



## ECOSMART VCB F

Medium Voltage Vacuum Circuit Breaker  
Front Execution Fixed or Withdrawable type

# ECOSMART VCB F

ECOSMART VCB F is a vacuum circuit breaker, manufactured in accordance with the standards IEC 62271-100, adopting the technique of the separate poles. The poles are manufactured using polyester material or epoxy resin for increased stability, the vacuum interrupter is therefore protected from any environmental effects.

ECOSMART VCB F is suitable for the following applications:

- Public medium voltage distribution
- Transformer substations
- Hospitals
- Residential centers
- Power transformer protection
- Data center protection
- Renewable energy plant
- Oil & Gas plants

ECOSMART VCB F provides protection for cable lines, transformers, capacitors banks and motors, and it's suitable for installation inside the medium voltage panels of our QMTC range. The ECOSMART VCB F is produced according with ENEL standards DY 523.

Service continuity, long life performance and personnel safety are paramount. The ECOSMART VCB F series is fully developed and type tested according to the IEC standards 62271-200.

The health and safety management system complies with the OHSAS 8001 standards and is certified by a third party. The internal test laboratory complies with UNI CEI EN ISO/IEC 17025 with tests and is certified by an independent certification body.

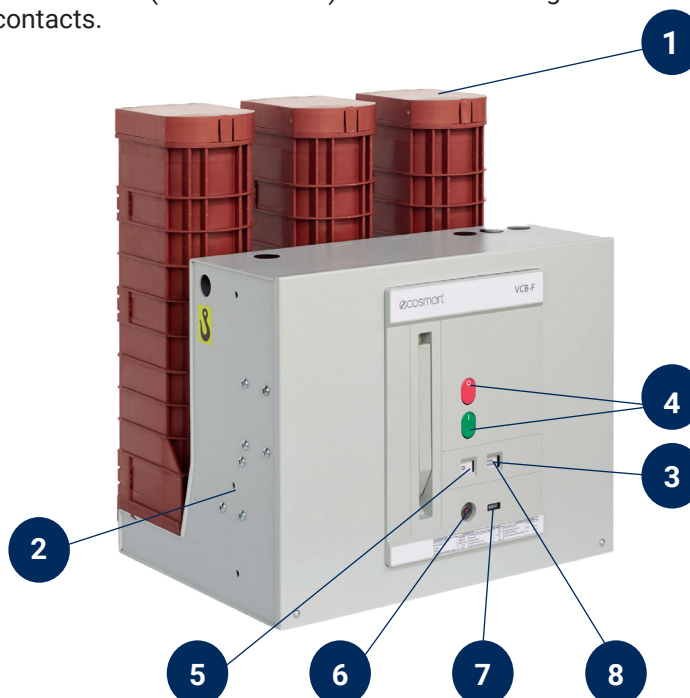
The ECOSMART VCB F production site and the environmental management system assumed by G&W Electric is in compliance with the standard quality rules ISO 14001.

## Reliability

Long service life and high reliability are required to distribute and use electric energy in a safe and secure way. The VCB F interrupters take advantage of vacuum technology due to its exceptional dielectric characteristics and capabilities as an interrupting method. The vacuum interrupters have two main contacts, one fixed and one mobile. Both contacts are housed in a sealed enclosure (vacuum bottle) that enables a high vacuum level to provide the insulating distance between the contacts.

**ECOSMART VCB F components include:**

1. Poles
2. Support Frame
3. Spring Charging Lever
4. Opening / Closing Push Buttons
5. CB Status Indicator
6. Key Lock
7. Operation Counter
8. Spring Status Indicator



## Technical Characteristics

ECOSMART VCB F													
Rated Voltage	Ur (kV)	12				17.5				24			
Power frequency withstands voltage 50/60 Hz 60 sec	Ud (kV)	28				38				50			
Rated lightning impulse withstand voltage	Up (kV)	75				95				125			
Rated frequency	fr (Hz)	50				50				50			
Rated short-circuit breaking current	Isc (kA)	16	20	25	31.5	16	20	25	31.5	16	20	25	
Rated short time withstand current	I <sub>tk</sub> (kA/3s)	16	20	25	31.5	16	20	25	31.5	16	20	25	
Rated current	I <sub>r</sub> (A)	630	-	630	630	630	-	630	-	630	630	630	
		1250	-	1250	1250	1250	-	1250	-	1250	1250	1250	
		1600	-	1600	1600	1600	-	1600	1600	1600	1600	1600	
		2000	-	2000	2000	2000	-	2000	2000	2000	2000	2000	
		2500	-	2500	2500	2500	-	2500	2500	2500	2500	2500	
Operation sequence	O - 0,3sec - CO - 3min - CO <sup>(1)</sup>												
Mechanical Endurance Class	M1 (2000)												
	M2 (10000)												
OPERATING CONDITIONS ACCORDING TO IEC 62271-1													
Service Temperature	°C	-5/+40											
Temperature (for stocking)	°C	-40/+70											
Average temperature over 24h	°C	35											
Maximum altitude (above sea level)	m	≤1000											

(1) O - 0,3sec - CO - 15 sec - CO available on request

## ECOSMART VCB F Medium Voltage Connection

### Fixed execution

The ECOSMART VCB F vacuum circuit breaker is equipped with terminals that allow for easy circuit breaker connections inside the panel. The terminals are already prepared with drilled holes to facilitate the installation activities.

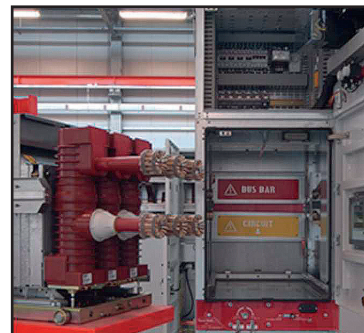
### Withdrawable execution

In the withdrawable execution, the metallic frame is placed on a truck equipped with wheels that allow the circuit breaker insertion and removal from the switchgear.

The circuit breaker is complete with arm and finger contacts on the back. These arm contacts allow the connection of the circuit breaker to the main busbar system of the medium voltage switchgear.

### Operating Mechanism

The vacuum circuit breaker is equipped with a spring operated mechanism (closing and opening spring). It can be operated both manually and electrically. The operating mechanism closing spring can be charged through the spring charging lever or by the gear motor. Opening and closing operations are carried out by the available push buttons or via opening and closing coils actuated from remote. Key locks are available with the key free in the open position to allow interlocking with other devices and switchgear.



Contact us today

+1.708.388.5010 or [info@gwelec.com](mailto:info@gwelec.com)

**G&W Electric**

Engineered to order. Built to last.

Since 1905, G&W Electric has been a leading provider of innovative power grid solutions, including the latest in load and fault interrupting switches, reclosers, system protection equipment, power grid automation and transmission and distribution cable terminations, joints and other cable accessories. G&W is headquartered in Bolingbrook, Illinois, U.S.A., with manufacturing facilities and sales support in more than 100 countries, including Canada, Italy, China, Mexico, Brazil, India, UAE and Singapore. We help our customers meet their challenges and gain a competitive edge through a suite of advanced products and technical services.

[gwelectric.com](http://gwelectric.com)

© 2020 G&W Electric  
GW27-2020 9/20