Features and benefits

VL circuit breakers

Answers for infrastructure and cities.
Cost saving
Module by module, VL circuit breakers address the critical issue: Your costs for operational processes, space and energy. The advantages range from simple retrofitting right up to compact construction, benefiting all those who work with VL circuit breakers; whether planner, wholesaler, switchboard manufacturer or plant operator.

Easy planning
A few modular components open up the possibility of thousands of different combinations for all energy distribution applications. Saving costs, contributing to flexible planning and offering simple integration within overlapping system solutions by communication. Never before have circuit breakers been so versatile and so simple.

Global
No matter what the electrical standard, no matter where on earth, VL circuit breakers are optimally designed for most applications. The uniform design for global applications provides a standard solution — a solution you can trust anywhere.

System solutions
Siemens, a name that stands for innovation, now brings a new set of advancements to circuit protection. With the ability to communicate over common protocols, the VL integrates with the broader system giving you the advantage of system monitoring capabilities along with cost effective installations. Build to today’s needs, and as your plant capacity or markets expand, VL is the consistent solution.

Fast service
VL circuit breakers get by with just a few standard parts, making it easier to get devices and components. That means that you find what you are looking for quicker at your dealer or you can reduce your own inventory costs.

Time savings
If time is money, Siemens VL will save you a lot. One example is the quick installation by simple connection of the main line. Another is the simple maintenance. Internal accessories are accessible without special tools and, as far as the life expectancy is concerned, VL circuit breakers are designed to exceed market standards.

A solutions oriented circuit protection family
A few simple components provide endless possibilities. You take the concept of modularity and apply it to a new breed of breakers. Suddenly you have countless possibilities with steadfast reliability.
Siemens VL Circuit Breakers are designed on the principal of contact magnetic repulsion. This allows the current limiting effect of the breakers to help protect the system components from the thermal and dynamic magnetic effects of short circuit currents in the event of an electrical fault. VL Circuit Breakers feature N-Class (35kA), H-Class (65kA) and L-Class (100kA) interrupting ratings. They also feature both thermal magnetic and electronic trip units across the entire product line, assuring compatibility for virtually any application. All of the VL Trip Units are UL listed for field installation and measure true RMS current. This type of measurement ensures the most accurate means of measuring currents in today’s harmonic filled electrical distribution systems. VL Trip Units are available for the following applications:

- **Line Protection** – overload and short-circuit curves are matched to protect cables, wiring and non-motorized loads.
- **Motor Circuit Protection** – equipped with adjustable instantaneous short circuit protection, trip characteristics are designed for optimum protection and isolation in combination starter applications (consisting of a motor circuit protector, contactor, and overload relay).
- **Non-automatic Circuit Breaker (MCS)** – can be used as supply, main or non-automatic switches without overload protection. They are fitted with fixed instantaneous settings.

### Siemens VL trip unit technology

**N/H/L class, model 525, thermal magnetic trip units**
- Ideal for line protection
- Fixed overload protection
- Adjustable short-circuit protection

**N/H/L class, model 545, electronic trip units**
- Flashing green LED indicates proper operation
- Yellow LED for overload status
- Integrated self-test function
- Operates without the need for auxiliary voltage
- Plug-in socket for field testing device

**N/H/L class, model 576, electronic LCD trip units**
- Integral LCD display
- User-friendly, menu-driven setting of protection parameters directly in absolute ampere values
- Integrated self-test function
- Operates without the need for auxiliary voltage when the breaker is under load
- Thermal memory function, selectable on/off
- Fully adjustable LSI and LSIG settings for flexible coordination
- Connects to communication modules
- Plug-in socket for field testing device

### Tool Set:
- Electronic catalog
- Manuals and instruction sheets
- Automated breaker cross-reference
- PC-based time current curve software program
- Internet links with easy to use navigation
- Multi-formatted breaker drawings (CAD or PDF)
- Product specifications in customizable formats for easy submittals
- Circuit breaker information guide (technical data)
- Product video
- PowerPoint presentations

**Backed by Siemens innovation and technology**
## Breaker frame family

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<tr>
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<th>DG</th>
<th>FG</th>
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<tbody>
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<td>50 - 150 A</td>
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<td><strong>Ground sensor (neutral transformers)</strong></td>
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1) Special version – see catalog.
2) Add 2.6” to height with extended shield.
3) Communications available via communications module.
4) \(400/500\) Amp only.
5) VL circuit breakers are inherently fungus resistant.
6) DG and FG 600Y/347V

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\(^1\) Special version – see catalog.
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- **Thermal-magnetic**: Electronic with LCD, Interchangeable trip unit, Communications capability
- **Auxiliary switch**: Alarm switch, Shunt trip, Mechanical interlock, Electric motor operator, Rear connecting studs, Handle mechanisms, Fungus proof
- **Molded case switch**: Motor circuit protector, 100% rated
- **Communications capability**: Interchangeable trip unit, Electronic with LCD
- **Handle mechanisms**: Rear connecting studs, Electric motor operator, Mechanical interlock, Shunt trip, Alarm switch, Fungus proof
- **Plug-in mounting assembly with trip interlock**: Draw-out assembly, Handle mechanisms, Fungus proof
- **Draw-out assembly**: Fungus proof
- **Mechanical interlock**: Fungus proof
- **Undervoltage release**: Fungus proof
- **Alarm switch**: Fungus proof
- **Molded case switch**: 100% rated
- **Auxiliary switch**: Alarm switch, Shunt trip, Mechanical interlock, Electric motor operator, Rear connecting studs, Handle mechanisms, Fungus proof
- **Fungus proof**: Fungus proof

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**Breaker Type**
- NDG
- HDG
- LDG
- NFG
- HFG
- LFG
- NJG
- HJG
- LJG

**Interrupting Class**
- N
- H
- L

**Max. Volts AC**
- 600 V

**Current Rating**
- 30 – 150 A
- 40 – 250 A
- 70 – 400 A

**Dimensions**
- 11 H x 5.5 W x 4.2 D
- 16 H x 7.5 W x 4.7 D
- 16 H x 9 W x 6.2 D

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**400 - 600 A**
- 600 - 800 A
- 800 - 1200 A
- 1200 - 1600 A

**2, 3**
- 2, 3
- 2, 3
- 3

**600 V**
- 600 V
- 600 V
- 600 V

**NLG HLG LLG NMG HMG LMG NNG HNG LNG NPG HPG LGP**
- N 65 H 100 200 | N 65 H 100 200 | N 65 H 100 200 | N 65 H 100 200
- 65/65 100/75 200/150 | 65/65 100/75 200/150 | 65/65 100/75 200/150 | 65/65 100/75 200/150
- 45/45 70/70 100/75 | 50/50 70/70 100/75 | 50/25 70/35 100/50 | 50/25 70/35 35/17
- 12/6 15/8 15/8 | 20/10 30/15 35/17 | 20/10 30/15 35/17 | 20/10 30/15 35/17
- 30 30 30 22 25 42 | 22 25 42 | 22 25 42 | 22 25 42
- 25 35 35 35 50 65 | 35 50 65 | 35 50 65 | 35 50 65
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**Auxiliary switch, Alarm switch, Shunt trip, Mechanical interlock, Electric motor operator, Rear connecting studs, Handle mechanisms, Fungus proof**

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**Communications capability**: Interchangeable trip unit, Electronic with LCD

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**Auxiliary switch, Alarm switch, Shunt trip, Mechanical interlock, Electric motor operator, Rear connecting studs, Handle mechanisms, Fungus proof**

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**100% rated**: Motor circuit protector

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**Molded case switch, Motor circuit protector, 100% rated**

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**Fungus proof**: Fungus proof

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**Communications capability**: Interchangeable trip unit, Electronic with LCD

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**Electronic with LCD**: Electronic, Thermal-magnetic

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**Thermal-magnetic**: Electronic with LCD, Interchangeable trip unit, Communications capability

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**Molded case switch**: Motor circuit protector, 100% rated

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**Auxiliary switch, Alarm switch, Shunt trip, Mechanical interlock, Electric motor operator, Rear connecting studs, Handle mechanisms, Fungus proof**

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**Fungus proof**: Fungus proof
Competitive advantages to reduce your installed cost

The compact size saves real estate and its associated costs.

The modularity and flexibility reduce inventory, allow for last minute changes, support quick ship opportunities, and promote the most cost effective configuration.

Global ratings, accessories, and distribution allow you to efficiently serve virtually every market using breakers with just one design and footprint.

The intuitiveness and ease of use eliminate the need for special training and significantly reduce installation time.

For higher reliability, most VL components have twice the endurance specified by UL. Automated bar code tracking, testing, and calibration of every breaker saves money on confirmation tests and field service.
Modularity to support all your application needs

VL circuit breakers with optional accessories

1) Base for plug-in or draw-out
2) Interphase barriers
3) Rear terminals – flat and round
4) Bus extensions
5) Terminal connectors
6) Plug-in terminal blades
7) Extended terminal shield
8) Standard terminal shield
9) Cover frame for door cutout
10) Stored energy operator
11) Rotary handle operator
12) Variable depth rotary operator
13) Max flex operator
14) Circuit breaker
15) Shunt trip or undervoltage releases
16) Auxiliary/alarm switches
17) Thermal-magnetic trip unit (525)
18) Electronic trip unit (545)
19) Electronic trip unit with LCD (576)
20) Communication module with ZSI
21) Electronic trip unit test kit
The information provided in this brochure contains merely general descriptions or characteristics of performance which in case of actual use do not always apply as described or which may change as a result of further development of the products. An obligation to provide the respective characteristics shall only exist if expressly agreed in the terms of contract.

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