

SIEMENS

Ingenuity for life



Siemens Breakers for Global Solutions

OEM Applications

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Siemens Breakers for Global Solutions

In today's aggressive marketplace all companies face issues of global competition, accelerated innovation and the escalating costs of operating a business. Partnering with Siemens can improve your competitive advantage to achieve your business growth goals.

Businesses are becoming increasingly more intelligent about the way they consume energy. Industrial and Commercial energy consumers are continuously looking for practical and efficient methods of measuring their energy usage while simultaneously ensuring any possible downtime is minimized. At Siemens we understand those needs and we have developed products and solutions to help energy consumers achieve their goals.



Around the world, the consistency, modularity and intelligence of our components and systems offer you numerous advantages – over the entire period of use. Developed according to the respective international standards, we offer trendsetting design and innovative functions in unique quality.

Siemens MCCBs are engineered to allow for easy deployment, quick installation and secure protection of industrial devices from excessive current flow.



Marine Classifications

	3VA IEC	3VA UL	Sentron	3VL	3WL	5SY/5SP	VL UL	WL UL
ABS	✓	✓	-	✓	✓	✓	-	-
LRS	✓	✓	-	✓	✓	✓	-	-
GL	✓	*	-	✓	✓	✓	-	-
BV	✓	*	-	✓	✓	✓	-	-
RMRS	✓	*	-	✓	✓	✓	-	-
DNV	✓	*	-	✓	✓	✓	-	-
PRS	-	-	-	✓	✓	-	-	-
CCS	-	*	-	✓	✓	-	-	-
RINA	-	-	-	✓	-	✓	-	-

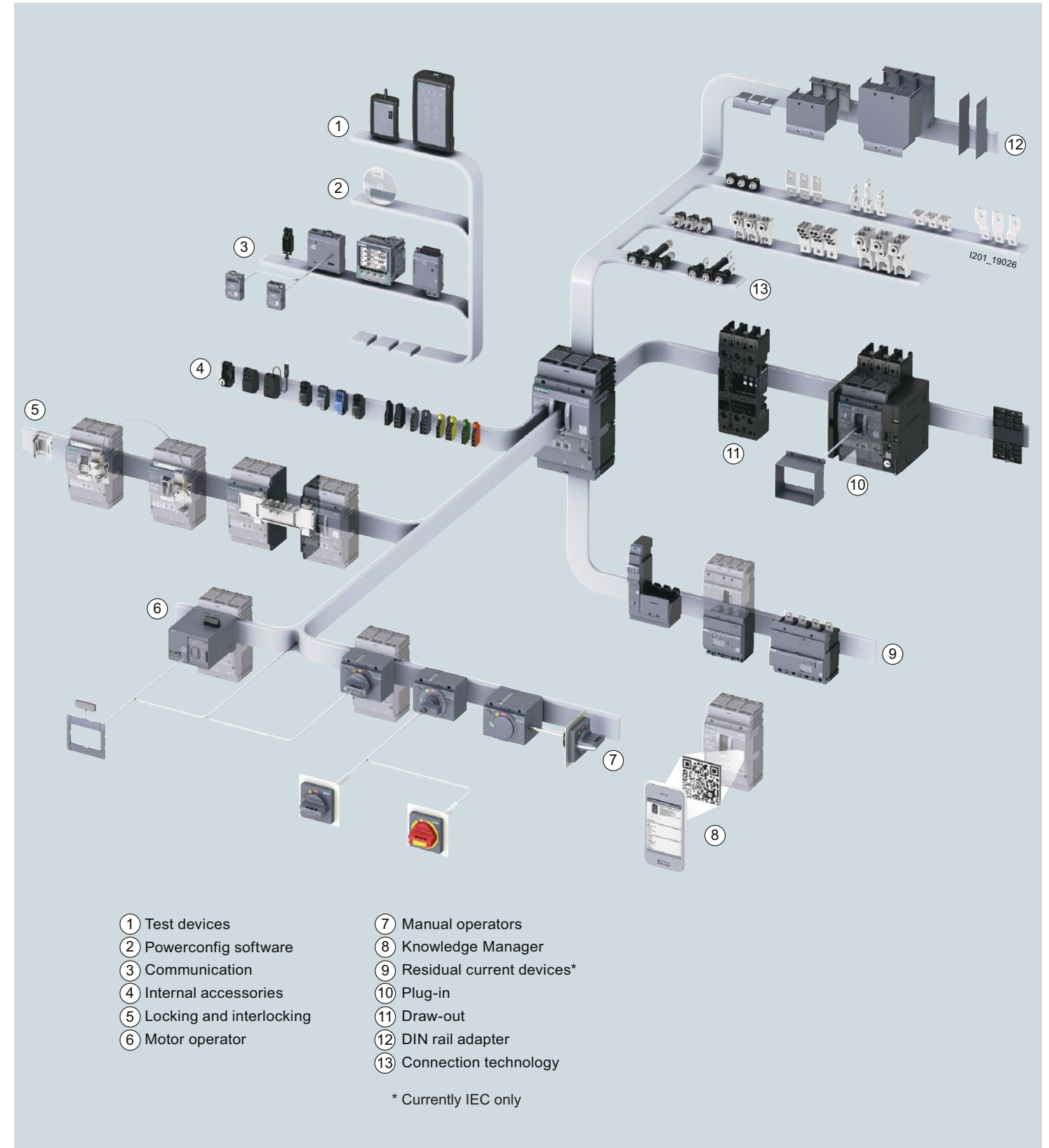
* - Testing is underway. Call to confirm release.

ABS	American Bureau of Shipping (NSA)
LRS	Lloyd's Register of Shipping (Great Britain)
GL	German Lloyd (Germany)
BV	Bureau Veritas (France)
RMRS	Maritime Register of Shipping (Russia)
DNV	Det Norske Veritas (Norway)
PRS	Polski Rejestr Statkow (Poland)
CCS	China Shipping Register (China)
RINA	Royal Inst. of Naval Architects (Italy)

Approvals

3VA IEC	3VA UL	3VL	VL UL	3WL	WL UL	Sentron	5SY/5SP
IEC/EN 60947-2/3/4/6-1	UL 489 / CSA C22.2	IEC/EN 60947-1/2	IEC-60947-2	IEC/EN 60947-2	UL 489 / CSA C22.2 No. 5-09	IEC/EN 60947-2	IEC/EN 60947-5-1
IEC/EN 60204-1 & DIN VDE 0113	IEC/EN 60947-2	DIN VDE 0660, Part 100/101	UL 489	CCC	UL 1066 / ANSI C37.13	UL 489 / CSA-C22.2 No. 5	EN 60898-1 EN 60947-2 EN 60898-2 EN 60947-2
IEC/EN 60909 & DIN VDE 0102 (Selectivity)?	EAC	EN 60204 & DIN VDE 0113	CSA-C22.2	GOST	UL 489 Supplement C37.13	UL 489 Supplement SB "Naval"	EN 60947-2
CISPR 11 Class A/B		IEC 68 Part 2 Shock Resistance, CCC, Gost, C-Tick for Australia, KLT Certificate, Fire Safety Certificate, Certificate of origin, Halogen-Free, PVC-Free	NOM (NMX-J-266-ANCE-2002)	DIN VDE 0690 Part 1	UL 489 Supplement SB	Optional 50 °C Calibration	UL 1077
IEC/EN 60664-1			CE (EN 60947-2)	IEC 60947-2 Annex F / CISPR 11/22 Class B, Climate-proof according to IEC 60068-2-30			CSA C22.2 No. 235
IEC/EN 60529			CCC			CE, NOM, HID, HACR, SWD	CCC
CE, CCC, EHC							

3VA Breaker Modularity



3VA Breaker Offering

Introduction

The 3VA molded case circuit breaker is a well thought-out, modular and highly variable system which is specifically designed to provide optimum support in every process step – from engineering to daily operation of the electrical power distribution system.

The 3VA molded case circuit breaker – a complete system designed with you in mind. It offers high flexibility, efficiency and safety – and enables you to

- Find solutions – independently of individual requirements
- Minimize efforts – from planning to installation and maintenance
- Increase transparency – across all energy-relevant data
- Ensure system availability – preventively and reliably

Highlights At A Glance

- Compact design
- Depending on size: 1-pole to 4-pole versions (3VA2 & 3VA6 3- and 4-pole)
- Fixed-mounted, plug-in version (depending on size)
- Thermal-magnetic (3VA1 & 3VA5) and Electronic (3VA2 & 3VA6) trip units
- AC/DC applications
- No derating up to +50 °C for 3VA1, 3VA2 & 3VA6
- Modular and easy-to-fit internal accessories with diverse functions
- Uniform accessories platform across all 3VA molded case circuit
- Integrated data collection and metering (ETU 8-series)
- Manual operators can be equipped with illumination kit for clear indication of switching position

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Advantages

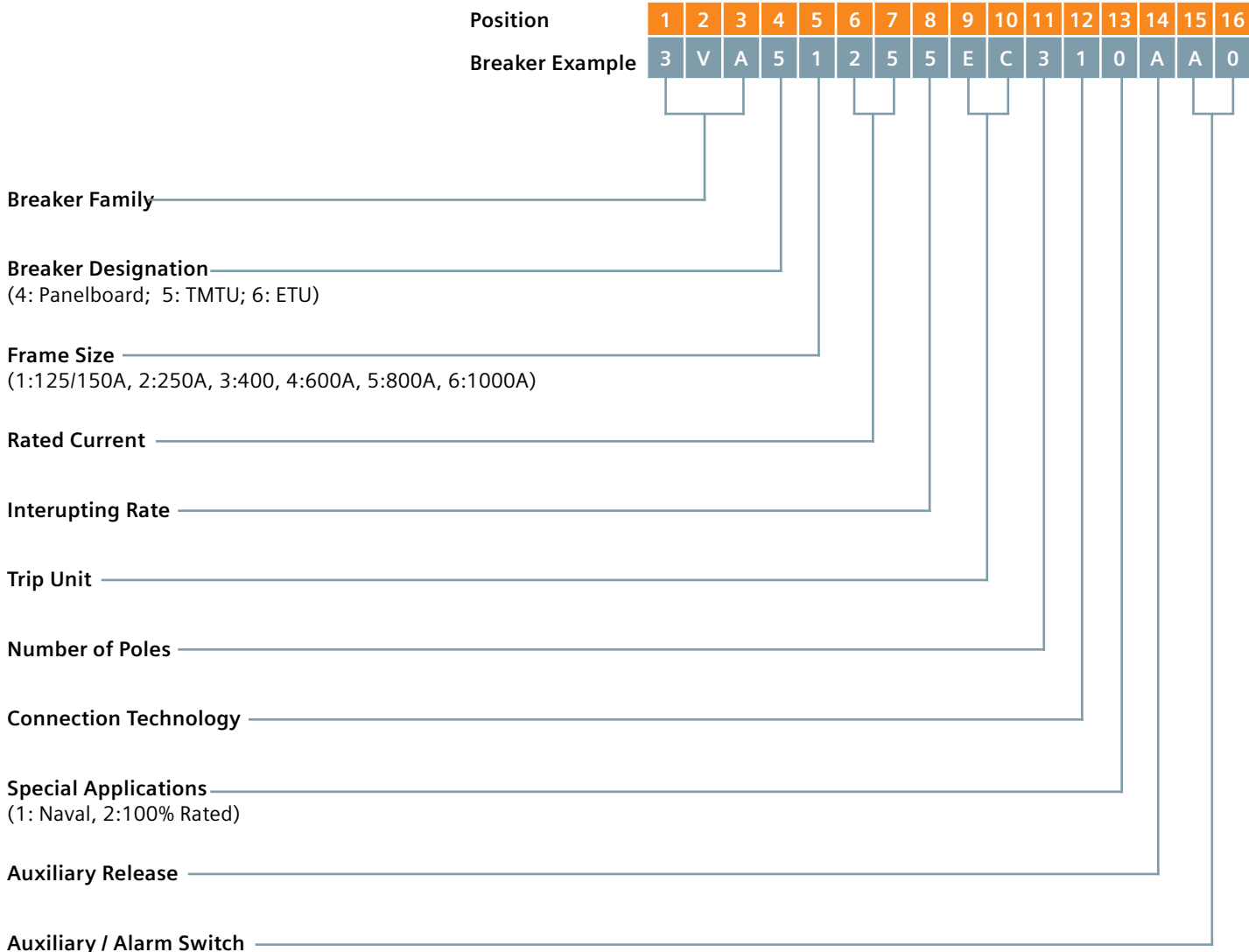
- Cost saving - Compact design helps to save panel cost.
- Time saving - 3VA offers quick field installation by simple connection, internal accessories fitment without special tool.
- Ease of maintenance - Plug-in / draw-out version and also modular design helps for easy and fast maintenance.
- Easy Planning and assembly - Modular design of 3VA MCCB offers different combinations for all power distribution applications. It also additionally offers integrated solutions by communication facility.
- System Solutions - With the ability to communicate over common protocols, the 3VA integrates with the broader system giving the advantage of system monitoring capabilities along with cost effective installations.
- Integrated communication concept for all ETUs with PROFIBUS/PROFINET/MODBUS/Ethernet
- Global range - Uniform design of 3VA MCCB helps to offer standard solution for various applications globally.

Typical Applications

- Line protection
- Generator protection
- Motor protection
- Protection for starter combinations
- Residual current protection
- Switch disconnectors

3VA Breaker Offering

Catalog Number Structure



3VA IEC Breaker Offering



Type	3VA10		3VA11				3VA12								
Number of poles	3, 4		1	2)	3, 4		3, 4								
3VA1 molded case circuit breakers for line protection, standard applications															
Size	100 A		160 A	160 A	160 A		250 A								
Rated operational current I_n at 50 °C ambient temperature	A	16 ... 100		16 ... 160	16 ... 160	16 ... 160		160 ... 250							
Rated operational voltage U_e AC 50/60 Hz	V	690		240	415	690		690							
Rated insulation voltage U_i	V	800		500	500	800		800							
Rated impulse withstand voltage U_{imp}	kV	8		8	8	8		8							
Use in IT networks		✓		✓	✓	✓		✓							
Frequency	Hz	0 ... 400		0 ... 400	0 ... 400	0 ... 400		0 ... 400							
Breaking capacity		B	N	S	N	S	N	S	N	S	M	H	S	M	H
Rated ultimate short-circuit breaking capacity I_{cu}															
rms value, according to IEC 60947-2															
220 - 240 V AC / 50/60 Hz	kA	25	36	55	25	36	36	55	36	55	85	100	55	85	100
380 - 415 V AC / 50/60 Hz	kA	16	25	36	5	6	25	36	25	36	55	70	36	55	70
440 V AC / 50/60 Hz	kA	8	16	25	-	-	-	-	16	25	36	55	25	36	36
500 V AC / 50/60 Hz	kA	On req.	On req.	On req.	-	-	-	-	On req.	On req.	On req.	On req.	10	15	15
690 V AC / 50/60 Hz	kA	5	5	7	-	-	-	-	7	7	10	10	7	10	10
125 V DC (1 switching pole)	kA	-	-	-	16	25	16	25	-	-	-	-	-	-	-
250 V DC (2 switching poles)	kA	25	36	55	-	-	36	55	36	55	85	100	55	85	100
500 V DC (3 switching poles)	kA	25	36	55	-	-	-	-	36	55	85	100	55	85	100
600 V DC (4 switching poles)	kA	8	16	25	-	-	-	-	16	25	36	55	25	36	55
Rated operational short-circuit breaking capacity I_{cs}															
rms value, according to IEC 60947-2															
220 - 240 V AC / 50/60 Hz	kA	25	36	55	25	36	36	55	36	55	85	100	55	85	100
380 - 415 V AC / 50/60 Hz	kA	16	25	36	5	6	25	36	25	36	55	70	36	55	70
440 V AC / 50/60 Hz	kA	8	16	25	-	-	-	-	16	25	36	40	25	36	36
500 V AC / 50/60 Hz	kA	On req.	On req.	On req.	-	-	-	-	On req.	On req.	On req.	On req.	10	10	10
690 V AC / 50/60 Hz	kA	5	5	5	-	-	-	-	5	5	5	5	5	5	5
125 V DC (1 switching pole)	kA	-	-	-	16	25	16	25	-	-	-	-	-	-	-
250 V DC (2 switching poles)	kA	25	36	55	-	-	36	55	36	55	85	100	55	85	100
500 V DC (3 switching poles)	kA	25	36	55	-	-	-	-	36	55	85	100	55	85	100
600 V DC (4 switching poles)	kA	8	16	25	-	-	-	-	16	25	36	55	25	36	55
Dimensions (mm)															
Width		76.2 (3p)/ 101.6(4p)		25.4	50.8	76.2 (3p)/ 101.6(4p)				105(3p)/140(4p)					
Height		130		130	130	130				158					
Depth		70		70	70	70				70					

3VA13		3VA14				3VA15						
Number of poles		3, 4		3, 4		3, 4		3, 4				
3VA13 molded case circuit breakers for line protection, standard applications												
Size		400 A		630 A				1000 A				
Rated operational current I_n at 50 °C ambient temperature		320-400		500-630				630-1000				
Rated operational voltage U_e AC 50/60 Hz		690		690				690				
Rated insulation voltage U_i		800		800				800				
Rated impulse withstand voltage U_{imp}		8 kV		8 kV				8 kV				
Use in IT networks		✓		✓				up to 500 V				
Frequency		0-400		0-400				0-400				
Breaking capacity		S	M	H	C	S	M	H	C	M	H	C
Rated ultimate short-circuit breaking capacity I_{cu}												
rms value, according to IEC 60947-2												
220 - 240 V AC / 50/60 Hz	kA	55	85	100	200	55	85	100	200	85	110	200
380 - 415 V AC / 50/60 Hz	kA	36	55	70	110	36	55	70	110	55	70	110
440 V AC / 50/60 Hz	kA	36	55	70	110	36	55	70	110	55	70	110
500 V AC / 50/60 Hz	kA	25	36	55	70	25	36	55	70	36	55	70
690 V AC / 50/60 Hz	kA	7	7	10	10	7	7	10	10	25	35	35
125 V DC (1 switching pole)	kA	-	-	-	-	-	-	-	-	-	-	-
250 V DC (2 switching poles)	kA	8	16	25	25	8	16	25	25	35	50	100
500 V DC (3 switching poles)	kA	8	16	25	25	8	16	25	25	35	50	100
600 V DC (4 switching poles)	kA	8	16	25	25	8	16	25	25	-	-	-
Rated operational short-circuit breaking capacity I_{cs}												
rms value, according to IEC 60947-2												
220 - 240 V AC / 50/60 Hz	kA	55	85	100	200	55	85	100	200	85	110	200
380 - 415 V AC / 50/60 Hz	kA	36	55	70	110	36	55	70	110	55	70	85
440 V AC / 50/60 Hz	kA	36	55	70	110	36	55	70	110	55	70	70
500 V AC / 50/60 Hz	kA	25	36	55	70	25	36	55	70	36	55	65
690 V AC / 50/60 Hz	kA	5	5	6	6	5	5	6	6	19	19	19
125 V DC (1 switching pole)	kA	-	-	-	-	-	-	-	-	-	-	-
250 V DC (2 switching poles)	kA	8	16	25	25	8	16	25	25	35	50	100
500 V DC (3 switching poles)	kA	8	16	25	25	8	16	25	25	35	50	100
600 V DC (4 switching poles)	kA	8	16	25	25	8	16	25	25	-	-	-
Dimensions (mm)												
Width		138(3P) 184 (4P)		138(3P) 184 (4P)				210 (3P) 280 (4P)				
Height		248		248				320				
Depth		110		110				120				

3VA IEC Breaker Offering



Type	3VA20				3VA21				3VA22				
Number of poles	3, 4				3, 4				3, 4				
3VA2 molded case circuit breakers for line protection, selectivity applications													
Size	100 A				160 A				250 A				
Rated operational current I_n at 50 °C ambient temperature	A 25 ... 100				25 ... 160				160 ... 250				
Rated operational voltage U_e AC 50/60 Hz	V 690				690				690				
Rated insulation voltage U_i	V 800				800				800				
Rated impulse withstand voltage U_{imp}	kV 8				8				8				
Use in IT networks	✓				✓				✓				
Frequency	Hz 50 ... 60				50 ... 60				50 ... 60				
Breaking capacity	M	H	C	L	M	H	C	L	M	H	C	L	
Rated ultimate short-circuit breaking capacity I_{cu}													
rms value, according to IEC 60947-2													
220 - 240 V AC / 50/60 Hz	kA	85	110	150	200	85	110	150	200	85	110	150	200
380 - 415 V AC / 50/60 Hz	kA	55	85	110	150	55	85	110	150	55	85	110	150
440 V AC / 50/60 Hz	kA	55	85	110	150	55	85	110	150	55	85	110	150
500 V AC / 50/60 Hz	kA	36	55	85	100	36	55	85	100	36	55	85	100
690 V AC / 50/60 Hz	kA	2	2	2	25	2.5	2.5	2.5	25	3	3	3	25
125 V DC (1 switching pole)	kA	--	--	--	--	--	--	--	--	--	--	--	--
250 V DC (2 switching poles)	kA	--	--	--	--	--	--	--	--	--	--	--	--
500 V DC (3 switching poles)	kA	--	--	--	--	--	--	--	--	--	--	--	--
600 V DC (4 switching poles)	kA	--	--	--	--	--	--	--	--	--	--	--	--
Rated operational short-circuit breaking capacity I_{cs}													
rms value, according to IEC 60947-2													
220 - 240 V AC / 50/60 Hz	kA	85	110	150	200	85	110	150	200	85	110	150	200
380 - 415 V AC / 50/60 Hz	kA	55	85	110	150	55	85	110	150	55	85	110	150
440 V AC / 50/60 Hz	kA	55	85	110	150	55	85	110	150	55	85	110	150
500 V AC / 50/60 Hz	kA	36	55	85	100	36	55	85	100	36	55	85	100
690 V AC / 50/60 Hz	kA	2	2	2	18	2.5	2.5	2.5	18	3	3	3	18
125 V DC (1 switching pole)	kA	--	--	--	--	--	--	--	--	--	--	--	--
250 V DC (2 switching poles)	kA	--	--	--	--	--	--	--	--	--	--	--	--
500 V DC (3 switching poles)	kA	--	--	--	--	--	--	--	--	--	--	--	--
600 V DC (4 switching poles)	kA	--	--	--	--	--	--	--	--	--	--	--	--
Dimensions (mm)													
Width	105(3p)/140(4p)				105(3p)/140(4p)				105(3p)/140(4p)				
Height	181				181				181				
Depth	86				86				86				

3VA23				3VA24				3VA25		
3, 4				3, 4				3, 4		
3VA23 molded case circuit breakers for line protection, selectivity applications										
400 A				630 A				1000A		
250 ... 400				400 ... 630				630-1000		
690				690				690		
800				800				800		
8				8				8		
✓				✓				✓		
50 ... 60				50 ... 60				50/60 Hz		
M	H	C	L	M	H	C	L	M	H	C
Rated ultimate short-circuit breaking capacity I_{cu}										
rms value, according to IEC 60947-2										
85	110	150	200	85	110	150	200	85	110	200
55	85	110	150	55	85	110	150	55	85	110
55	85	110	150	55	85	110	150	55	85	110
36	55	85	100	36	55	85	100	36	55	85
5	5	5	25	6	6	6	25	25	35	35
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Rated operational short-circuit breaking capacity I_{cs}										
rms value, according to IEC 60947-2										
85	110	150	On req.	85	110	150	On req.	85	110	150
55	85	110	On req.	55	85	110	On req.	55	85	85
55	85	110	On req.	55	85	110	On req.	55	70	70
36	55	85	On req.	36	55	85	On req.	36	55	65
5	5	5	On req.	6	6	6	On req.	19	19	19
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Dimensions (mm)										
138(3p)/184(4p)				138(3p)/184(4p)				210 (3P) 280 (4P)		
248				248				320		
110				110				120		

3VA UL Breaker Offering



Type	3VA51			3VA52						
Numer of Poles	1	2, 3, 4		2 in 3-Pole, 3						
3VA5 molded case circuit breakers for line protection										
Size	125 A	125 A		250 A						
Rated Current at 40° C	A	-		15-125		150-200				
Rated voltage Ue 50/60 Hz AC	V	347		600						
Rated voltage Ue DC	V	125		500						
Frequency	Hz	0-400		0-400						
Short-circuit breaking capacity according to UL 489										
Breaking Capacity		S	M	H	S	M	H	M	H	C
120 V AC / 50/60 Hz	kA	65	85	100	-	-	-	-	-	-
240 V AC / 50/60 Hz	kA	-	-	-	65	85	150	85	100	200
277 V AC / 50/60 Hz	kA	25	35	50	-	-	-	-	-	-
347 V AC / 50/60 Hz	kA	14	18	18	-	-	-	-	-	-
480 Y/277 V AC / 50/60 Hz	kA	-	-	-	25	35	65	35	65	100
480 V AC / 50/60 Hz	kA	-	-	-	25	35	65	35	65	100
600 Y/347 V AC / 50/60 Hz	kA	-	-	-	14	18	25	18	25	35
600 V AC / 50/60 Hz	kA	-	-	-	-	-	-	18	25	35
125 V DC	kA	14	25	30	-	-	-	-	-	-
250 V DC	kA	-	-	-	50	85	100	50	85	100
500 V DC	kA	-	-	-	50	85	100	50	85	100
600 V DC (3-pole only)	kA	-	-	-	-	-	-	50	85	100
750 V DC (4-pole only)	kA	-	-	-	-	-	-	50	85	100
1000 V DC (4-pole only)	kA	-	-	-	-	-	-	-	-	-
Short-circuit breaking capacity according to IEC 60947-2										
Breaking Capacity		S	M	H	S	M	H	M	H	C
240 V AC / 50/60 Hz	kA	25/25	36/36	55/55	55/55	85/85	150/150	85/85	100/100	200/200
415 V AC / 50/60 Hz	kA	5/5	5/5	5/5	36/36	55/55	70/70	55/55	70/70	110/110
690 V AC / 50/60 Hz	kA	-	-	-	5/5	7/5	10/5	7/7	10/10	10/10
125 V DC	kA	14	25	30	-	-	-	-	-	-
250 V DC	kA	-	-	-	50	85	100	50	85	100
500 V DC	kA	-	-	-	50	85	100	50	85	100
750 V DC (3 Pole Only)	kA	-	-	-	-	-	-	50	85	100
Dimensions (mm)										
Width	25.4	105		105						
Height	140	185		185						
Depth (D1)	76.5	83		83						
Depth to Handle (D2)	96.8	107		107						

3VA53			3VA54			3VA55		
2 in 3-Pole, 3, 4			2 in 3-Pole, 3, 4			3, 4		
3VA5 molded case circuit breakers for line protection								
400 A			600 A			800A		
200-400			400-600			600-800		
600			600			600		
600			600			600		
0-400			0-400			0-400		
Short-circuit breaking capacity according to UL 489								
M	H	C	M	H	C	M	H	C
-	-	-	-	-	-	-	-	-
85	100	200	85	100	200	85	100	200
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
35	65	100	35	65	100	35	65	100
35	65	100	35	65	100	35	65	100
18	25	35	18	25	35	18	25	50
18	25	35	18	25	35	18	25	50
-	-	-	-	-	-	-	-	-
50	85	100	50	85	100	50	85	100
50	85	100	50	85	100	50	85	100
50	85	100	50	85	100	50	85	100
50	85	100	50	85	100	50	85	100
50	85	100	50	85	100	50	85	100
-	-	-	-	-	-	18	25	50
Short-circuit breaking capacity according to IEC 60947-2								
M	H	C	M	H	C	85	100	200
85/85	100/100	200/200	85/85	100/100	200/200	55	70	110
55/55	70/70	110/110	55/55	70/70	110/110	25	35	35
7/7	10/10	10/10	7/7	10/10	10/10	-	-	-
-	-	-	-	-	-	50	85	100
50	85	100	50	85	100	50	85	100
50	85	100	50	85	100	50	85	100
50	85	100	50	85	100	-	-	-
Dimensions (mm)								
138 (3p)/184 (4p)			138 (3p)/184 (4p)			210 (3P) 280 (4P)		
248			248			328		
110			110			120		
137			137			-		

3VA UL Breaker Offering

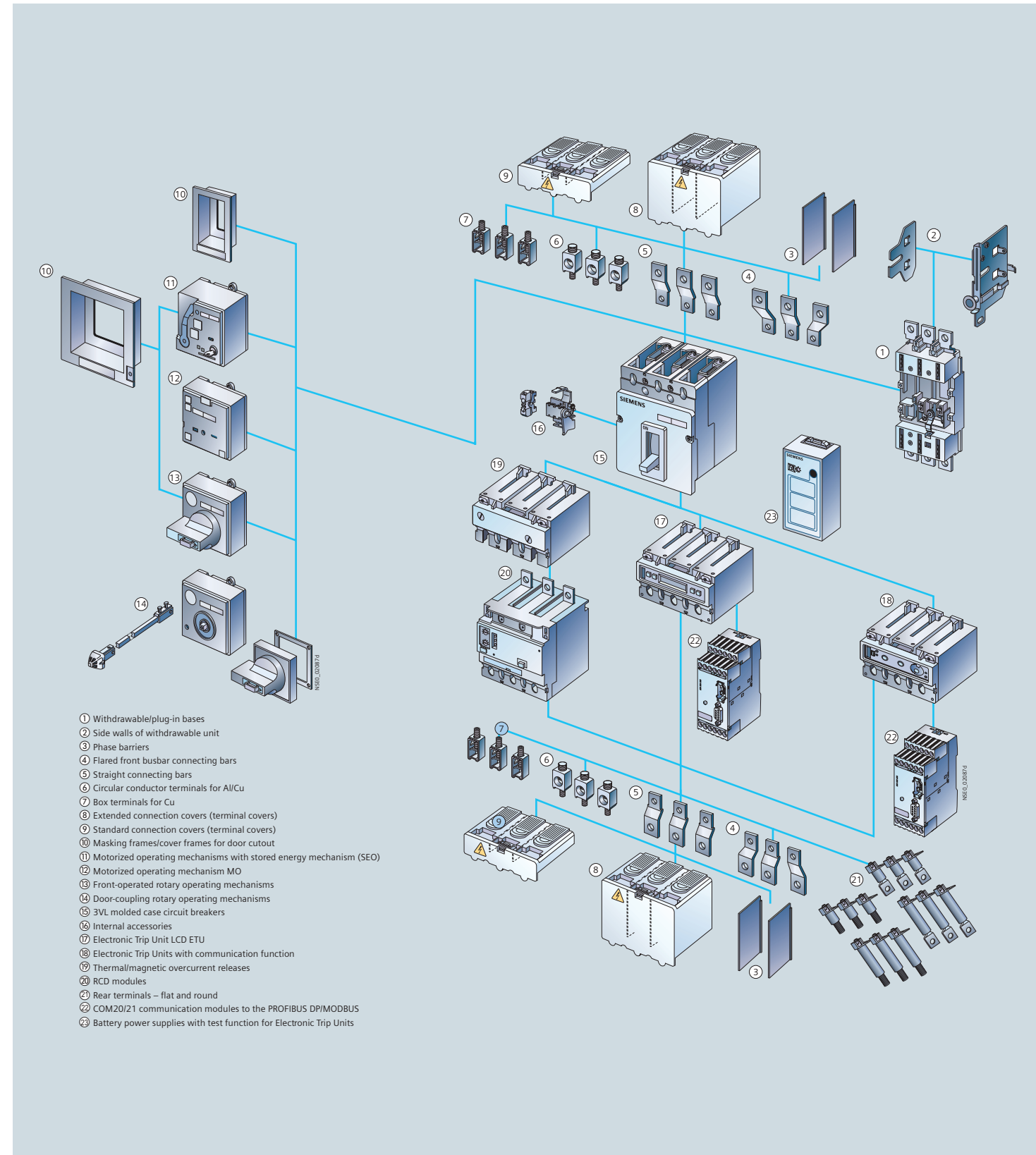


Type	3VA61			3VA62			3VA63									
Numer of Poles	3, 4			3, 4			3, 4									
3VA6 molded case circuit breakers for line protection																
Size	150 A			250 A			400 A									
Rated Current at 40° C	A	40-150			100-250			250-400								
Rated voltage Ue 50/60 Hz AC	V	600			600			600								
Rated voltage Ue DC	V	-			-			-								
Frequency	Hz	50-60			50-60			50-60								
Short-circuit breaking capacity according to UL 489																
Breaking Capacity		M	H	C	L	E	M	H	C	L	E	M	H	C	L	E
120V AC / 50/60 Hz	kA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
240 V AC / 50/60 Hz	kA	100	100	200	200	-	100	100	200	200	-	100	100	200	200	-
277 V AC / 50/60 Hz	kA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
347 V AC / 50/60 Hz	kA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
480Y/277 V AC / 50/60 Hz	kA	35	65	100	150	200	35	65	100	150	200	35	65	100	150	200
480 V AC / 50/60 Hz	kA	35	65	100	150	200	35	65	100	150	200	35	65	100	150	200
600Y/347 V AC / 50/60 Hz	kA	18	22	35	50	100	18	22	35	50	100	18	22	35	50	100
600 V AC / 50/60Hz	kA	18	22	35	50	100	18	22	35	50	100	18	22	35	50	100
125 V DC	kA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
250 V DC	kA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
500 V DC	kA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
600 V DC (3-pole only)	kA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
750 V DC (4-pole only)	kA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1000 V DC (4-pole only)	kA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Short-circuit breaking capacity according to IEC 60947-2																
240V AC / 50/60 Hz	kA	85/85	110/110	150/150	200/200	-	85/85	110/110	150/150	200/200	-	85/85	110/110	150/150	200/200	-
415 V AC / 50/60 Hz	kA	55/55	85/85	110/110	150/150	200	55/55	85/85	110/110	150/150	200	55/55	85/85	110/110	150/150	200
690 V AC / 50/60Hz	kA	2.5/2.5	2.5/2.5	2.5/2.5	2.5/2.5	-	3/3	3/3	3/3	3/3	-	5/5	5/5	5/5	5/5	-
125 V DC	kA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
250 V DC	kA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
500 V DC	kA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
750 V DC (3-pole only)	kA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dimensions (mm)																
Width	105 (3p)/140 (4p)			105 (3p)/140 (4p)			138 (3p)/184 (4p)									
Height	198			198			248									
Depth (D1)	86			86			110									



3VA64					3VA65					3VA66						
3, 4					3, 4					3, 4						
600 A					800A					1000A						
400-600					600-800					1000						
600					600					600						
-					600					600						
50-60					50-60					50-60						
Short-circuit breaking capacity according to UL 489																
M	H	C	L	E	M	H	C	L	E	M	H	C	M	H	C	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
100	100	200	200	-	100	150	200	200	-	100	150	200	100	150	200	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
35	65	100	150	200	35	65	100	150	200	35	65	100	35	65	100	
35	65	100	150	200	35	65	100	150	200	35	65	100	35	65	100	
18	22	35	50	100	25	35	50	100	25	35	50	100	25	35	50	
18	22	35	50	100	25	35	50	100	25	35	50	100	25	35	50	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Short-circuit breaking capacity according to IEC 60947-2																
85/85	110/110	150/150	200/200	-	85	110	200	85	110	200	85	110	200	85	110	200
55/55	85/85	110/110	150/150	200	55	85	110	150/150	200	55	85	110	55	85	110	
6/6	6/6	6/6	6/6	-	25	35	35	25	35	35	25	35	25	35	35	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
138 (3p)/184 (4p)					210 (3P) 280 (4P)					210 (3P) 280 (4P)						
248					328					328						
110					120					120						

VL Breaker Modularity



VL UL Breaker Offering

Introduction

The VL family of circuit breakers by Siemens utilizes a compact and modular design which can be configured to suit a wide range of ratings and applications. Designed for global requirements, these breakers include the following standards and markings:

- UL (UL 489)
- CSA (CSA-C22.2)
- NOM (NMX-J-266-ANCE-2002)[®]
- IEC (IEC-60947-2)

The range of frames includes 150A to 1600A and each rating is available with interchangeable trip units. The frames are available in three (3) interrupting ratings classes:

- N – Normal
- H – High
- L – Very High

The assortment of trip units allows a choice of trip functions and each trip unit features adjustable settings. The interchangeable trip units are available in three (3) varieties as well:

- Model 525 – Thermal-magnetic
- Model 555 – Electronic
- Model 586 – Electronic with LCD display

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The VL family also includes Molded Case Switches, Motor Circuit Protectors, special 600V DC breakers, and other complete breakers with non-interchangeable trip units.

Internal accessories are field installable and are conveniently located in pockets behind the front accessory cover. To simplify the selection of accessories, just two (2) groups of internal accessories cover the entire VL product family. To accommodate the wide variety of application requirements for connecting, mounting, and operating the breakers, a wide range of external accessories is also available. Some of these accessories are listed in this guide.

VL circuit breakers have been tested for series connected short circuit ratings. Refer to the website for more information.

UL File Numbers:

- E10848 – circuit breakers, motor circuit protectors
- E68312 – molded case switches

[®]Select frames.

Catalog Number Structure

Position	Primary Catalog Number								Lugs		Switch		Release		Other	
	1	2	3	4	5	6	7	8	P1	P2	P1	P2	P1	P2	P1	P2
Breaker example	H	F	G	3	B	2	5	0	L							
Trip unit example	C	F	T	3	E	2	5	0	—	—	—	—	—	—	—	—
Character type	a	a	a	n	a	n	n	n	a	a	n	a	a/n	a	a	a

Interrupting capacity

- N – Normal: 65kAIR at 240VAC, 35kAIR at 480VAC, and 18kAIR at 600VAC
- H – High: 100kAIR at 240VAC, 65kAIR at 480VAC, and 20kAIR at 600VAC
- L – Very High: 200kAIR at 240VAC, 100kAIR at 480VAC, and 25kAIR at 600VAC

Frame size

{D, F, J, L, M, N, P}

Breaker type

- G – Global (UL, IEC, CE, CSA, NOM)
- X – Global, non-interchangeable
- K – Non-interchangeable (DG,FG, LG)
- W – Global, 100% rated, non-interchangeable (DG,LG)
- Y – Global, 100% rated, non-interchangeable
- T – Trip unit only

Number of poles {1, 2, 3}

Trip unit type {F for frame only}

Current rating (I_n) in amperes
(Amperes/10 if > = 1000)

Terminations

Two letter suffixes describing accessories and modifications

VL UL Breaker Offering



Breaker Frame Family			DG			FG			JG			
Continuous Amps			30–150A			40–250A			70–400A			
Poles			2, 3			2, 3			2, 3			
Max. Volts AC			600Y/347V			600Y/347V			600Y/347V			
Breaker Type			NDGA	HDGA	LDGA	NFGA	HFGA	LFGA	NJGA	HJGA	LJGA	
Ratings	Interrupting Class		N	H	L	N	H	L	N	H	L	
	Interrupting Rating RMS Symmetrical Amperes AC 50/60HZ	UL	240Vac	65	100	200	65	100	200	65	100	200
			480Vac	35	65	100	35	65	100	35	65	100
			600Vac	18	18	18	18	18	18	25	25	25
	IEC60947-2 50/60 HZ	220/240Vac	65/65	100/75	200/150	65/65	100/75	200/150	65/65	100/75	200/150	
		380/415Vac	40/40	70/70	100/75	40/40	70/70	100/75	45/45	70/70	100/75	
	DC Interrupting Ratings (UL)	250Vdc (2-Pole)	30	30	30	30	30	30	30	30	30	30
500Vdc (3-Pole)		18	18	18	18	18	30	25	35	35		
600Vdc (3-Pole)		—	—	—	—	42	—	—	65	—		
Dimensions in Inches	1-Pole		—			—			—			
	2-Pole		6.9H x 4.1W x 3.4D			6.9H x 4.1W x 3.4D			11H x 5.5W x 4.2D			
	3-Pole		6.9H x 4.1W x 3.4D			6.9H x 4.1W x 3.4D			11H x 5.5W x 4.2D			
	4-Pole		—			—			—			



Breaker Frame Family			LG			MG			NG			PG			
Continuous Amps			150–600A			200–800A			300–1200A			400–1600A			
Poles			2, 3			2, 3			2, 3			3			
Max. Volts AC			600V			600V			600V			600V			
Breaker Type			NLGB	HLGB	LLGB	NMG	HMG	LMG	NNG	HNG	LNG	NPG	HPG	LPG	
Ratings	Interrupting Class		N	H	L	N	H	L	N	H	L	N	H	L	
	Interrupting Rating RMS Symmetrical Amperes AC 50/60HZ	UL	240Vac	65.00	100.00	200.00	65.00	100.00	200.00	65.00	100.00	200.00	65.00	100.00	200.00
			480Vac	35.00	65.00	100.00	35.00	65.00	100.00	35.00	65.00	100.00	35.00	65.00	100.00
			600Vac	18.00	18.00	18.00	25.00	35.00	65.00	25.00	35.00	65.00	25.00	35.00	65.00
	IEC60947-2 50/60 HZ	ICU / ICS	220/240Vac	65/65	100/75	200/150	65/35	100/50	200/150	65/65	100/75	200/100	65/35	100/50	200/100
			380/415Vac	45/45	70/70	100/75	50/50	70/70	100/75	50/25	70/35	100/50	50/25	70/35	100/50
	IEC60947-2 50/60 HZ	ICU / ICS	690Vac	12/6	15/8	15/8	20/10	30/15	35/17	20/10	30/15	35/17	20/10	30/15	35/15
250Vdc (2-Pole)			30.00	30.00	30.00	22.00	25.00	42.00	22.00	25.00	42.00	22.00	25.00	42.00	
500Vdc (3-Pole)			25.00	35.00	35.00	35.00	50.00	65.00	35.00	50.00	65.00	35.00	50.00	65.00	
Dimensions in Inches	2-Pole		11H x 5.5W x 4.2D			16H x 7.5W x 4.7D			16H x 9W x 6.2D			—			
	3-Pole		11H x 5.5W x 4.2D			16H x 7.5W x 4.7D			16H x 9W x 6.2D			16H x 9W x 6.2D			

VL UL Breaker Offering

VL UL Breaker Offering		DG	FG	JG	LG	MG	NG	PG
Undervoltage Trip								
Drop voltage (percentage)	V	35% – 70%	35% – 70%	35% – 70%	35% – 70%	35% – 70%	35% – 70%	35% – 70%
Pick-up voltage (percentage)	V	70% – 85%	70% – 85%	70% – 85%	70% – 85%	70% – 85%	70% – 85%	70% – 85%
Power consumption (continuous) at:								
110 – 127 V AC	VA	1.5	1.5	1.5	1.5	1.1	1.1	1.1
220 – 250 V AC	VA	1.5	1.5	1.5	1.5	2.1	2.1	2.1
208 V AC	VA	1.8	1.8	1.8	1.8	2.2	2.2	2.2
277 V AC	VA	2.1	2.1	2.1	2.1	1.6	1.6	1.6
380 – 415 V AC	VA	1.6	1.6	1.6	1.6	2.0	2.0	2.0
440 – 480 V AC	VA	1.8	1.8	1.8	1.8	2.3	2.3	2.3
500 – 525 V AC	VA	2.5	2.5	2.5	2.5	2.9	2.9	2.9
Max. opening time	ms	50	50	50	50	50	50	50
Motorized Operating Mechanism								
Control voltages 24 V DC								
42 – 48 V AC / DC								
60 V AC / DC								
110 - 127 V AC / DC								
220 - 250 V AC / DC								
Operating range: 85 – 110% of rated control voltage								
Motor with stored energy mechanism (synchronizable)		X	X	X	X	X	—	—
Motor Operator		120	120	120	60	60	30	30
Max. switching rate (per hour)		20 – 50	20 – 50	20 – 50	20 – 50	20 – 50	50	50
Command duration ms		<100	<100	<100	<100	<100	<5,000	<5,000
Closing time ms		<5	<5	<5	<5	<5	<5	<5
Charging time s		<5	<5	<5	<5	<5	<5	<5
Break time s		<100	<100	<100	<100	<250	<250	<250
Power consumption VA/W								



Sentron Breaker Offering



Introduction

Siemens Sentron™ Series Circuit Breakers have a long history of excellent performance in both the Commercial and Industrial market segments, they are tried and true in the most critical applications. Siemens Sentron™ Series Circuit Breakers are available in nine frame sizes from 125A to 2000A.

Highlights at a glance

- Global Ratings (UL489, CSA, CE, NOM, HID, HACR, SWD)
- Fixed or Interchangeable
- Field Installable external accessories
- Series connected short circuit ratings
- Thermal magnetic & electronic trip units
- Fungus Proofing — In accordance with MIL-T-152
- UL 489 Supplement SB "Naval"

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15 to 2000A Thermal Magnetic Line

- Fixed or interchangeable trip units
- Marked with IEC interrupting ratings
- Motor circuit protectors from 1-800 Amps
- 100% rated, 50C available
- Naval UL489 supplement SB available
- Full line current limiting without fuses
- Full line of 250V - 500V DC ratings

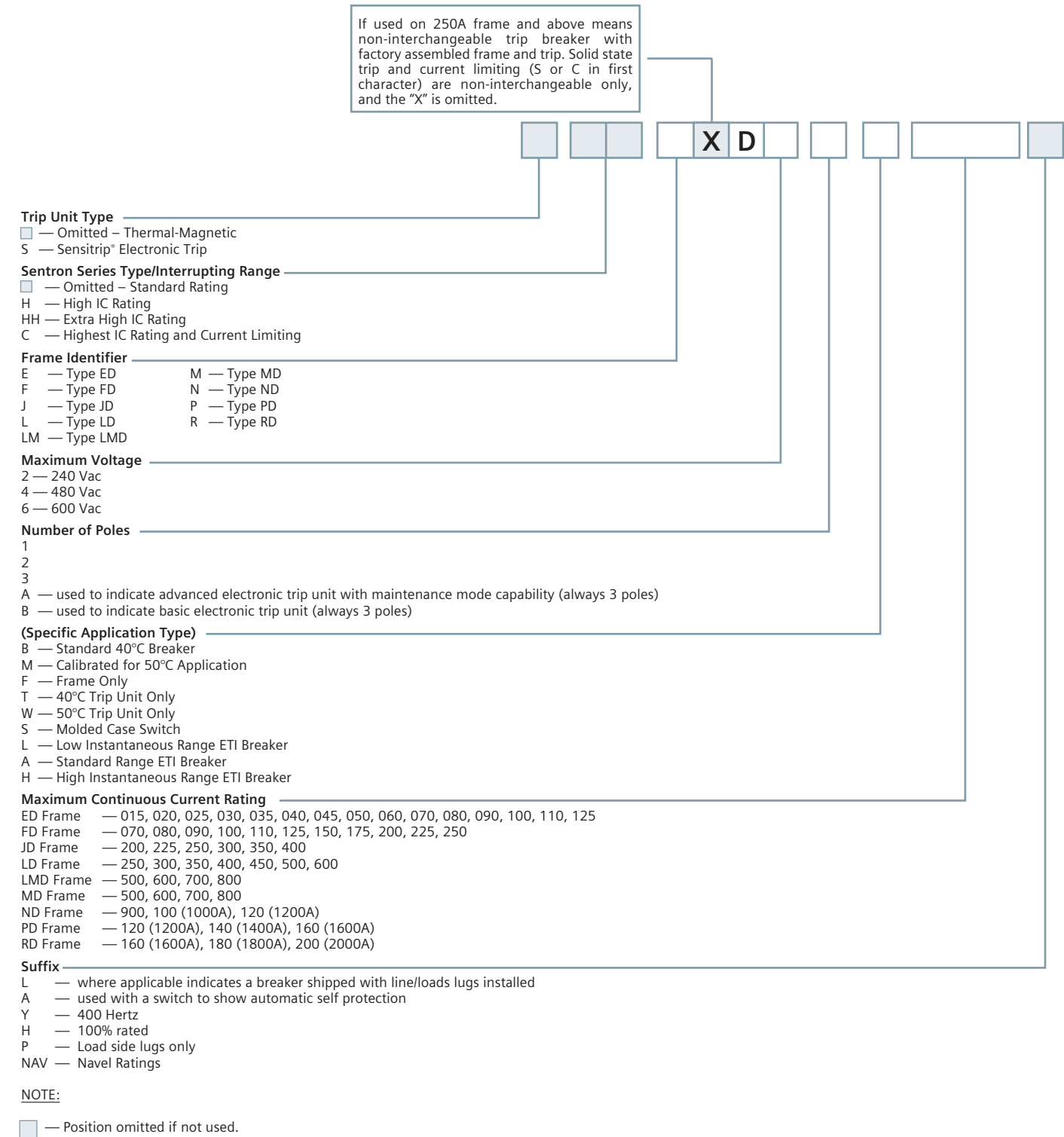
UL 489 Supplement SB Naval Use Breakers

Breakers tested to UL 489 Supplement SB are qualified for use on non combat and auxiliary naval vessels. Various Siemens Sentron molded case breakers can be labeled "NAVAL" in compliance with Supplement SB. See table below for specific breaker types and UL file references. Supplement SB testing comprises two sets of vibration tests. The first is to find mechanical resonances in the product and to subject the breaker to extreme testing at each resonant frequency. The second is a swept frequency test, in which the frequency of excitation is changed in intervals of 1Hz, and held at each frequency for five minutes. The excitation frequencies run from 4 to 33Hz, and the test is conducted in each of the three orthogonal axes of the breaker. During these tests, the breaker must not trip from the closed position, nor may the contacts touch from the open position. Calibration and insulation resistance are also verified during the test. For detailed information, refer to UL 489, Supplement SB.

Breaker Type	UL File
BL	E82615, Vol. 1, Sec. 1 & 4
NGB	E10848, Vol. 10, Sec. 3
CED6	E10848, Vol. 4, Sec. 13
HED4, ED6	E10848, Vol. 4, Sec. 11
FXD6, HFD6, HHFD6	E10848, Vol. 4, Sec. 17
HHJD6	E10848, Vol. 4, Sec. 20

Sentron Breaker Offering

Catalog Number Structure



Sentron Breaker Offering



Breaker Frame	ED	ED	FD	JD
Breaker Type	ED4 ^①	ED6 ^①	FD ^①	JD ^①
Amps	15-125	15-125	70-250	200-400
Volts	480	600	600	600
Poles	1, 2, 3	1, 2, 3	2, 3	2, 3

UL Interrupting Rating	ED	HED	ED	HHED	CED	FD	HFD	HHFD	CFD	JD	HJD	HHJD	CJD
240V	65	100	65	100	200	65	100	200	200	65	100	200	200
480/277V	-	-	-	-	-	-	-	-	-	-	-	-	-
480V	18	42	25	65	200	35	65	100	200	35	65	100	150
600V	-	-	18	25	100	22	25	25	100	25	35	50	100
250V DC (2 P)	30	30	30	-	30	30	30	-	30	30	30	-	30

IEC (Icu) Interrupt Rating	ED	HED	ED	HHED	CED	FD	HFD	HHFD	CFD	JD	HJD	HHJD	CJD
220/240V	-	-	65	-	-	65	100	-	-	65	100	-	-
380/415V	-	-	35	-	-	35	65	-	-	40	65	-	-
500V	-	-	18	-	-	20	42	-	-	30	42	-	-

Accessories	ED	HED	ED	HHED	CED	FD	HFD	HHFD	CFD	JD	HJD	HHJD	CJD
Thermal Mag. Fixed	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Thermal Mag. Interchangeable	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓
Magnetic Only MCP	-	-	✓	-	✓	✓	-	-	✓	✓	-	-	✓
Molded Case Switch	✓	-	✓	-	✓	✓	✓	-	✓	✓	✓	-	✓
Electronic Trip	-	-	-	-	-	-	-	-	-	✓	✓	-	✓

Dim.	2 (1) Pole	Height	6.3"	6.3"	6.5"	9.6"	9.5"	9.5"	9.5"	14.2"	11"	11"	11"	17.8"	
		Width	2" (1P1")	2" (1P1")	2" (1P1")	2" (1P1")	4.5"	4.5"	4.5"	4.5"	7.5"	7.5"	7.5"	7.5"	7.5"
		Depth	4"	4"	4"	4"	4"	4"	4"	4"	4"	4"	4"	4"	4"
	3 Pole	Height	6.3"	6.3"	6.5"	9.6"	9.5"	9.5"	9.5"	14.2"	11"	11"	11"	17.8"	
		Width	3"	3"	3"	3"	4.5"	4.5"	4.5"	4.5"	7.5"	7.5"	7.5"	7.5"	
		Depth	4"	4"	4"	4"	4"	4"	4"	4"	4"	4"	4"	4"	

① Optional UL489 Supplement SB (Naval Use) available.

Sentron Breaker Offering



Breaker Frame	LD	LMD	MD	ND	PD	RD
Breaker Type	LD ^①	LMD ^①	MD ^①	ND ^①	PD ^①	RD ^①
Amps	250-600	500-800	500-800	800-1200	1200-1600	1600-2000
Volts	600	600	600	600	600	600
Poles	2, 3	2, 3	2,3	2, 3	3	3

UL Interrupting Rating	LD	HLD	HHLD	CLD	LMD 3X	HLMD	MD	HMD	CMD	ND	HND	CND	PD	HPD	CPD	RD	HRD
240V	65	100	200	200	65	100	65	100	200	65	100	200	65	100	200	65	100
480/277V	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
480V	35	65	100	150	50	65	50	65	100	50	65	100	50	65	100	50	65
600V	25	35	50	100	25	50	25	50	65	25	50	65	25	50	65	25	50
250V DC (2 P)	30	30	-	30	30	30	30	30	30	30	30	30	30	30	30	30	30

IEC (Icu) Interrupt Rating	LD	HLD	HHLD	CLD	LMD 3X	HLMD	MD	HMD	CMD	ND	HND	CND	PD	HPD	CPD	RD	HRD
220/240V	65	100	-	-	-	-	65	100	-	65	100	-	-	-	-	-	-
380/415V	40	65	-	-	-	-	40	65	-	40	65	-	-	-	-	-	-
500V	30	42	-	-	-	-	30	42	-	30	42	-	-	-	-	-	-

Accessories	LD	HLD	HHLD	CLD	LMD 3X	HLMD	MD	HMD	CMD	ND	HND	CND	PD	HPD	CPD	RD	HRD
Thermal Mag. Fixed	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Thermal Mag. Interchangeable	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Magnetic Only MCP	✓	-	-	✓	✓	-	✓	-	✓	-	-	-	-	-	-	-	-
Molded Case Switch	✓	✓	-	✓	✓	-	✓	-	✓	✓	-	-	-	-	-	-	-
Electronic Trip	✓	✓	-	✓	-	-	✓	✓	✓	✓	✓	✓	✓	✓	-	-	-

Dim.	2 (1) Pole	Height	11"	11"	11"	17.8"	16"	16"	16"	16"	16"	16"	16"	16"	16"	-	-	-	
		Width	7.5"	7.5"	7.5"	7.5"	7.5"	7.5"	9"	9"	9"	9"	9"	9"	9"	9"	-	-	-
		Depth	4"	4"	4"	4"	4.5"	4.5"	6.2"	6.2"	6.2"	6.2"	6.2"	6.2"	6.2"	6.2"	-	-	-
	3 Pole	Height	11"	11"	11"	17.8"	16"	16"	16"	16"	16"	16"	16"	16"	16"	16"	16"	16"	16"
		Width	7.5"	7.5"	7.5"	7.5"	7.5"	7.5"	9"	9"	9"	9"	9"	9"	9"	9"	9"	9"	9"
		Depth	4"	4"	4"	4"	4.5"	4.5"	6.2"	6.2"	6.2"	6.2"	6.2"	6.2"	6.2"	6.2"	6.2"	6.2"	6.2"

① Optional UL489 Supplement SB (Naval Use) available.

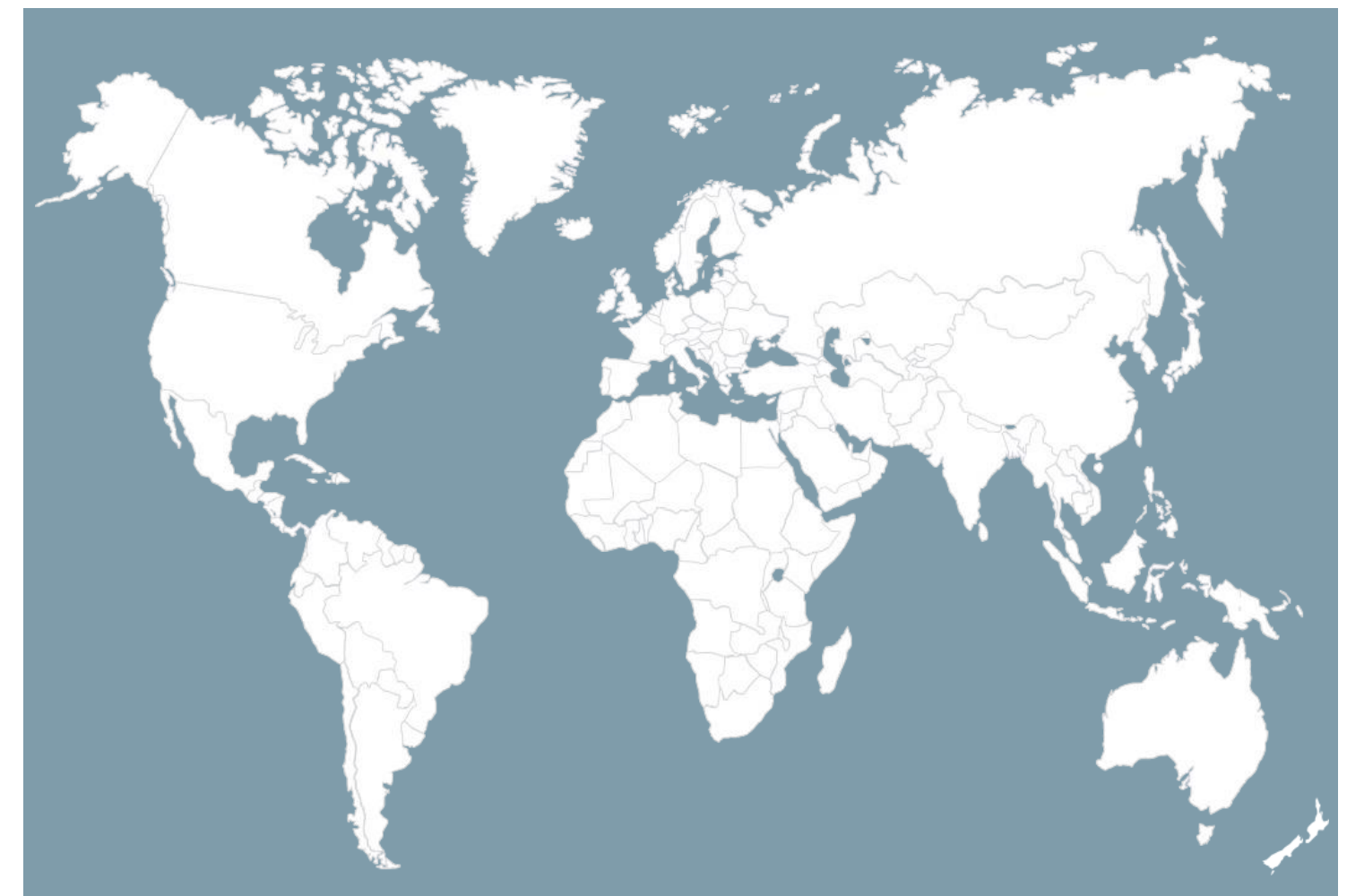
WL Breaker Modularity



WL Breaker Offering



	3WL IEC	WL UL 489	WL UL 1066 (ANSI)	3WL5 IEC & UL
WL Breaker Offering				
Amperes	200A – 6300A	200A – 5000A	200A – 6000A	200A – 5000A
No. of Poles	3 & 4 Pole	3 Pole	3 & 4 Pole	3 & 4 Pole
Approval	IEC 60947-2	UL 489 / CSA C22.2 No. 5-09	UL 1066 / ANSI C37.13	IEC 60947-2 + UL 489 / CSA C22.2 No. 5-09
Short Circuit Rating (kA)	55/65/85 (FS1) 66/80/100/130 (FS2) 100/150 (FS3,3P) 130 (FS3,4P)	65/100 (FS1) 65/100/150 (FS2) 100/150 (FS3)	50/65/85/100/200 (FS2) 85/100/150/200 (FS3)	65 (FS1) 100 (FS2) 100 (FS3)
Voltage Rating	Up to 1150 V (AC) Up to 1000 V (DC)	Up to 600V	Up to 635V	Up to 690V
Operating Cycles	Up to 20,000	Up to 15,000	Up to 15,000	Up to 15,000
Operating Temp.	-25 to 40 °C	-25 to 40 °C	-25 to 40 °C	-25 to 40 °C
Assembled In	Czech Republic	USA	USA	Czech Republic



3WL IEC Breaker Offering

Introduction

With over one million breakers sold around the world since the product introduction, 3WL Circuit Breakers provide time-tested and proven technology in the low-voltage product portfolio. With a design created around customer needs and convenience, the 3WL family offers virtually-unlimited configuration capabilities unique to its class, setting an industry precedent for modularity.

Highlights at a glance

Flexible - Covers a power range from 630A to 6300A. The breakers are suitable for applications up to 1150VAC and as non-automatic switches up to 1000VDC.

Simple - Three frame sizes that support either a 3 or 4 pole design with fixed-mounted and draw-out versions.

World's Smallest Air Circuit Breaker - ...in the upper performance range, 5000A to 6300A, as FS3 offering.

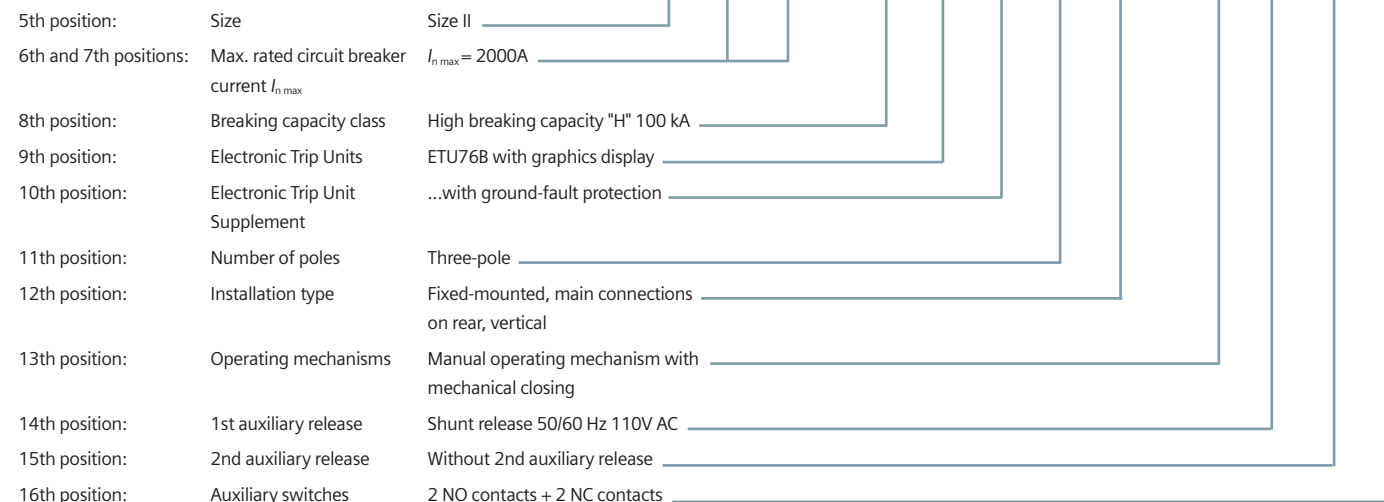
Full Communication Capability - ...via PROFIBUS or MODBUS; integrated communication concept with 3VL.

International standards and approvals

- IEC/EN 60947-2, CCC, GOST, DIN VDE 0690 Part 1, IEC 60947-2 Annex F / CISPR 11/22 Class B, Climate-proof according to IEC 60068-2-30
- Climatic withstand capability in acc. with DIN IEC 68 Part 30-2
- Shipbuilding, e.g. GL, ABS, LRS, PRS For international applications

Catalog Number Structure

3WL1 2 2 0 - 4 N G 3 1 - 1 F A 2 - Z



3WL IEC Breaker Offering



3WL air circuit breakers/non-automatic air circuit breakers up to 6300 A (AC), IEC | 3WL non-automatic air circuit breakers up to 4000 A (DC)

3WL Air Circuit Breakers						
Size	I, II, III					
Rated current I_n	A	630, 800, 1000, 1250, 1600, 2000, 2500, 3200, 4000, 5000, 6300			1000, 2000, 4000	
Number of poles		3-pole, 4-pole			3-pole, 4-pole	
Rated operational voltage U_e	V AC V DC	... 690/1000/1150 -			- ... 1150	
Rated ultimate short-circuit breaking capacity at 500 V AC	kA	Size I 55/66/85	Size II 66/80/100	Size III 100/150 (3-pole), 130 (4-pole)	30/25/20 (at 300/600/1000 V DC)	
Endurance	Operating cycles	Up to 20000	15000	10000	15000	
Mounting position						
Degree of protection with cover without cover (with door sealing frame)		IP55 IP41			IP55 IP41	
Dimensions 3/4-pole		W mm	320/340	460/590	704/914	460/590
		Fixed-mounted	H mm D mm	434 291	434 291	434 291
Withdrawable		H mm D mm	465.5 471	465.5 471	465.5 471	465.5 471



Type	ETU15B ^①	ETU25B	ETU27B	ETU45B	ETU76B
Electronic Trip Units for 3WL circuit breakers					
Overload protection	✓	✓	✓	✓	✓
Short-time delayed short-circuit protection	-	✓	✓	✓	✓
Instantaneous short-circuit protection	✓	✓	✓	✓	✓
Neutral conductor protection	-	-	✓	✓	✓
Ground-fault protection	-	-	✓	□	□
Zone Selective Interlocking	-	-	-	□	□
LCD, 4-line	-	-	-	□	-
LCD, graphic	-	-	-	-	✓
Communication	-	-	-	□	□
Metering function Plus	-	-	-	□	□
Selectable parameter sets	-	-	-	-	✓
Parameters freely programmable	-	-	-	-	✓
CubicleBUS	-	-	-	✓	✓

✓ Standard □ Optional
 - Not available ① ETU15B cannot be used with 3WL circuit breakers, size III

3WL IEC Breaker Offering

Breaking capacity

Size	I			II				III			
Type	3WL11			3WL12				3WL13			
Breaking capacity	N	S	H	N	S	H	C	H	C	C 3-pole	C 4-pole
Rated short-circuit breaking capacity											
Rated operational voltage U_e up to 415 V AC											
I_{cu} kA	55	66	85	66	80	100	130	100	150	130	
I_{cs} kA	55	66	85	66	80	100	130	100	150	130	
I_{cm} kA	121	145	187	145	176	220	286	220	330	286	
Rated operational voltage U_e up to 500 V AC											
I_{cu} kA	55	66	85	66	80	100	130	100	150	130	
I_{cs} kA	55	66	85	66	80	100	130	100	150	130	
I_{cm} kA	121	145	187	145	176	220	286	220	330	286	
Rated operational voltage U_e up to 690 V AC											
I_{cu} kA	42	50	66	50	75	85	100	85	150	130	
I_{cs} kA	42	50	66	50	75	85	100	85	150	130	
I_{cm} kA	88	105	145	105	165	187	220	187	330	286	
Rated operational voltage U_e up to 1000 V/1150 V AC											
I_{cu} kA	–	–	50 ^①	–	–	50	–	50	70 ^②	70 ^②	
I_{cs} kA	–	–	50 ^①	–	–	50	–	50	70 ^②	70 ^②	
I_{cm} kA	–	–	105 ^③	–	–	105	–	105	154 ^④	154 ^④	
Rated short-time withstand current I_{cw} of the circuit breakers^⑤											
0.5 s kA	55	66	75	66	80	100	100	100	100	100	100
1 s kA	42	50	66	55	66	80	100	100	100	100	100
2 s kA	29.5	35	46	39	46	65 ^⑥ /70 ^⑦	70	80	80	80	80
3 s kA	24	29	44	32	44	50 ^⑥ /65 ^⑦	65	65	65	65	65
Rated short-circuit breaking capacity I_{cs} of the non-automatic air circuit breakers											
Up to 500 V AC kA	55	66	75	66	80	100	130	100	100	100	100
Up to 690 V AC kA	42	50	66	50	75	85	100	85	100	100	100
Up to 1000 V / 1150 V AC kA	–	–	50 ^①	–	–	50 ^①	–	–	70 ^②	70 ^②	70 ^②

Size	I		II	
Type	3WL11		3WL12	
Breaking capacity	DC		DC	
Rated short-circuit breaking capacity				
Up to 220 V DC I_{cc} kA	20		35	
Up to 300 V DC I_{cc} kA	20		30	
Up to 600 V DC I_{cc} kA	20		25	
Up to 1000 V DC I_{cc} kA	20		20	
Rated short-time withstand current I_{cw}				
0.5 s kA	–		–	
1 s kA	20		35 ^① /30 ^② /25 ^③ /20 ^④	
2 s kA	–		–	
3 s kA	–		–	

N	Circuit breakers with ECO breaking capacity N
S	Circuit breakers with standard breaking capacity S
H	Circuit breakers with high breaking capacity H
C	Circuit breakers with very high breaking capacity C
DC	Non-automatic air circuit breakers with DC breaking capacity
These breaking capacities are indicated in the corresponding tables by the symbols shown on blue backgrounds	

Abbreviations* (functions)	English long text	Explanation
L	Long Time Delay	Overload protection
S	Short Time Delay	Short-circuit protection (short time delayed)
I	Instantaneous	Short-circuit protection (instantaneous)
N	Neutral Protection	Neutral conductor protection
G	Ground Fault	Ground-fault protection

- ① Size II with $I_{n,max} \leq 2500$ A
- ② Size II with $I_{n,max} = 3200$ A and $I_{n,max} = 4000$ A
- ③ At a rated voltage of ≥ 690 V the I_{cw} value of the circuit breaker cannot be greater than the I_{cu} or I_{cs} value at 690 V
- ④ Rated operational voltage $U_e = 1150$ V
- ⑤ At $U_e = 220$ V DC

- ⑥ At $U_e = 300$ V DC
- ⑦ At $U_e = 600$ V DC
- ⑧ At $U_e = 1000$ V DC
- ⑨ Values also apply to 690 V + 20% version with Z-option "A16".
- * Designations according to IEC 60947-2, Appendix K

WL UL/ANSI Breaker Offering

Introduction

Businesses are becoming increasingly more intelligent about the way they consume energy. Industrial and Commercial energy consumers are continuously looking for practical and efficient methods of measuring their energy usage while simultaneously ensuring any possible downtime is minimized. At Siemens we understand those needs and we have developed products and solutions to help energy consumers achieve their goals. One of our solutions begins with our world-class WL Circuit Breakers. The WL line-up of breakers developed by Siemens combines decades of patented circuit breaker protection experience with the latest technology in circuit breaker performance and communication.

Features and Benefits

- **3 frame sizes:** Three frame sizes that cover a wide range of continuous current ratings allow for flexible exchange of breakers to other compartments and reducing the footprint of the breaker enclosures.
- **Ready-to-close indication:** Built-in check points of the breakers mechanical operator provide an additional layer of safety and external controls by inhibiting the breaker from closing until certain conditions are satisfied.
- **100% rating:** All model breakers are designed for continuous operation at their maximum current ratings without de-rating the frame.
- **Rogowski coil sensing:** Full range sensing without tap terminals or exchanging sensors to match load change requirements.
- **Bi-directional feed:** Top or bottom supply feed without any hardware configuration changes.

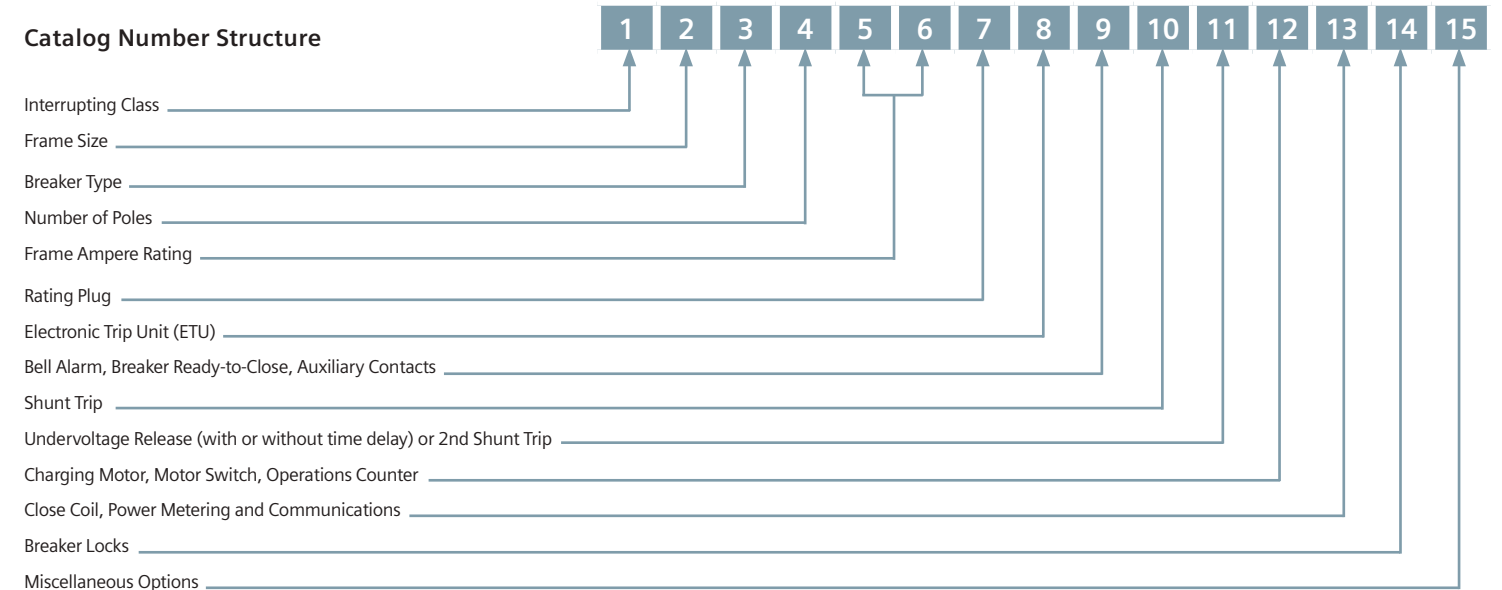
Applications

The WL line of power breakers are protecting electrical distribution applications like waste water treatment, industrial plants, hospitals, transportation systems and data centers just to name a few. Yes, mission critical applications trust the Siemens WL Circuit Breakers to operate safely and reliably. The compact modular design provides higher power density in a section or line-up of distribution gear. Components like spring-charging motor, shunt trips, and trip units are common across the entire line of breakers. That allows users the ability to stock fewer spare parts or exchange options if necessary. Common options and accessories also make learning how to order, maintain and operate the WL much easier than most breakers on the market today. WL Circuit Breakers are manufactured and performance tested to comply with UL489 and UL1066 standards for listed products.

UL/CSA 489 Listed type WL Low Voltage Insulated Case Circuit Breakers are generally intended to provide service entrance, feeder, and branch circuit protection in accordance with UL/CSA 489 Standard for Safety for Molded-Case Circuit Breakers, Molded-Case Switches, and Circuit-Breaker Enclosures. WL UL 489 Breakers are available in both fixed and drawout configurations.

UL 1066 Listed type WL low voltage power circuit breakers are generally intended to provide main and feeder circuit protection in accordance with UL1066 Standard for Safety for low-voltage AC and DC power circuit breakers used in Enclosures. Presently, there is not an equivalent CSA standard to UL 1066, and therefore these circuit breakers do not carry a CSA listing mark. WL UL 1066 Breakers are available in 3-pole and 4-pole configurations.

Catalog Number Structure



WL UL489 Breaker Offering



		800A		1200A		1600A		2000A	
WL Frame Ratings – Frame Size 1									
Rating Class		S	L	S	L	S	L	S	L
Interrupting current frame Ics (kAIR RMS) 50/60 Hz	240VAC	65	100	65	100	65	100	65	100
	480VAC	65	100	65	100	65	100	65	100
	600VAC	65	65	65	65	65	65	65	65
Short-time current Icw (kA RMS)	0.4 sec.	65	65	65	65	65	65	65	65
Extended instantaneous protection rating (kA RMS)	480VAC	65	100	65	100	65	100	65	100
	600VAC	65	65	65	65	65	65	65	65
Close and latch rating (kA RMS)		65	65	65	65	65	65	65	65
Applicable rating plug range		200 - 800A		200 - 1200A		200 - 1600A		200 - 2000A	
Minimum enclosure dimension (in.)		22Wx15Hx19.5D		22Wx15Hx19.5D		22Wx15Hx19.5D		22Wx15Hx19.5D	
Mechanical make-time (ms)		35		35		35		35	
Mechanical break-time (ms)		34		34		34		34	
Electric close make-time (ms)		50		50		50		50	
Electric trip/ UV break-time (ms)		40/73		40/73		40/73		40/73	
Electric trip and reclose interval (ms)		80		80		80		80	
Mechanical duty cycles (no maint.)		7500		7500		7500		7500	
Electrical duty cycles (no maint.)		7500		7500		7500		7500	
Draw-out breaker efficiency (Watts loss at In)		80		180		350		530	
Fixed-mount breaker efficiency (Watts loss at In)		60		120		160		270	
Ambient operating temperature (°C)		-25 to 40		-25 to 40		-25 to 40		-25 to 40	
Weights (Fixed Breaker/DO Breaker/Cradle) lbs.		86/137/108		86/137/108		86/137/108		86/137/108	

		800A			1200A			1600A			2000A			2500A			3000A		
WL Frame Ratings – Frame Size 2																			
Rating Class		S	L	C	S	L	C	S	L	C	S	L	C	L	C	L	C		
Interrupting current frame Ics	240VAC	65	100	150	65	100	150	65	100	150	65	100	150	100	150	100	150		
(kAIR RMS) 50/60 Hz	480VAC	65	100	150	65	100	150	65	100	150	65	100	150	100	150	100	150		
	600VAC	65	85	100	65	85	100	65	85	100	65	85	100	85	100	85	100		
Short-time current Icw (kA RMS)	0.4 sec.	65	85	100	65	85	100	65	85	100	65	85	100	85	100	85	100		
Extended instantaneous protection	480VAC	65	100	150	65	100	150	65	100	150	65	100	150	100	150	100	150		
rating (kA RMS)	600VAC	65	85	100	65	85	100	65	85	100	65	85	100	85	100	85	100		
Close and latch rating (kA RMS)		65	85	100	65	85	100	65	85	100	65	85	100	85	100	85	100		
Applicable rating plug range		200 - 800A			200 - 1200A			200 - 1600A			200 - 2000A			200 - 2500A			200 - 3000A		
Minimum enclosure dimension (in.)		22Wx22.5Hx19.5D			22Wx22.5Hx19.5D			22Wx22.5Hx19.5D			22Wx22.5Hx19.5D			22Wx22.5Hx19.5D			22Wx15Hx19.5D		
Mechanical make-time (ms)		35			35			35			35			35			35		
Mechanical break-time (ms)		34			34			34			34			34			34		
Electric close make-time (ms)		50			50			50			50			50			50		
Electric trip/ UV break-time (ms)		40/73			40/73			40/73			40/73			40/73			40/73		
Electric trip and reclose interval (ms)		80			80			80			80			80			80		
Mechanical duty cycles (no maint.)		10,000 (5000 for Class C)			10,000 (5000 for Class C)			10,000 (5000 for Class C)			10,000 (5000 for Class C)			10,000 (5000 for Class C)			10,000 (5000 for Class C)		
Electrical duty cycles (no maint)		7500 (5000 for Class C)			7500 (5000 for Class C)			7500 (5000 for Class C)			4000			4000			4000		
Draw-out breaker efficiency (Watts loss at In)		85			150			320			500			680			1000		
Fixed-mount breaker efficiency (Watts loss at In)		40			80			120			230			320			480		
Ambient operating temperature (°C)		-25 to 40			-25 to 40			-25 to 40			-25 to 40			-25 to 40			-25 to 40		
Weights (Fixed Breaker/DO Breaker/Cradle) lbs.		124/159/112 148/220/163 (Class C)			124/159/112 148/220/163 (Class C)			124/159/112 148/220/163 (Class C)			130/177/128 148/220/163 (Class C)			130/177/128 148/220/163 (Class C)			130/177/128 148/220/163 (Class C)		

WL UL489 Breaker Offering

		4000A		5000A	
WL Frame Ratings – Frame Size 3					
Rating Class		L	C	L	C
Interrupting current frame Ics (kAIR RMS) 50/60 Hz	240VAC	100	150	100	150
	480VAC	100	150	100	150
	600VAC	85	100	85	100
Short-time current Icw (kA RMS)	0.4 sec.	85	100	85	100
Extended instantaneous protection rating (kA RMS)	480VAC	100	150	100	150
	600VAC	85	100	85	100
Close and latch rating (kA RMS)		85	100	85	100
Applicable rating plug range		800 - 4000A		800 - 5000A	
Minimum enclosure dimension (in.)		32Wx22.5Hx19.5D		32Wx22.5Hx19.5D	
Mechanical make-time (ms)		35		35	
Mechanical break-time (ms)		34		34	
Electric close make-time (ms)		50		50	
Electric trip/ UV break-time (ms)		40/73		40/73	
Electric trip and reclose interval (ms)		80		80	
Mechanical duty cycles (no maint.)		5000		5000	
Electrical duty cycles (no maint.)		2000		2000	
Draw-out breaker efficiency (Watts loss at In)		1100		1100	
Fixed-mount breaker efficiency (Watts loss at In)		580		580	
Ambient operating temperature (°C)		-25 to 40		-25 to 40	
Weights (Fixed Breaker/DO Breaker/Cradle) lbs.		181/278/306 200/278/306 (Class C)		181/278/306 200/278/306 (Class C)	

		Frame Size 1 800 - 2000A	Frame Size 2 800 - 3000A	Frame Size 3 4000 - 5000A
Ratings for UL 489 Listed Non-Automatic Switches				
WL Frame Ratings				
Rating Class		L	L	L
Breaking capacity with external relay (kA RMS)	240VAC	100	100	100
50/60 Hz, instantaneous trip	480VAC	100	100	100
	600VAC	85	85	85
Short-time current Icw (kA RMS)	0.4 sec.	85	85	85

WL UL1066/ANSI Breaker Offering



		800A					1600A				
WL Frame Ratings – Frame size 2											
Rating Class		N	S	H	L	F	N	S	H	L	F
Interrupting current frame Ics (kAIR RMS) 50/60 Hz	254VAC	50	65	85	100	200	50	65	85	100	200
	508VAC	50	65	85	100	200	50	65	85	100	200
	600VAC	—	—	—	—	200	—	—	—	—	200
	635VAC	50	65	65	85	—	50	65	65	85	—
Short-time current Icw (kA RMS)	1 sec.	50	65	65	85	—	50	65	65	85	—
Close and latch rating (kA RMS)		50	65	65	85	—	50	65	65	85	—
Applicable rating plug range		200 - 800A					200 - 1600A				
Mechanical make-time (ms)		35					35				
Mechanical break-time (ms)		34					34				
Electric close make-time (ms)		50					50				
Electric trip/ UV break-time (ms)		40/73					40/73				
Electric trip and reclose interval (ms)		80					80				
Mechanical duty cycles (with maint.) ^①		15,000					15,000				
Electrical duty cycles (with maint.) ^②		15,000					15,000				
Draw-out breaker efficiency (Watts loss at rated In)		85					320				
Draw-out fused breaker efficiency (Watts loss at rated In)		Consult factory					Consult factory				
Ambient operating temperature (°C)		-25 to 40					-25 to 40				
Weights (Fused Breaker/Breaker/Cradle) lbs.		227/159/112					227/159/112				

		2000A				3200A		
WL Frame Ratings – Frame Size 2								
Rating Class		S	H	L	F	S	H	L
Interrupting current frame Ics (kAIR RMS) 50/60 Hz	254VAC	65	85	100	200	65	85	100
	508VAC	65	85	100	200	65	85	100
	600VAC	—	—	—	200	—	—	—
	635VAC	65	65	85	—	65	65	85
Short-time current Icw (kA RMS)	1 sec.	65	65	85	—	65	65	85
Close and latch rating (kA RMS)		65	65	85	—	65	65	85
Applicable rating plug range		200 - 2000A				200 - 3200A		
Mechanical make-time (ms)		35				35		
Mechanical break-time (ms)		34				34		
Electric close make-time (ms)		50				50		
Electric trip/ UV break-time (ms)		40/73				40/73		
Electric trip and reclose interval (ms)		80				80		
Mechanical duty cycles (with maint.) ^①		15,000				15,000		
Electrical duty cycles (with maint.) ^②		15,000				15,000		
Draw-out breaker efficiency (Watts loss at rated In)		700				1650		
Draw-out fused breaker efficiency (Watts loss at rated In)		Consult factory				Consult factory		
Short-time current Icw (kA RMS)ure (°C)		-25 to 40				-25 to 40		
Weights (Fused Breaker/Breaker/Cradle) lbs.		227/209/152				227/209/152		

① Maintenance means: replacing main contacts and arc chutes (see operating instructions). M-Class main contacts can be replaced by Siemens personnel only.

WL UL1066/ANSI Breaker Offering

		3200A				4000A				5000A				6000A		
WL Frame Ratings – Frame Size 3																
Rating Class		M	F	H	L	M	F	H	L	M	F	H	L	M		
Interrupting current frame Ics (kAIR RMS) 50/60 Hz	254VAC	150	200	85	100	150	200	85	100	150	200	85	100	150		
	508VAC	150	200	85	100	150	200	85	100	150	200	85	100	150		
	600VAC	—	200	—	—	—	200	—	—	—	200	—	—	—		
	635VAC	85	—	85	85	85	—	85	85	85	—	85	85	85		
Short-time current Icw (kA RMS)	1 sec.	100 ^②	—	85	100 ^②	100 ^②	—	85	100 ^②	100 ^②	—	85	100 ^②	100 ^②		
Close and latch rating (kA RMS)		100 ^②	—	85	100 ^②	100 ^②	—	85	100 ^②	100 ^②	—	85	100 ^②	100 ^②		
Applicable rating plug range		800 - 3200A				800 - 4000A				800 - 5000 A				800 - 6000 A		
Mechanical make-time (ms)		35				35				35				35		
Mechanical break-time (ms)		34				34				24				24		
Electric close make-time (ms)		50				50				50				50		
Electric trip/ UV break-time (ms)		40/73				40/73				40/73				40/73		
Electric trip and reclose interval (ms)		80				80				80				80		
Mechanical duty cycles (with maint.) ^①		10,000				10,000				10,000				10,000		
Electrical duty cycles (with maint.) ^②		10,000				10,000				10,000				10,000		
Draw-out breaker efficiency (Watts loss at rated In)		700				1100				1650				2376		
Draw-out fused breaker efficiency (Watts loss at rated In)		Consult factory				Consult factory				Consult factory				Consult factory		
Ambient operating temperature (°C)		-25 to 40				-25 to 40				-25 to 40				-25 to 40		
Weights (Fused Carriage/Breaker/Cradle) lbs.		225/260/306				225/260/306				225/260/306				225/260/306		

Ratings for UL 1066 Listed Non-Automatic Switches		Frame Size 2 800A - 3200A ^④			Frame Size 2 3200A - 6000A ^④		
WL Frame Ratings							
Rating Class		F ^③	L	F ^③	L	F ^③	L
Breaking capacity with external relay (kA RMS) 50/60 Hz, instantaneous trip	254VAC	200	100	200	100	200	100
	508VAC	200	100	200	100	200	100
	635VAC	200	85	200	85	200	85
Short-time current Icw (kA RMS)	1 sec.	200	65	200	100	200	100

① Maintenance means: replacing main contacts and arc chutes (see operating instructions).

M-Class main contacts can be replaced by Siemens personnel only.

Do not apply switch or breaker rated at 635VAC to a system with fault current > 85kA RMS.

② Short-time withstand current (Icw) at 635 VAC is kAIC RMS.

③ Max. 600 VAC.

④ 3200A frame rating is only available in L-Class in Frame Size 2. 3200A frame rating is not available in L-Class in Frame Size 3.

5S Breaker Offering

Introduction

5SP and 5SY Supplementary Protectors are single and multi-pole thermal / magnetic overcurrent protection devices that are intended for general industrial use. They are UL Recognized (File No. E116386) in accordance with UL 1077, "Supplementary Protectors for Use in Electrical Equipment" and Certified to Canadian Standards (CSA 22.2 No. 2352). They are provided with a manual means for opening the circuit and they are not ambient compensated.

Features

- Thermal magnetic protection
- High interrupting rating / rated switching capacity –
- UL 1077: up to 14,000 maximum RMS symmetrical amps AC
- (I_{cn}) to IEC 60 898-1: up to 10,000 A AC
- (I_{cu}) to IEC 60 947-2: up to 15,000 A AC
- Can be used for "field wiring" applications:
- 5SP4: AWG 14 to AWG 2, Copper (Cu) only
- 5SY: AWG 14 to AWG 4, Copper (Cu) only
- Calibration base:
- UL: 25°C (77°F)
- IEC: 30°C (86°F)
- Meets trip characteristics: A, B, C, D
- Rated voltage
- UL 1077
 - 277 VAC (1- & 1+N-pole)
 - 480 VAC (multi-poles)
- EN 60 898 and EN 60947-2
 - VAC/DC: 24 minimum
 - VDC/pole: 60 maximum
 - VAC: 440 maximum
- Available with: 1-, 1+N-, 2-, 3-, 3+N- and 4-poles
- Available from: 0.3 to 80 Amps (depending on the device selected)
- Visible indicator for ON and OFF/Trip
- Touch protection to EN 50274-1
- Standard DIN rail mounting
- Identical wire screw connections on line and load side
- CFC and silicone free

Certifications And Standards

- UL recognized and certified to Canadian Standards (File E116386)
- UL 1077
- CSA 22.2 No. 235
- CE
- EN 60 898, IEC/EN 60 947-2

Catalog Number Structure

Frame Style

5SY4 – 10 kA, standard frame
 5SY5 – 10 kA, universal current
 5SY6 – 6 kA, standard frame
 5SY7 – 15 kA, standard frame
 5SY8 – 25 kA, standard frame
 5SP4 – 10 kA, high current

Poles

1 – 1 Pole
 5 – 1 Pole + Neutral
 2 – 2 Pole
 3 – 3 Pole
 6 – 3 Pole + Neutral
 4 – 4 Pole

Code Rated current (I_n)

14 – 0.3
 05 – 0.5
 01 – 1
 15 – 1.6
 02 – 2
 03 – 3
 04 – 4
 11 – 5
 06 – 6
 08 – 8
 10 – 10
 13 – 13
 18 – 15
 16 – 16
 20 – 20
 25 – 25
 30 – 30
 32 – 32
 35 – 35
 40 – 40
 45 – 45
 50 – 50
 60 – 60
 63 – 63
 80 – 80
 91 – 100
 92 – 125

Trip Curve (Characteristic)

5 – Trip curve A, Magnetic trip point 2 to 3 I_n , 1.13 to 1.45 breaker rating
 6 – Trip curve B, Magnetic trip point 3 to 5 I_n , 1.13 to 1.45 breaker rating
 7 – Trip curve C, Magnetic trip point 5 to 10 I_n , 1.13 to 1.45 breaker rating
 6 – Trip curve D, Magnetic trip point 10 to 20 I_n , 1.13 to 1.45 breaker rating

5SY4 1 10 7

Control Circuit Protection Supplementary Protection

5SY and 5SP Supplementary Protectors



	5SY4 ^②	5SY5 ^②	5SP4 ^②
Technical Data			
Standards	EN 60898; EN 60947-2; UL 1077; CSA C22.2 No. 235	EN 60898; EN 60947-2	EN 60898; EN 60947-2; UL 1077; CSA C22.2 No. 235
Certifications	CE; cURus, UL File No. E116386	Not UL/CSA Rated	CE; cURus, UL File No. E106582
Tripping Characteristic	A, B, C, D	B, C	B, C, D
Number Of Poles	1, 1+N, 2, 3, 3+N, 4	1, 2	1, 2, 3, 4
Operating Voltage - EN 60898, EN 60947-2 - UL 1077 and CSA C22.2 No. 2352	Min. V AC/DC Max. V DC/pole Max. V AC Max. V AC V DC/pole	24 60 ^① 440 480 –	220 440 – –
Interrupting Rating - I_{cn} to IEC/EN 60898-1 - I_{cn} to IEC/EN 60898-2 - UL 1077 and CSA C22.2 No. 235 AC: Max. RMS Symmetrical	kA AC kA AC 120/240, 240 V: kA AC 240 V: kA AC 277 V: kA AC 480 V: kA AC	10 – 14 7.5 5 5	10 10 Not UL Rated – 14 7.5 5 5
Touch protection to EN 50274-1	Yes	Yes	Yes
Degree of protection to EN 60529	IP20, with connected conductors	IP20, with connected conductors	IP20, with connected conductors
CFC and Silicone Free	Yes	Yes	Yes
Mounting - Snap-on mounting - Standard mounting rail and mounting	Yes –	Yes –	– Yes
Device depth	mm	70	70
Terminals - Tunnel terminals at both ends - Combined terminals at both ends - Terminal, solid, stranded or finely stranded with end sleeve - Terminal tightening torque	mm ² lb. in. Nm	– Yes 0.75 to 25 22 to 26 2.5 to 3	– Yes 0.75 to 25 22 to 31 2.5 to 3.5
Conductor cross sections - Solid and stranded - Finely stranded, with end sleeve	mm ² mm ² AWG	0.75 to 35 0.75 to 25 14 to 4	0.75 to 35 0.75 to 25 14 to 4
Calibration Base	°C	30 (EN 60898)	30 (EN 60898)
Average Service Life, With Rated Load	Operations	20,000	20,000 (above 40A: 10,000)
Ambient Operating Temperature	°C	-25 to 45, occasionally +55, max. 95% humidity	-25 to 45, occasionally +55, max. 95% humidity
Storage Temperature	°C	-40 to +75	-40 to +75
Resistance to vibration to IEC 60068-2-6	m/s ²	60 at 10 Hz to 150 Hz	60 at 10 Hz to 150 Hz

① The operating voltage 60 V DC/pole takes into account a battery charging voltage with peak value of 72 V.

② 50 C Calibration.

Additional Breakers

3WL5, BQ, QR, G-Frame

3WL5 Air Circuit Breakers

- Three sizes up to 5000 A
- Switching capacity 65 kA/100 kA at up to 480 VAC
- Fixed-mounted/withdrawable design
- Horizontal, vertical, front or flange connection
- Two tripping unit variants (ETU25B and ETU45B)
- Optimum protection also with partial loads
With the rating plug module, the circuit breakers can be adjusted to the suitable nominal current within seconds – already from 100A upwards.
- Uniform communication solution
A uniform software is available for the parameterization and operating state control of air circuit breaker and molded-case circuit breaker.
- High thermal load capacity
The 3WL5 has a thermal load capacity of up to 70°C, which is particularly important when installed in control cabinets.

BQ General Purpose Breakers

Siemens BQ Breakers provide easy lug-in/lug-out connections. Siemens offers three AIC ratings for these breakers: BQ @ 10K AIC, BQH @ 22K AIC, and HQL @ 65 K AIC.

4 available constructions to choose from: 1 Pole 120V, 2 Pole 120/240V, 2 Pole 240V, 3 Pole 240V.

QR Circuit Breakers

The Siemens QR Circuit Breaker is a compact, industrial design for protection of branch and feeder circuits with valuable features for use in North American markets. These features include the ability to handle higher interrupting ratings and higher inrush currents, as well as available UL listed field installable internal accessories. The QR breaker also has the capacity to reduce overall cost due to its ability to supply up to 250A at 240VAC up to 100KAIC. These qualities compose a circuit breaker that is suited for use as main breakers in load centers, panelboards, switchboards, meter centers, and modular metering.

Applications:

- Implemented in load centers, panelboards, switchboards, meter centers, and modular metering
 - Use by OEMs in control panels and a variety of other 240V applications
- Operating Conditions:
- Standard QR breakers are calibrated at 40°C ambient operating temperatures. Operation at higher temperatures will require derating.
 - Enclosures are available for installing QR breakers in factory environments (NEMA 1) or outdoor (NEMA 3R)



Additional Breakers

3WL5, BQ, QR, G-Frame

G-Frame Circuit Breakers

The Siemens GG Circuit Breaker is a compact, industrial design thermal magnetic breaker with valuable features for the global markets. These features include a design that meets multi-national standards, is suitable for DIN rail or base mounting without the need for adapters, and includes UL listed field installable accessories. The GG also has an over-center toggle mechanism that is trip free and uses repulsion contact arm construction. Therefore, should a short circuit or tripping condition occur, the contacts are forced apart and the breaker cannot be held closed by means of the handle.

The GB Circuit Breaker includes the same design features as the GG except the line end of the breaker is configured for panelboard mounting applications and it is without some of the global markings.

- Global rated (UL/CSA/IEC/NOM)
UL489, CSA-C22.2 No. 5-02, IEC 60947-2 (GG), NMX-J-515-ANCE 2000
- HACR, SWD, and HID marked (at applicable ratings)
- Integral DIN rail or base mount without adapters (GG)
- UL Listed field installable accessories
- Removable lugs
- 25 kA, 35 kA, 65 kA @ 480V AC (GG/GB2) kA, 35 kA, 65 kA @ 480Y/277V AC (GB)
- 1, 2, 3 pole units
- Over-center toggle and trip free mechanism
- Suitable for reverse feed applications
- Common trip

Applications:

- With their compact size, the GG/GB Circuit Breakers are well suited for OEM designed equipment in both light commercial and industrial applications.
- The GG can be independently mounted on DIN rail or held in place by mounting screws.
- The GB breaker is for panelboard mounted applications.
- These circuit breakers may be used as incoming main and branch breakers in distribution systems.

Operating conditions:

- The GG Circuit Breakers are designed for use in enclosed rooms, in which there are no adverse operating conditions (e.g. dust, corrosive vapors, destructive gases).
- For installation in dusty and damp rooms or outdoors, suitable enclosures must be used.
- The G-Frame is factory calibrated for 40° C ambient.

usa.siemens.com/QR



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