

Medium Voltage Breakers



Type VCP-W/VCP-T Medium Voltage Vacuum Circuit Breaker

Product Description

Breakers and structures for switchgear assemblies:

- ANSI 4.76 kV, 8.25 kV, 15 kV, 27 kV and 38 kV:
 - 250 to 1500 MVA
 - IEC 3.6 kV thru 17.5 kV
 - 16 kA to 63 kA
- Metal-clad, compartmented design.
- Power modules.
- Mini modules.
- Breaker compartment kits.

Application Description

Eaton's Cutler-Hammer® Type VCP-W, VCP-T, T-VAC and W-VAC vacuum breakers provide centralized control and protection of medium voltage power equipment and circuits in industrial, commercial and utility installations involving generators, motors, feeder circuits, and transmission and distribution lines.

VCP-W Standard Features

- Eaton's maintenance-free Cutler-Hammer vacuum interrupters with visual contact erosion indicator.
- Patented non-sliding/non-rolling V-flex current transfer system.
- Glass polyester insulation.
- Cycloaliphatic Epoxy Insulation (optional with Type VCPW-SE breakers) for 27 kV and 38 kV breakers.
- Front-accessible operating mechanism.
- Electrically operated trip-free, spring stored energy mechanism.
- Interlocks which prevent moving a closed circuit breaker into or out of the connected position.
- Closing springs automatically discharge before moving the circuit breaker into or out of the enclosure.
- Provisions for manual charging of closing springs.
- Manual close and trip pushbuttons.
- Operations counter.
- Closing spring charged/discharged indicator.
- Circuit breaker Open/Closed indicator.
- Auxiliary switch with 2A/3B for dc and 1A/3B for ac spare contacts.
- Spring charging motor, close coil, trip coil, latch check switch, and anti-pump relay.

VCP-T Standard Features

- Grounded steel barrier between mechanism and primary conductors.
- Spring loaded, silver-plated primary disconnects (drawout breaker).
- Silver-plated primary connections (fixed circuit breaker).
- Manual charging of closing springs (includes shunt trip).
- Integral spring charging handle.
- Auxiliary switch (5a and 5b contacts).
- Mechanical operations counter.
- 24, 48, 125 and 250 Vdc, 120 and 240 Vac control.
- Shunt trip.
- ON and OFF pushbuttons.
- Integral lifting hooks.
- Through or behind door operation.
- Identified/dedicated secondaries.
- Secondary umbilical cord (drawout circuit breaker).
- Secondary disconnect block (fixed circuit breaker).
- Two-step stored energy mechanism.
- O – 0.3s – CO – 15s – CO.
- Anti-pump.
- Trip free.
- Latch check switch.
- Visible contact erosion indicator.
- Visible contact wipe indicator.
- Disconnect, Test and Connect (drawout circuit breaker).
- Integral levering mechanism (drawout circuit breaker).
- Field installable accessories.

Standards and Certifications

- Designed, tested and certified in accordance with ANSI and IEC standards.
- Applicable ANSI standards C37.04-1979 or 1999, C37.09-1979 or 1999, C37.06-2000 and C37.013.
- Internal arc resistance tested to IEC 298, Appendix AA, 25 kA for 1 second.
- Drawout circuit breaker fully qualified to IEC 56 by testing inside the IEC 298 switchgear cubicle.

Medium Voltage Circuit Breakers

ANSI Standards

Table 13-8. ANSI Standard Ratings ① — VCP-W Vacuum Circuit Breaker Types Rated on Symmetrical Current Rating Basis

Identification Circuit Breaker Type	Rated Values														Weight Lbs. (kg)			
	Nominal Voltage Class	Nominal 3-Phase MVA Class	Voltage		Insulation Level		Current		Interrupting Time	Permissible Tripping Delay	Maximum Voltage Divided by K ②	Current Values						
			Maximum Voltage E	Voltage Range Factor ② K	Withstand Test Voltage	Power Frequency (1 Min.) Impulse	Contin-uous Current at 60 Hz I	Short Circuit Current (at Rated Max. kV)				Cycles	Seconds	E/K		Maximum Symmetrical Interrupting Capability K x 1	Closing and Latching Capability kA Peak	Closing and Latching Momentary Capability kA rms Total
50 VCP-WND250	4.16	250	4.76	1.24	19	60	1200	29	5	2	3.85	36	97	58	345 (157)			
50 VCP-W250	4.16	250	4.76	1.24	19	60	1200 2000 3000	29	5	2	3.85	36	97	58	350 (159) 410 (186) 525 (238)			
50 VCP-W350	4.16	350	4.76	1.19	19	60	1200 2000 3000	41	5	2	4.0	49	132	78	460 (209) 490 (223) 525 (238)			
50 VCP-W500 (63 kA)	4.16	—	4.76	1.00	19	60	1200 2000 3000	63	5	2	4.76	63	170	101	525 (238) 530 (241) 550 (250)			
75 VCP-W500	7.2	500	8.25	1.25	36	95	1200 2000 3000	33	5	2	6.6	41	111	66	375 (170) 410 (186) 525 (238)			
150 VCP-W500	13.8	500	15	1.30	36	95	1200 2000 3000	18	5	2	11.5	23	62 97	37 58	350 (159) 410 (186) 525 (238)			
150 VCP-W750	13.8	750	15	1.30	36	95	1200 2000 3000	28	5	2	11.5	36	97 130	58 77	350 (159) 410 (186) 525 (238)			
150 VCP-W1000	13.8	1000	15	1.30	36	95	1200 2000 3000	37	5	2	11.5	48	130	77	460 (209) 490 (223) 525 (238)			
150 VCP-W1500 (63 kA)	13.8	—	15	1.00	36	95	1200 2000 3000	63	5	2	15.0	63	170	101	525 (238) 530 (241) 550 (250)			
Standard Circuit Breakers ①	50 VCP-W25C	4.16	—	5.95	1.00	24	75	1200 2000 3000	25	3	Tested for 3 Seconds	2	5.95	25	97	58	350 (159) 410 (186) 525 (238)	
	50 VCP-W40C	4.16	—	5.95	1.00	24	75	1200 2000 3000	40	3		2	5.95	40	139	83	460 (209) 490 (223) 525 (238)	
	50 VCP-W50C	4.16	—	5.95	1.00	24	75	1200 2000 3000	50	3		2	5.95	50	139	83	525 (238) 530 (241) 550 (250)	
	50 VCP-W63C	4.16	—	5.95	1.00	24	75	1200 2000 3000	63	3		2	5.95	63	175	104	350 (159) 410 (186) 525 (238)	
	75 VCP-W50C	7.2	—	10.3	1.00	42	95	1200 2000 3000	50	3		2	10.3	50	139	83	460 (209) 490 (223) 525 (238)	
	150 VCP-W25C	13.8	—	17.5	1.00	42	95	1200 2000 3000	25	3		2	17.5	25	97	58	350 (159) 410 (186) 525 (238)	
	150 VCP-W40C	13.8	—	17.5	1.00	42	95	1200 2000 3000	40	3		2	17.5	40	139	83	350 (159) 410 (186) 525 (238)	
	150 VCP-W50C	13.8	—	17.5	1.00	42	95	1200 2000 3000	50	3		2	17.5	50	139	83	460 (209) 490 (223) 525 (238)	
	150 VCP-W63C	13.8	—	15.0	1.00	42	95	1200 2000 3000	63	3		2	15.0	63	175	104	525 (238) 530 (241) 550 (250)	

① Applicable ANSI Standards C37.04-1999, C37.06-2000 (including both K >1 and K =1 ratings) and C37.09-1999.

② See *Consulting Application Guide* for further information.

Medium Voltage Circuit Breakers

Table 13-8. ANSI Standards ① — VCP-W Vacuum Circuit Breaker Types Rated on Symmetrical Current Rating Basis (Continued)

Identification				Rated Values											Weight		
Circuit Breaker Type	Nominal Voltage Class	Nominal 3-Phase MVA Class	Voltage		Insulation Level		Current		Interrupting Time	Permissible Tripping Delay	Maximum Voltage ② Divided by K	Current Values			Lbs. (kg)		
			Maximum Voltage	Voltage Range Factor ②	Withstand Test Voltage	Continuous Current at 60 Hz	Short Circuit Current (at Rated Max. kV)	Maximum Symmetrical Interrupting Capability				Closing and Latching Capability	Closing and Latching Momentary Capability				
														Power Frequency (1 Min.)		Impulse	Short Time Current ②
			E	K	kV rms	kV Peak	Amperes	kA rms				Cycles	Seconds	E/K		K x 1	kA rms
kV	MVA	kV rms	kV rms	kV Peak	Amperes	kA rms	Cycles	Seconds	E/K	K x 1	kA rms	kA Peak	kA rms Total	Lbs. (kg)			
Generator Breakers (to ANSI C37.013)	50 VCP-WG50	4.16	—	4.76	1.00	19	60	1200 2000 3000	50	3	Tested for 3 Seconds	1	4.76	50	137	82	525 (238) 530 (241) 550 (250)
	50 VCP-WG63	4.16	—	4.76	1.00	19	60	1200 2000 3000	63	3		1	4.76	63	173	103	525 (238) 530 (241) 550 (250)
	150 VCP-WG50	13.8	—	15.0	1.00	36	95	1200 2000 3000	50	3		1	15.0	50	137	82	525 (238) 530 (241) 550 (250)
	150 VCP-WG63	13.8	—	15.0	1.00	36	95	1200 2000 3000	63	3		1	15.0	63	173	103	525 (238) 530 (241) 550 (250)

① Applicable ANSI Standards C37.04-1999, C37.06-2000 (including both K > 1 and K = 1 ratings), and C37.09-1999.

 ② See *Consulting Application Guide* for further information.

Medium Voltage Circuit Breakers

Table 13-9. VCP-W Vacuum Breaker Types rated on Symmetrical Current Rating Basis ①

Identification		Rated Values												Weight	
Circuit Breaker Type	Nominal Voltage Class	Nominal 3-Phase MVA Class	Voltage		Insulation Level		Current		Interrupting Time	Maximum Permissible Tripping Delay Y	Transient Recovery Voltage		Current Values		
			Maximum Voltage E	Voltage Range Factor K	Withstand Test Voltage		Continuous Current at 60 Hz	Short Circuit Current (at Rated max. kV) I			E ₂	T ₂	Closing and Latching Capability (2.6 K Times Rated Short Circuit Current)	Capacitor Switching Cable Charging	
					Power Frequency (1 min.)	Impulse									Amperes
270 VCP-W750	27	750	27 ②	1.0	60	125	600 1200 2000	16	83 (5) ⑥	2	51	105	¥43	31.5	460 480 500
270 VCP-W1000	27	1000	27 ②	1.0	60	125	600 1200 2000	22	83 (5) ⑥	2	51	105	60	31.5	460 480 500
270 VCP-W1250	27	1250	27 ②	1.0	60	125	600 1200 2000	25	83 (5) ⑥	2	51	105	68	31.5	460 480 500
270 VCP-W1600	27	1600	27 ②	1.0	60	125	1200 2000	25	83 (5) ⑥	2	51	105	85	31.5	545 560
270 VCP-W2000	27	2000	27 ②	1.0	60	125	1200 2000	40	83 (5) ⑥	2	51	105	106	31.5	545 600
270 VCP-W25C	27	—	27	1.0	60	125	1200 1600	25	50 (3)	2.5	50	50	85	31.5	545 560
270 VCP-W32C	27	—	27	1.0	60	125	1200 1600	31.5	50 (3)	1.6	50	50	100	31.5	545 560
270 VCP-W40C	27	—	27	1.0	60	125	1200 1600	40	50 (3)	1.0	50	50	112	31.5	545 560

① CESI tested to applicable ANSI standards C37.04, C37.09 and C37.06. Consult Eaton for CESI copies of test reports on file. Operating duty cycle CO-15 seconds-CO. Operating time values: Opening 33 – 55 ms, closing 50 – 60 ms and reclosing 18 cycles (300 ms).

② Tested at 28.5 kV.

③ K = 1.0, therefore E = E/K and I = KI.

④ Also maximum interrupting rating and short-time current rating.

⑤ Duration of short-time current = 3 seconds, except as noted in

⑥ Optional interrupting time of 50 ms (3 cycles) is available.

Medium Voltage Circuit Breakers
IEC Standards
Table 13-10. IEC Standards ① — VCP-W Vacuum Circuit Breaker Types Rated on Symmetrical Current Rating Basis

Identification Circuit Breaker Type	Rated Values							Weight Lbs. (kg)
	Voltage	Insulation Level		Normal Current	Short Circuit Breaking Current and 3-Second Short Time Current	Short Circuit Making Current	Cable Charging Breaking Current	
		Power Frequency	Impulse Withstand					
kV rms	kV rms Peak	kV Peak	Amperes	kA rms	kV Peak	Amperes		
36 VCP-WND25	3.6	10	40	630 1250	25	65	10	350 (159)
36 VCP-WND32	3.6	10	40	630 1250	31.5	82	10	350 (159)
72 VCP-WND25	7.2	20	60	630 1250	25	65	10	350 (159)
72 VCP-WND32	7.2	20	60	630 1250	31.5	82	10	350 (159)
36 VCP-W25	3.6	10	40	630 1250 2000	25	65	10	414 (188) 430 (195) 496 (225)
36 VCP-W32	3.6	10	40	1250 2000	31.5	82	10	414 (188) 496 (225)
36 VCP-W40	3.6	10	40	1250 2000	40	104	10	496 (225) 550 (250)
72 VCP-W25	7.2	20	60	630 1250 2000	25	65	10	414 (188) 414 (188) 496 (225)
72 VCP-W32	7.2	20	60	1250 2000	31.5	82	10	414 (188) 430 (195)
72 VCP-W40	7.2	20	60	1250 2000	40	104	10	430 (195) 496 (225)
120 VCP-W25	12.0	28	75	630 1250 2000	25	65	25	430 (195) 496 (225) 496 (225)
120 VCP-W32	12.0	28	75	1250 2000	31.5	82	25	430 (195) 496 (225)
120 VCP-W40	12.0	28	75	1250 2000	40	104	25	496 (225) 550 (250)
175 VCP-W25	17.5	38	95	630 1250 2000	25	65	—	430 (195) 496 (225) 496 (225)
175 VCP-W32	17.5	38	95	1250 2000	31.5	82	—	430 (195) 496 (225)
175 VCP-W40	17.5	38	95	1250 2000	40	104	—	496 (225) 550 (250)
175 VCP-W50	17.5	38	95	1250 2000 3150	50	130	—	1013 (460) 1079 (490) 1156 (525)

① IEC Standards 60056 and 60694 apply.

Medium Voltage Circuit Breakers

Type VCP-W Vacuum Circuit Breaker Ratings

Table 13-11. Type VCP-W Ratings on Symmetrical Current Rating Basis ①②

Identification Circuit Breaker Type	Rated Values																							
	Voltage				Insulation Level		Current														Interruption Time ⑥			
	Nominal Voltage Class kV rms	Maximum Voltage V kV rms	Voltage Range Factor K ③ V/K	V/K ③	Withstand Test		Continuous Current at 60 Hz ⑤ Amps rms	Short Circuit Current							Momentary Current Withstand Capability kA rms Total	Short Time Current kA rms	Duration of Short Time Current s	Operating Duty (Duty Cycle) %	Rated Reclosing Factor (R) %	Maximum Permissible Tripping Delay Sec.			Transient Recovery Voltage (RRRV) kV/μs ⑦	Mechanical Endurance
					Power Frequency (1 Minute) kV rms	Lightning Impulse 1.2x50 ④ kV Peak		Sym. Interrupting at V (Isc) kA rms	% dc Component (I _{dc}) %	Asym. Factor S (Ref.) Asym. Interrupting (I _t) kA rms Total	Max. Asym. Interrupting at V/K (KxIsc) ③ kA rms	Max. Asym. Interrupting at V/K (SxKxIsc) ③ kA rms Total	Closing and Latching Capability kA Peak											
380 VCP-W 6 and 380 VCP-WR 16	34.5	38	1	38	80	170	600 1200 1600 2000	16	47	1.2	19.2	16	19.3	43	26	16	3	⑧⑩	100	83	5	2	0.6	2000
380 VCP-W 25 and 380 VCP-WR 25	34.5	38	1	38	80	170	600 1200 1600 2000	25	47	1.2	30.0	25	30.0	68	40	25	3	⑧⑩	100	83	5	2	0.6	2000
380 VCP-W 32 and 380 VCP-WR 32	34.5	38	1	38	80	170	600 1200 1600 2000 3000FC 2500	31.5	47	1.2	37.8	31.5	37.8	85	50	31.5	3	⑧⑩	100	83	5	2	0.6	2000
380 VCP-W 21 and 380 VCP-WR 21	34.5	38	1.65 ⑧	23 ⑧	80	170	1200 2000 3000FC 2500	21	47	1.2	39.5	35 ⑧	42.0	95	56	35	3	⑧⑩	100	83	5	2	0.6	2000
380 VCP-W 40 and 380 VCP-WR 40	34.5	38	1	38	80	170	1200 2000 3000FC 2500	40	47	1.2	48.0	40	48.0	107	63	40	3	⑧⑩	100	83	5	2	0.6	2000

13

① KEMA tested to applicable ANSI standards C37.04-1979, C37.09-1979 and C37.06-1979 (operating duty sequence CO - 15s - CO). Typical operating time values: operating 45 ms, closing 75 ms and reclosing 300 ms (18 cycles).
 ② The standard breaker is not rated for capacitor switching. If you require capacitor switching, please refer to the "C" breakers.
 ③ K = 1.0, therefore E = E/K and I = KI. Refer to the Consulting Application Guide for more information.
 ④ The ANSI C37.06 standard requires 150 kV BIL. If higher BIL levels are required, please refer to the "C" breakers.
 ⑤ For force air cooled fixed breaker applications, consult Eaton.
 ⑥ If you require 50 ms (3 cycle) interrupting time, please refer to the "C" breakers.
 ⑦ No-load operations.
 ⑧ At 23 kV rms (rated maximum voltage/K). Rated maximum symmetrical interrupting capability = 35kA rms (K x 1).
 ⑨ CO - 15s - CO.
 ⑩ Rated and tested also for rapid reclosing capability O - 0.3s - CO.
 ⑪ Not rated for rapid reclosing.

Medium Voltage Circuit Breakers

T-VAC and T-VACR Vacuum Breaker Ratings

Table 13-12. VCP-T and VCP-TR Ratings (ANSI C37.04 and C37.09)

Identification	Rated Values						
	Voltage Class	Insulation Level		Continuous Current	Short Circuit ^③ Breaking Current	Short Circuit Making Current	Mechanical Endurance C-0
		Power Frequency	Impulse Withstand				
Circuit Breaker Type	kV rms	kV rms	kV Peak	Amp-eres	kA rms	kA Peak	Oper-ations
50 VCP-T16 and 50 VCP-TR16	4.76	19	60	600 800 1200 1600 ^②	16	42	20,000 20,000 10,000 10,000
50 VCP-T20 and 50 VCP-TR20	4.6	19	60	600 800 1200 1600 ^②	16	52	10,000 10,000 10,000 10,000
50 VCP-T25 and 50 VCP-TR25	4.76	19	60	600 800 1200 1600 ^②	25	65	10,000 10,000 10,000 10,000
75 VCP-T16 and 75 VCP-TR16	8.25	20	60 ^①	600 800 1200 1600 ^②	16	42	20,000 20,000 10,000 10,000
75 VCP-T20 and 75 VCP-TR20	8.25	20	60 ^①	600 800 1200 1600 ^②	20	52	10,000 10,000 10,000 10,000
75 VCP-T25 and 75 VCP-TR25	8.25	20	60 ^①	600 800 1200 1600 ^②	25	65	10,000 10,000 10,000 10,000
150 VCP-T16 and 150 VCP-TR16	15	36	95	600 800 1200 1600 ^②	16	42	10,000 10,000 10,000 10,000
150 VCP-T20 and 150 VCP-TR20	15	36	95	600 800 1200 1600 ^②	20	52	10,000 10,000 10,000 10,000
150 VCP-T25 and 150 VCP-TR25	15	36	95	600 800 1200 1600 ^②	25	65	10,000 10,000 10,000 10,000

① Use 15 kV breaker and cassette when 95 kV impulse withstand required.
 ② 1600 A VCP-T breaker available.
 ③ Also 2 second short time current rating.

Table 13-13. T-VAC and T-VACR Ratings (Certified to IEC62271-100)

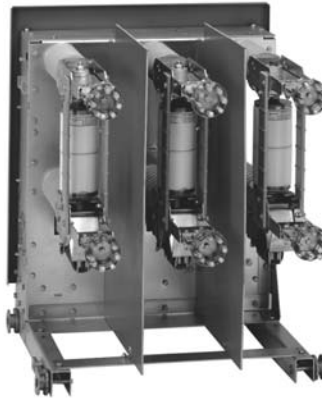
Identification	Rated Values						
	Voltage Class	Insulation Level		Normal Current (In)	Short Circuit ^④ Breaking Current	Short Circuit Making Current (Isc)	Mechanical Endurance C-0
		Power Frequency Withstand Voltage	Lightning Impulse (U _{Jw}) Withstand Voltage				
Circuit Breaker Type	kV rms	kV rms	kV Peak	Amp-eres	kA rms	kA Peak	Oper-ations
72 T-VAC16 and 72 T-VACR16	7.2	20	60	630 800 1250 1600 ^⑤	16	40	20,000 20,000 10,000 10,000
72 T-VAC20 and 72 T-VACR20	7.2	20	60	630 800 1250 1600 ^⑤	20	50	10,000 10,000 10,000 10,000
72 T-VAC25 and 72 T-VACR25	7.2	20	60	630 800 1250 1600 ^⑤	25	63	10,000 10,000 10,000 10,000
120 T-VAC16 and 120 T-VACR16	12	28	75 ^④	630 800 1250 1600 ^⑤	16	40	20,000 20,000 10,000 10,000
120 T-VAC20 and 120 T-VACR20	12	28	75 ^④	630 800 1250 1600 ^⑤	20	50	10,000 10,000 10,000 10,000
120 T-VAC25 and 120 T-VACR25	12	28	75 ^④	630 800 1250 1600 ^⑤	25	63	10,000 10,000 10,000 10,000
175 T-VAC16 and 175 T-VACR16	17.5	38	95	630 800 1250 1600 ^⑤	16	40	10,000 10,000 10,000 10,000
175 T-VAC20 and 175 T-VACR20	17.5	38	95	630 800 1250 1600 ^⑤	20	50	10,000 10,000 10,000 10,000
175 T-VAC25 and 175 T-VACR25	17.5	38	95	630 800 1250 1600 ^⑤	25	63	10,000 10,000 10,000 10,000

④ Use 17.5 kV breaker and cassette when 95 kV impulse withstand required.
 ⑤ 1600 A T-VAC breaker available.
 ⑥ Also 3 second short time current rating.

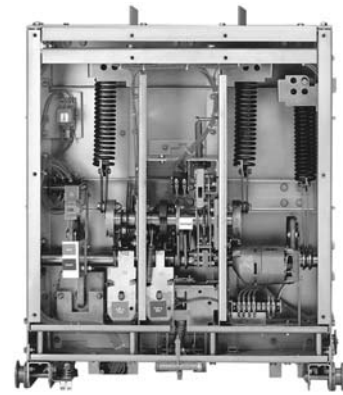
Technical Data and Specifications



Mini Module



Type VCP-W Circuit Breaker
Shown from Rear



VCP-W Circuit Breaker with Deadfront
Panel Removed

5/15 kV VCPW-ND and VCP-W Power Modules — Dimensions in Inches (mm)

13

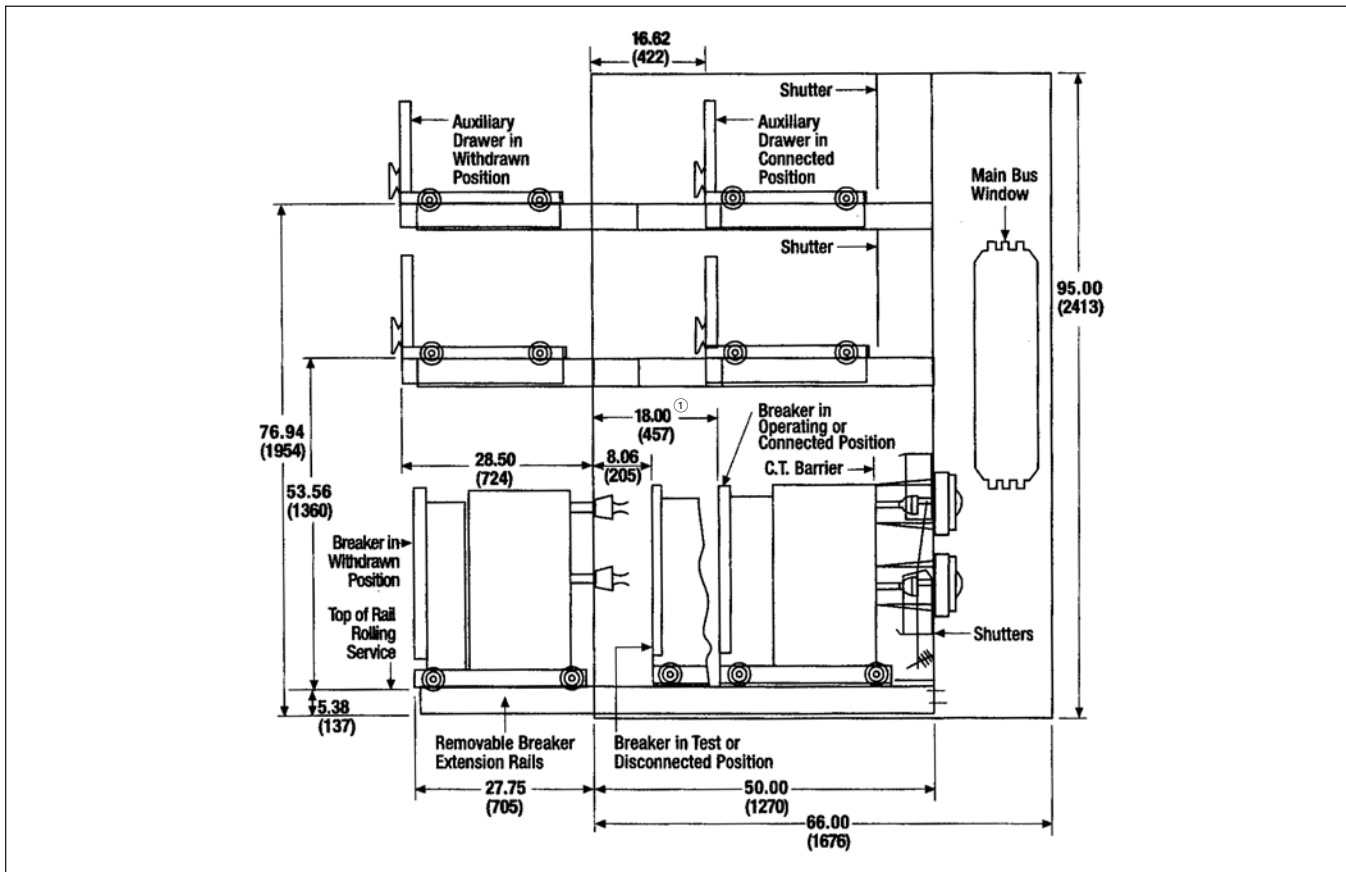


Figure 13-2. Power Module, 5/15 kV VCPW-ND 26.00 (660) Wide, VCP-W 36.00 (914) Wide

① VCPW-ND Dimensions of Breaker Travel 15.00 (381.0 mm).

5/15 kV VCPW-ND and VCP-W Mini Modules — Dimensions in Inches (mm)

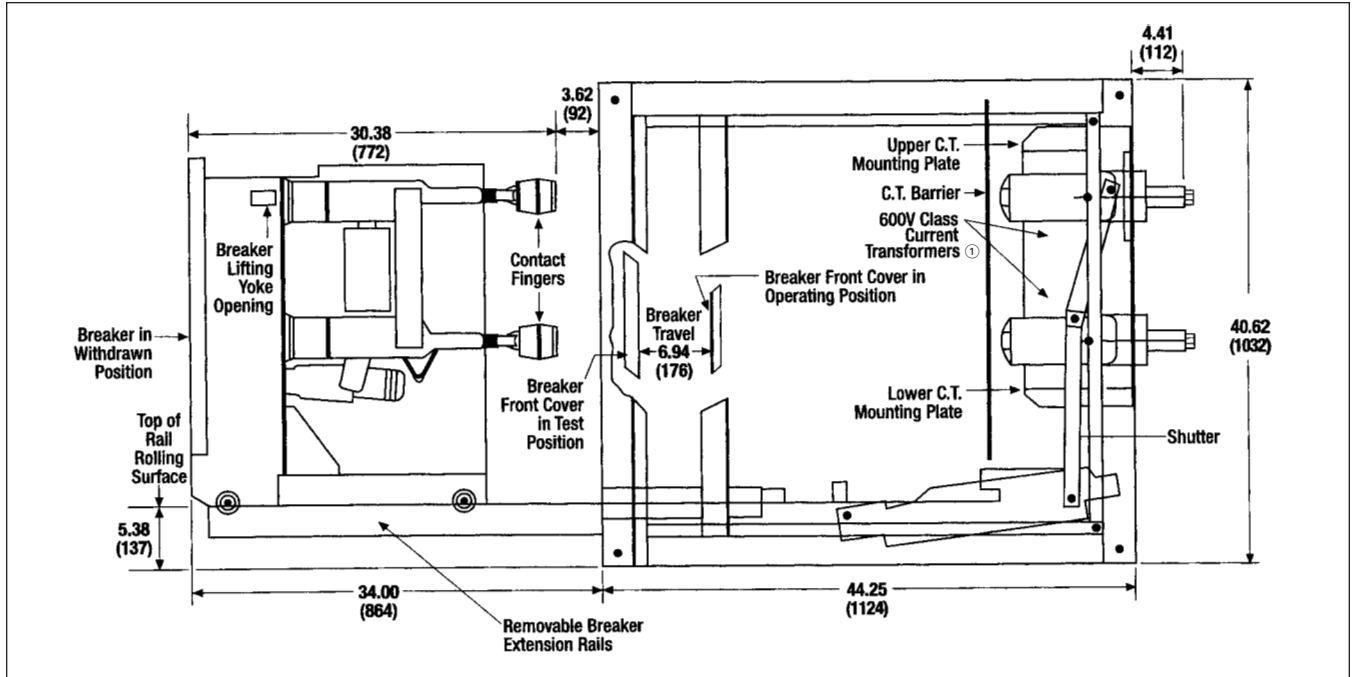


Figure 13-3. 5 kV VCPW-ND Mini Module 25.88 (657) Wide

① Current transformers not supplied.

5/15 kV VCP-W Mini Module — Dimensions in Inches (mm)

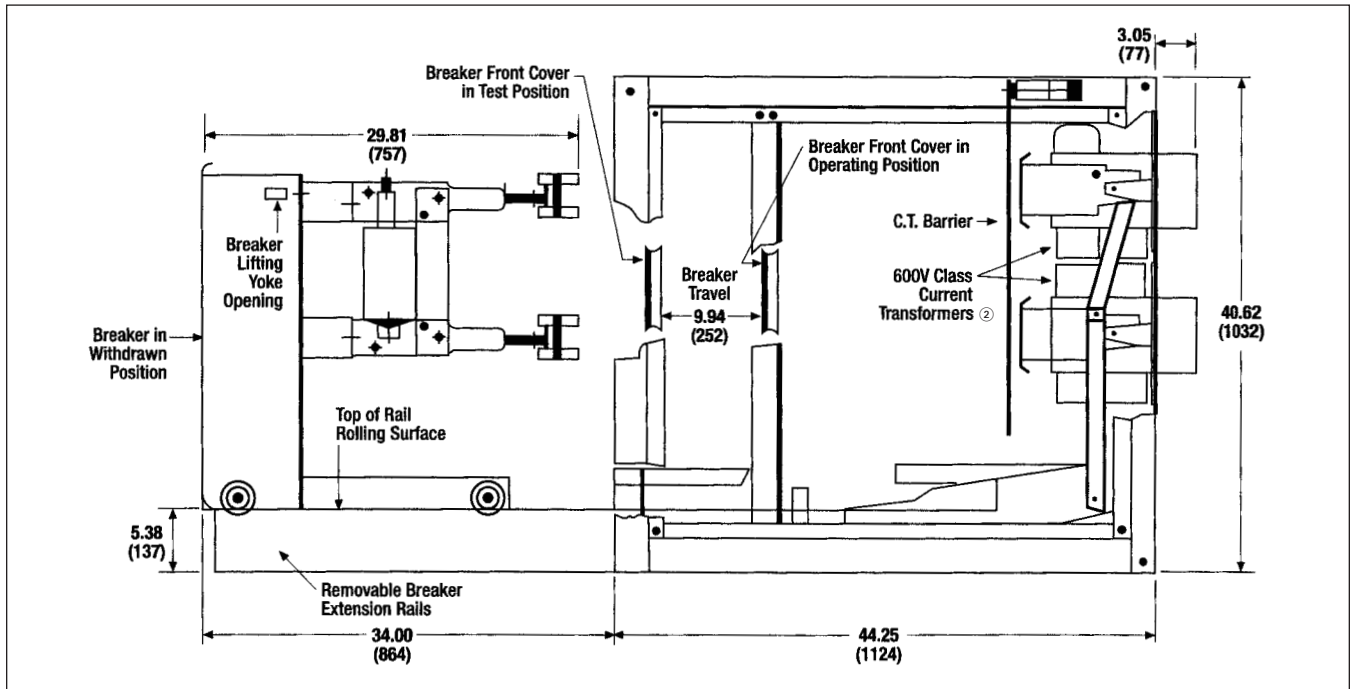


Figure 13-4. 5/15 kV VCP-W Mini-Module 35.88 (911) Wide

② Current transformers not supplied.

Product Description

SL MV Power Contactor Size 160 – 400 Amperes



SL Medium Voltage Contactor

Product Description

- A single family of contactors for any medium voltage control application. Voltage range of 2200 to 7200 volts.
- Ampere ratings from 160 through 400 amperes with Induction Motor Horsepower ranges from 600 to 5500 hp.
- Three different altitude versions.
- Leading-edge vacuum technology.
- Fully complies with global standards.
- Third-party qualified by UL, CSA, KEMA.
- Long life — 300,000 electrical and over 2 million mechanical.
- Mounting flexibility — panel or pedestal mounting provisions are standard. Unit can be mounted in horizontal or vertical position.
- Field-selectable settings for coil voltage, ac/dc, and coil dropout time.
- Field kits available for auxiliary contacts and mechanical latch. Accessories are common for all sizes.
- Special ordering allows unit to be factory pre-set to customer specification, including field kit installation.
- Highest quality available — all contactors manufactured within state-of-the-art “ISO-Certified” facilities. 100% made in America.

Application Description

Eaton’s Cutler-Hammer SL Medium Voltage Contactor starting applications:

- Squirrel-cage induction motors.
- Synchronous motors.
- Wound-rotor.

Fully applicable to:

- Full voltage starting.
- Reduced voltage starting.

The perfect choice for harsh duty applications:

- Mining.
- Pulp and paper.
- HVAC.
- Petrochemical.
- Automotive.
- Many others.

Features, Benefits and Functions

The SL Contactor Ratings

- Voltages of 2200 – 7200 volts.
- Amperages from 160 – 400 amperes.
- Interrupting ratings as high as 8500 amperes.

Control Voltages (Field Adjustable)

- 110, 220 Vac 50 Hz.
- 120, 240 Vac 60 Hz.
- 125 Vdc.

Drop-out Time (Field Adjustable)

- 30 ms
- 50 ms
- 130 ms
- 250 ms
- 330 ms

Global Acceptability

- NEMA
- ANSI
- IEC

Third-Party Verification

- UL
- CSA
- KEMA

Easy-to-Install Option Kits (Field Addition)

- Up to 6 extra auxiliary contacts.
- Mechanical latch — many coil voltages.

Long Life Guarantees High Quality

- 300,000 electrical operations.
- 2.5 million mechanical operations.

Standards and Certifications

Design and Test Standards

- UL 347, File No. E63257.
- CSA T.I.L. D-21, File No. LR28548.
- IEC No. 60470.
- ANSI/NEMA ICS 3 – 1993 (R2000)

Options and Accessories

SL Series — Accessory Kits

Mechanical Latch Kit — SL Vacuum Contactor Sizes 160 – 400 Amperes

Field Mount to 160 – 400 amperes SL Vacuum Contactor. Coil voltages available in a wide range of ac and dc selections. Easy to install on new and existing units.



Mechanical Latch Kit

Auxiliary Contact Kit — SL Vacuum Contactor Sizes 160 – 400 Amperes

Field Mount auxiliary contact kits for 160 – 400 amperes SL Vacuum Contactor. Contact kits are available in many configurations of NO-NC.



Auxiliary Contact Kit

Mechanical Interlock Kit

Field Mount mechanical interlock kits for 160 – 400 amperes SL Vacuum Contactor.



Mechanical Interlock Kit