



Eaton engineering for wind power applications: proven, industry-leading circuit protection



Engineered for wind power applications, the compact 38 kV VCP-Wind medium voltage circuit breaker provides reliable and robust circuit protection. Applying more than 80 years of circuit breaker innovation, the VCP-Wind breaker emphasizes reliable operation, increased efficiency, enhanced safety and improved sustainability.

Using industry-leading vacuum interruption technology, the VCP-Wind breaker is engineered to meet the needs of wind farm collector substations. With current ratings up to 2000A without fan cooling and 31.5 kA symmetrical interrupting rating, the 38 kV VCP-Wind meets ANSI/IEEE® C37.09 standards.

Sustainable, robust design

The VCP-Wind breaker is sustainable by design, using environmentally friendly insulation without Sulfur Hexafluoride (SF₆), which poses environmental and safety concerns.

The VCP-Wind breaker is designed to reliably switch in both normal load and high stress fault currents. The VCP-Wind breaker has an integrated lev-in assembly, versus the traditional VCP-W lev-in assembly mounted in the bottom of the cell, separate from the breaker. With encapsulated pole units versus the traditional VCP-W open design VI and conductors, the new VCP-Wind breaker is better suited for harsher environments and no exposed "live" medium voltage components in the breaker compartment.

Eaton vacuum interrupters provide negligible contact erosion and have a high electrical life. To increase the dielectric strength of the circuit breakers, they are encapsulated in epoxy resin material. Eaton has used solid insulation technology in a wide range of applications for more than 50 years.

Compact, tailored to fit

The VCP-Wind breaker is 30% smaller than the traditional 38 kV VCP-W, which allows switchgear manufacturers to stack a second breaker or a voltage transformer in the top compartment of the switchgear, reducing the overall footprint of the switchgear. Eaton's VCP-Wind breakers have a range of accessories to customize to site specifications. For example, a breaker module can facilitate and simplify integrating the VCP-Wind breaker into a switchgear design. The module is engineered to ANSI/IEEE C37.20.2 standards.



Powering Business Worldwide

Module features

- Self-aligning and coupling primary and secondary disconnecting devices
- Trip-free interlocks prevent moving a closed breaker into and out of the connect position
- Closing springs automatically discharge before moving the breaker out of the enclosure
- Coding pins ensure that only breakers of the correct rating can be inserted into the enclosure
- Three distinct latched positions: disconnect, test and connect
- Epoxy spouts are designed to accommodate the mounting of six sets of C200 class current transformers per phase in the front breaker compartment

Drawout Circuit Breaker Type	Voltage		Insulation Level	
	Maximum Voltage	Voltage Range Factor	Withstand Test	
	kV rms	K	Power Frequency (1 Min)	Lightning Impulse 1.2 x 50 µs
	kV rms	K	kV rms	kV Peak
380 VCP-Wind 16	38	1	80	150
380 VCP-Wind 16	38	1	80	150
380 VCP-Wind 16	38	1	80	150
380 VCP-Wind 16	38	1	80	150
380 VCP-Wind 25	38	1	80	150
380 VCP-Wind 25	38	1	80	150
380 VCP-Wind 25	38	1	80	150
380 VCP-Wind 25	38	1	80	150
380 VCP-Wind 31.5	38	1	80	150
380 VCP-Wind 31.5	38	1	80	150
380 VCP-Wind 31.5	38	1	80	150
380 VCP-Wind 31.5	38	1	80	150

Drawout Circuit Breaker Type	Short-Circuit Current							
	Continuous Current at 60 Hz	Symmetrical Interrupting at V (Isc)	Minimum Open Time	% DC Component (I _{dc})	Asymmetry Factor S (ref)	Asymmetry Interrupting (I _r)	Closing & Latching Capability	Short- Time Current
	A rms	kA rms	ms	%		kA rms Total	kA Peak	kA rms
380 VCP-Wind 16	600	16	36	39	1.14	18.3	42	16
380 VCP-Wind 16	1200	16	36	39	1.14	18.3	42	16
380 VCP-Wind 16	1600	16	36	39	1.14	18.3	42	16
380 VCP-Wind 16	2000	16	36	39	1.14	18.3	42	16
380 VCP-Wind 25	600	25	36	39	1.14	28.6	65	25
380 VCP-Wind 25	1200	25	36	39	1.14	28.6	65	25
380 VCP-Wind 25	1600	25	36	39	1.14	28.6	65	25
380 VCP-Wind 25	2000	25	36	39	1.14	28.6	65	25
380 VCP-Wind 31.5	600	31.5	36	39	1.14	36	82	31.5
380 VCP-Wind 31.5	1200	31.5	36	39	1.14	36	82	31.5
380 VCP-Wind 31.5	1600	31.5	36	39	1.14	36	82	31.5
380 VCP-Wind 31.5	2000	31.5	36	39	1.14	36	82	31.5

Eaton Corporation

Electrical Sector
1111 Superior Ave.
Cleveland, OH 44114
United States
877-ETN-CARE (877-386-2273)
Eaton.com

© 2011 Eaton Corporation
All Rights Reserved
Printed in USA
Publication No. PA08303001E / Z11179
November 2011

Eaton is a registered trademark
of Eaton Corporation.

All other trademarks are property
of their respective owners.



Powering Business Worldwide