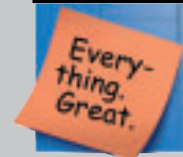


Molded-case circuit-breakers 3VL:

Always the optimum device from 16 A to 1600 A.

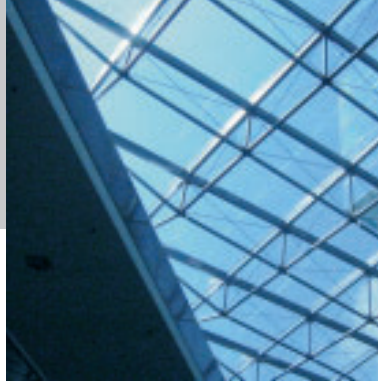


sentron 3VL



SIEMENS

Everything. Great. With low-voltage power distribution from Siemens.



SETRON Molded-case circuit-breakers 3VL :

Lower costs.

More possibilities.

Buildings are becoming increasingly more intelligent, production plants and systems continually more flexible and this means that low-voltage power distribution is truly becoming a "main artery" – as never before. The current to power electric loads must flow – reliably, cost-effectively and safely.

So that this really happens, we are offering something quite unique: Products that are harmonized with one another so that your requirements can be mastered easily. This technology has a name: SETRON – the complete range of devices from 16 A to 6300 A, from well-proven switch disconnectors up to the intelligent circuit-breakers 3VL and 3WL.

Let yourself be inspired.





From 16 A to 1600 A – molded-case circuit-breakers 3VL ensure safety and security over this wide current range. When mounted in distribution panels, their versatility is just as convincing as their space-saving design: As feed-in and feeder breaker they protect plants, motors and generators against short-circuit and overload – in the widest range of systems. There are many reasons why your circuit breaker of choice should be SENTRON 3VL:

- **Because SENTRON 3VL seamlessly covers the current range from 16 A to 1600 A.** Whether with 3- or 4-pole circuit-breakers, whether fixed-mounted devices or in a withdrawable-unit design, whether for AC or DC – everything fits together perfectly. Furthermore, three switching power classes are available: 40 kA, 70 kA and 100 kA.
- **Because SENTRON 3VL offers the maximum versatility with minimum costs.** From plant, motor and generator protection through starter combinations up to use as switch disconnectors –



Molded-case circuit-breakers 3VL – the highlights:

- Accessories are the same for many frame sizes
- Everything can be combined in a modular fashion and can be simply retrofitted
- Compact design reduces storage and electrical cabinet costs
- Practically no derating up to 50°C
- Communications-capable via PROFIBUS-DP

the range of applications is almost unlimited. Only two series of internal accessories are required for the complete range!

- **Because SENTRON 3VL takes up so little space** – the extremely compact and modular design ensures that valuable space is saved – both in the warehouse and in the electrical cabinet.
- **Because SENTRON 3VL makes your plant transparent** – using the integrated PROFIBUS-DP based communications solution. The integrated status indicator using an LED or display always provides an overview locally, establishes the Internet connection and offers effective remote parameterization and diagnostic functionality. All of the communication components can be simply retrofitted thanks to the modular design.
- **Because SENTRON 3VL is so cost-effective** – in the range from 16 A to 630 A, you can depend on the favorably priced thermal-magnetic releases. The electronic versions are available for the range between 63 A and 1600 A.
- **Because SENTRON 3VL can take a lot.** Namely 50°C without derating. This means that the plant performance can be optimally utilized even if things get hot in the cabinet due to the trend toward more compact arrangement.
- **Because SENTRON 3VL provides you with a high degree of safety and security worldwide:**
 - Various certifications and international approvals
 - such as IEC, CCC or shipbuilding – permit an almost infinite range of applications.

SENTRON



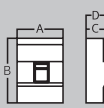
Molded-case circuit-breakers 3VL:

Everything. Brilliant technology.

One range – many applications – simple accessories:

Everything is possible with molded-case circuit-breakers 3VL. Simple mounting, installation and operation mean that handling is child's play. Internal accessories are easily snapped in.

There are only two groups of internal components for all of the sizes!

Type		VL160X		VL160		
						
Rated current at 50 °C ambient temperature		16 A to 160 A		26 A to 160 A		
Number of poles		3	4	3	4	
Rated voltage (AC) 50–60 Hz [V]		690		690		
(DC) ⁽¹⁾ [V]		250	250	600	600	
Overcurrent release						
Thermal-magnetic		✓	✓	✓	✓	
Electronic ETU/LCD		–	–	✓	✓	
Exchangeable		–	–	✓	✓	
PROFIBUS module COM10		–	–	✓	✓	
	A mm	105	139	105	139	
	B mm	157	157	175	175	
	C mm	81	81	81	81	
	D mm	107	107	107	107	
VL-N short-circuit breaking capacity (kA) RMS value						
IEC 60947-2	I_{cu}/I_{cs}		I_{cu}/I_{cs}		I_{cu}/I_{cs}	
	to	240 VAC	65/65		65/65	
		415 VAC	40/40		40/40	
		440 VAC	25/20		25/20	
		500/525 VAC	18/14		25/20	
	to	690 VAC	8/4 ⁽²⁾		12/6	
		250 VDC	30/30		32/32	
		500 VDC	–		–	
	600 VDC	–		–		
VL-H short-circuit breaking capacity (kA) RMS value (high switching capacity)						
IEC 60947-2	I_{cu}/I_{cs}		I_{cu}/I_{cs}		I_{cu}/I_{cs}	
	to	240 VAC	100/75		100/75	
		415 VAC	70/70		70/70	
		440 VAC	42/32		50/38	
		500/525 VAC	30/23		40/30	
	to	690 VAC	12/6 ⁽²⁾		12/6	
		250 VDC	30/30		32/32	
		500 VDC	–		32/32	
	600 VDC	–		–		
VL-L short-circuit breaking capacity (kA) RMS value (very high switching capacity)						
IEC 60947-2	I_{cu}/I_{cs}		I_{cu}/I_{cs}		I_{cu}/I_{cs}	
	to	240 VAC	–		200/150	
		415 VAC	–		100/75	
		440 VAC	–		75/50	
		500/525 VAC	–		50/38	
	to	690 VAC	–		12/6	
		250 VDC	–		32/32	
		500 VDC	–		32/32	
	600 VDC	–		30/30		







✓ available

– not available

⁽¹⁾ rated DC voltage, only
for circuit-breakers with
thermal-magnetic release

⁽²⁾ rated current ≥ 25 A



VL250		VL400		VL630		VL800		VL1250		VL1600	
											
80 A to 250 A		125 A to 400 A		252 A to 630 A		320 A to 800 A		400 A to 1250 A		640 A to 1600 A	
3	4	3	4	3	4	3	4	3	4	3	4
690		690		690		690		690		690	
600	600	600	600	600	600	–	–	–	–	–	–
✓	✓	✓	✓	✓	✓	–	–	–	–	–	–
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
105	139	139	183	190	253	190	253	229	305	229	305
175	175	279	279	279	279	406	406	406	406	406	406
81	81	102	102	102	102	114	114	152	152	152	152
107	107	138	138	138	138	151	151	207	207	207	207
Icu/Ics		Icu/Ics		Icu/Ics		Icu/Ics		Icu/Ics		Icu/Ics	
65/65		65/65		65/65		65/65		65/35		65/35	
40/40		45/45		45/45		50/50		50/25		50/25	
25/20		35/26		35/26		35/26		35/26		35/26	
25/20		25/20		25/20		25/20		25/20		25/20	
12/6		15/8		20/10		20/10		20/10		20/10	
32/32		32/32		32/32		–		–		–	
–		–		–		–		–		–	
–		–		–		–		–		–	
Icu/Ics		Icu/Ics		Icu/Ics		Icu/Ics		Icu/Ics		Icu/Ics	
100/75		100/75		100/75		100/75		100/75		100/50	
70/70		70/70		70/70		70/70		70/35		70/35	
50/38		50/38		50/38		50/38		50/38		50/38	
40/30		40/30		40/30		40/30		40/30		40/30	
12/6		15/8		30/15		30/15		30/15		30/15	
32/32		32/32		32/32		–		–		–	
32/32		32/32		32/32		–		–		–	
–		–		–		–		–		–	
Icu/Ics		Icu/Ics		Icu/Ics		Icu/Ics		Icu/Ics		Icu/Ics	
200/150		200/150		200/150		200/150		200/100		200/100	
100/75		100/75		100/75		100/75		100/50		100/50	
75/50		75/50		75/50		75/50		75/50		75/50	
50/38		50/38		50/38		50/38		50/38		50/38	
12/6		15/8		35/17		35/17		35/17		35/17	
32/32		32/32		32/32		–		–		–	
32/32		32/32		32/32		–		–		–	
30/30		30/30		30/30		–		–		–	

SENTRON

Molded-case circuit-breakers 3VL:

Communication ensures transparency.



Whether in commercial buildings or in production plants – often, it is decisive to know everything that is happening in the power distribution system – and that in just seconds.

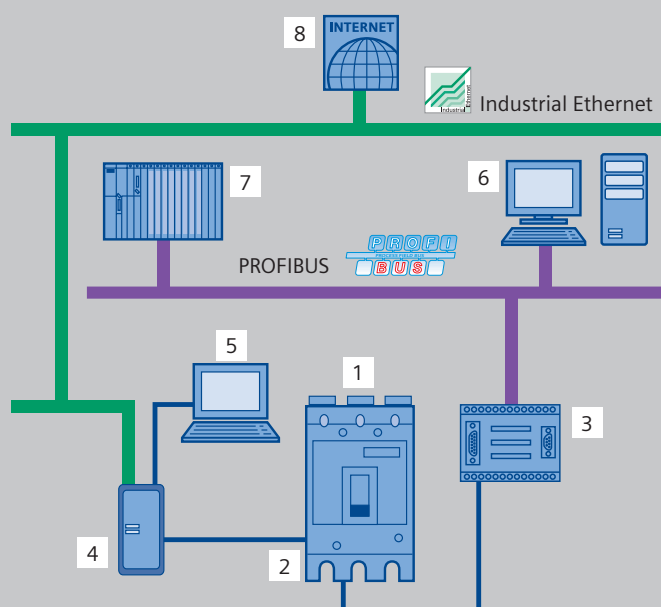
The molded-case circuit-breaker 3VL has all of the functionality to provide you with this capability. It employs a modular communications system that by the way has the same PROFIBUS profile as the air circuit-breakers 3WL. This means that an integrated seamless communications solution is provided for all of our circuit-breakers.

You have three ways to find out what is happening at any time:

- Direct connection with PROFIBUS-DP via the COM10 PROFIBUS module
- Simple access to the Intranet or Internet using the Breaker Data Adapter Plus (BDA Plus) – for fast favorably-priced remote diagnostics and parameterization
- Complete transparency using the SIMARIS manager energy management software that is aligned 1:1 to SENTRON

When the requirements grow: Simply add the communications functionality

Modularity is the principle of the molded-case circuit-breakers 3VL. This also applies to the communications, which can be simply added at any time. And that includes all of the additional functional requirements, which can be added in the shortest time – such as remote switching with the motorized operator that can be synchronized.

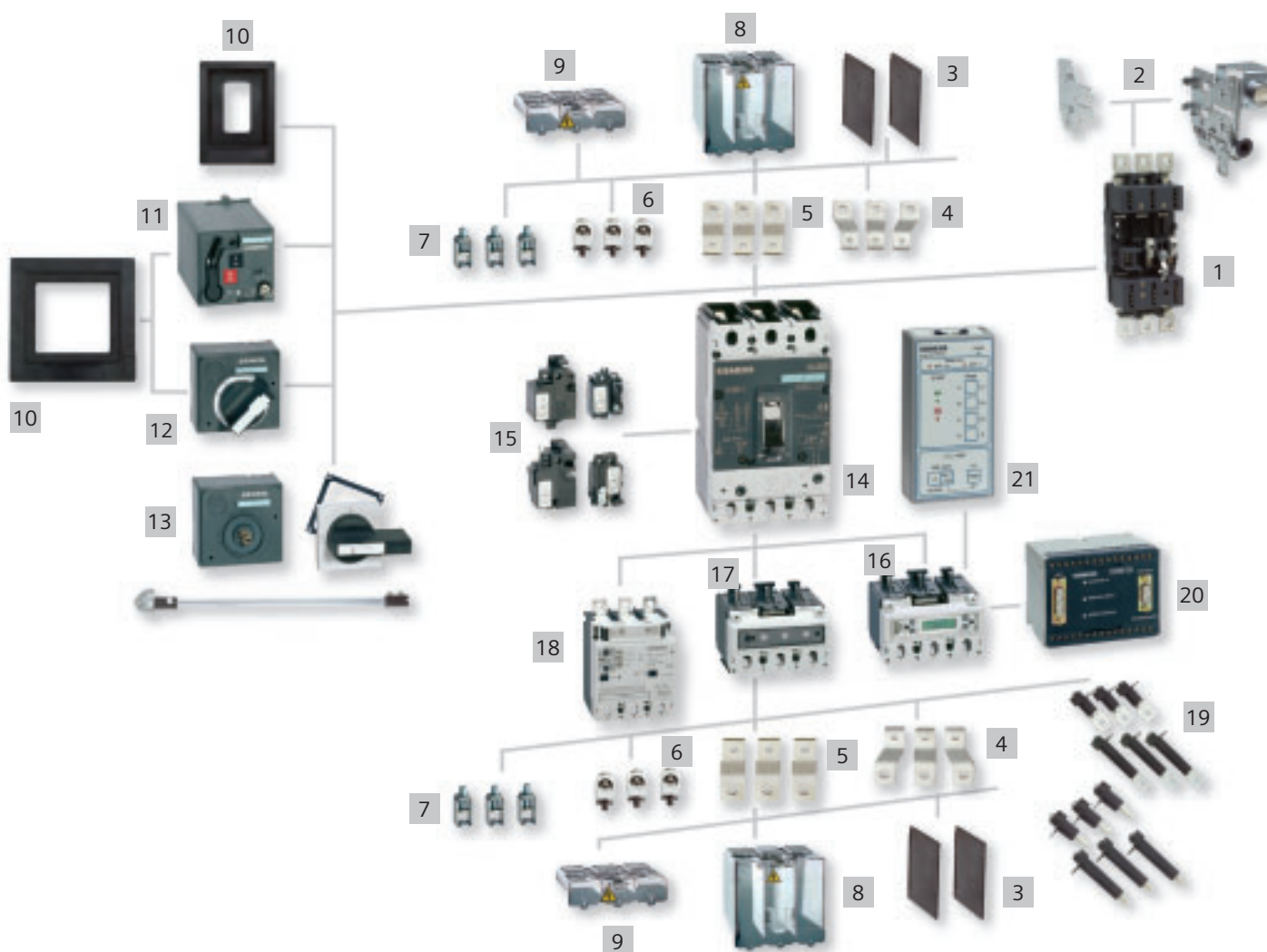


- 1 Molded-case circuit-breaker 3VL
- 2 Electronic overcurrent trip (ETU LCD)
- 3 COM10 PROFIBUS module including short-term grading
- 4 Breaker Data Adapter (BDA/BDA Plus)
- 5 Browser-capable input and output device (e.g. notebook)
- 6 PC with Switch ES Power
- 7 PLC (e.g. SIMATIC S7)
- 8 Ethernet/Intranet/Internet

Complete and compatible:

Low-voltage power distribution with molded-case circuit-breakers 3VL.

Molded-case circuit-breakers 3VL: Superior individual components, integrated into unified, seamless power distribution systems – up to solutions for specific industry sectors and the infrastructure.



- 1 Plug-in/draw-out base
- 2 Draw-out assembly side plates
- 3 Interface shields
- 4 Flared busbar extensions
- 5 Straight busbar extensions
- 6 Round terminal for Al/Cu
- 7 Box terminal for Cu
- 8 Extended terminal cover

- 9 Standard terminal cover
- 10 Cover frame for door cut-out
- 11 Motorized stored energy operator
- 12 Front rotary direct drive
- 13 Front rotary extended drive
- 14 3VL molded-case circuit-breaker
- 15 Internal accessories
- 16 Electronic Trip Unit (ETU)

- 17 Thermal-Magnetic Trip Unit TM
- 18 Residual Current Device (RCD)
- 19 Rear terminals flat and round
- 20 COM10 PROFIBUS module
- 21 Handheld electronic release test kit

Would you like more information? **Our pleasure!**

The simple way to obtain more information and data about Siemens low-voltage power distribution: Please copy this page, complete and fax to +49 (911) 978-3321.

☐ Yes, please send me additional information.

Switching and protecting with

- ☐ SENTRON switch disconnectors
☐ SENTRON air circuit-breakers

Distribution with

- ☐ SIVACON power distribution and motor control centers
☐ SIVACON busbar distributors

Planning, engineering and managing with

- ☐ SIMARIS design
☐ SIMARIS manager
☐ **Totally Integrated Power**

For more detailed information, please contact your local Siemens salesperson.

If you have technical questions, please contact the following:

Technical Assistance

Tel.: +49 (911) 895-5900

E-Mail: technical-assistance@siemens.com

www.siemens.com/lowvoltage/technical-assistance

Please send me the selected information to the following address:

Name

First name

Function

Company

Street, No. / Postbox

Postal code / City

Country

Telephone

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E-Mail

Siemens Aktiengesellschaft

Automation and Drives
Low-Voltage Controls and Distribution
P.O. Box 4848, D-90327 Nuremberg

www.siemens.com/sentron

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