

3 pole	3VL9300-4WA30
RCD load end mounted to 3 pole	3VL9300-4WB30
4 pole	3VL9300-4WA40
RCD load end mounted to 4 pole	3VL9300-4WB40

Front connected

3 pole	3VL9300-4WC00
RCD load end mounted to 3 pole	3VL9300-4WD30
4 pole	3VL9300-4WC40
RCD load end mounted to 4 pole	3VL9300-4WD40

Position signaling switch

to indicate connected or unconnected position of plug-in or draw-out assembly. Kit consists of 1 change switch. Each base can accept up to 2 switches.

Catalog no.	3VL9000-4WL00
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Handle padlocking device:

Catalog no.	3VL9300-3HL00
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Mounting screw kit

2 screws	3VL9300-8SA20
4 screws	3VL9300-8SA40