

## Protective Devices for Power Modules PM240-2

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## General Notes

- The voltage rating of any protection device must be at least the voltage rating of the supply circuit.
- Protective devices of the same type with lower current ratings may be used.
- Protection devices of the same type with a lower SCCR / Icc rating may be used.
- The branch circuit protection information given in this document for the PM240-2 Frame Size A (FSA) applies only to FSA hardware versions A08 or higher. The hardware version number can be found on the Power Module rating label.
- The converters must be mounted in a suitable enclosure, while ensuring the minimum enclosure sizes are observed.

## Overview of the approved protection devices according to UL standards

- JDDZ: Fuses of any manufacturer.
- DIVQ: Siemens circuit breaker
- NKJH: SIEMENS Type E combination motor controllers

## ICC conditional short circuit current Icc:

The maximum RMS value of a prospective short circuit current, available from a supply source.

## Short-Circuit Current Rating (SCCR):

The Short-Circuit Current Rating (SCCR) is the prospective symmetrical fault current at a nominal voltage to which an apparatus or system is able to be connected without sustaining damage exceeding defined acceptance criteria.

## UL Certificates:

FSA, FSB, FSC: 200 V	UL-File E121068, Vol. 2 Sec. 29
FSA, FSB, FSC: 400 V	UL-File E121068, Vol. 2 Sec. 27
FSD, FSE, FSF: 200 V / 400 V / 690 V	UL-File E192450, Vol. 13 Sec. 4

# 1 Protective devices for IEC applications

## 1.1 IEC Fuses

### 1.1.1 IEC 3NA Fuses, 200 V ... 240 V

Power Module			Fuse			Min. enclosure volume	
Frame size	Rated Power, (LO)	Article no.	Max. rated current	Article no.	ICC	Metric	Imperial (USA)
FSA	0,55 kW	6SL3210-1PB13-0...	16 A	3NA3805	100 kA	-	-
	0,75 kW	6SL3210-1PB13-8... 6SL3211-1PB13-8...					
FSB	1,1 kW	6SL3210-1PB15-5...	32 A	3NA3812	100 kA	-	-
	1,5 kW	6SL3210-1PB17-4...					
	2,2 kW	6SL3210-1PB21-0... 6SL3211-1PB21-0...					
FSC	3,0 kW	6SL3210-1PB21-4...	50 A	3NA3820	100 kA	-	-
	4,0 kW	6SL3210-1PB21-8...					
		6SL3211-1PB21-8...					
	5,5 kW	6SL3210-1PC22-2...					
6SL3211-1PC22-2...							
7,5 kW	6SL3210-1PC22-8...						
	6SL3211-1PC22-8...						
FSD	11,0 kW	6SL3210-1PC24-2...	63 A	3NA3822	100 kA	0,6 m <sup>3</sup> 1)	21,19 ft <sup>3</sup> 1)
	15,0 kW	6SL3210-1PC25-4...	80 A	3NA3824			
	18,5 kW	6SL3210-1PC26-8...	100 A	3NA3830			
FSE	22,0 kW	6SL3210-1PC28-0...	100 A	3NA3830	100 kA		
	30,0 kW	6SL3210-1PC31-1...	160 A	3NA3836 3NA3836-8			
FSF	37,0 kW	6SL3210-1PC31-1...	200 A	3NA3140	100 kA		
	45,0 kW	6SL3210-1PC31-1...	200 A	3NA3140			
	55,0 kW	6SL3210-1PC31-1...	224 A	3NA3142			

1) No enclosure size restrictions apply for 65 kA ICC rating

Note: Siemens 3NA low-voltage fuse series is recommended.

**1.1.2 IEC 3NA Fuses, 380 V ... 480 V**

Power Module			Fuse			Min. enclosure volume	
Frame size	Rated Power, (LO)	Article no.	Max. rated current	Article no.	ICC	Metric	Imperial (USA)
FSA	0,55 kW	6SL3210-1PE11-8...	10 A	3NA3803	100 kA	-	-
	0,75 kW	6SL3210-1PE12-3...					
	1,1 kW	6SL3210-1PE13-2...	16 A	3NA3805	100 kA	-	-
	1,5 kW	6SL3210-1PE14-3...					
	2,2 kW	6SL3210-1PE16-1...					
		6SL3210-1PE18-0...					
3,0 kW	6SL3211-1PE18-0...						
FSB	4,0 kW	6SL3210-1PE21-1...	32 A	3NA3812	100 kA	-	-
	5,5 kW	6SL3210-1PE21-4...					
	7,5 kW	6SL3210-1PE21-8...					
		6SL3211-1PE21-8...					
FSC	11,0 kW	6SL3210-1PE22-7...	50 A	3NA3820	100 kA	-	-
	15,0 kW	6SL3210-1PE23-3...					
		6SL3211-1PE23-3...					
FSD	18,5 kW	6SL3210-1PE23-8...	63 A	3NA3822	100 kA	0,6 m <sup>3</sup> 1)	21,19 ft <sup>3</sup> 1)
	22,0 kW	6SL3210-1PE24-5...	80 A	3NA3824			
	30,0 kW	6SL3210-1PE26-0...	100 A	3NA3830			
	37,0 kW	6SL3210-1PE27-5...					
FSE	45,0 kW	6SL3210-1PE28-8...	125 A	3NA3832	100 kA	0,6 m <sup>3</sup> 1)	21,19 ft <sup>3</sup> 1)
	55,0 kW	6SL3210-1PE31-1...	160 A	3NA3836			
FSF	75,0 kW	6SL3210-1PE31-5...	200 A	3NA3140	100 kA	0,6 m <sup>3</sup> 1)	21,19 ft <sup>3</sup> 1)
	90,0 kW	6SL3210-1PE31-8...	224 A	3NA3142			
	110,0 kW	6SL3210-1PE32-1...	300 A	3NA3250			
	132,0 kW	6SL3210-1PE32-5...	315 A	3NA3252			

1) No enclosure size restrictions apply for 65 kA ICC rating

Note: Siemens 3NA low-voltage fuse series is recommended.

### 1.1.3 IEC 3NA Fuses, 500 V ... 690 V

Power Module			Fuse			Min. enclosure volume	
Frame size	Rated Power, (LO)	Article no.	Max. rated current	Article no.	ICC	Metric	Imperial (USA)
FSD	11,0 kW	6SL3210-1PH21-4...	20 A	3NA3807-6	100 kA	0,6 m <sup>3</sup> 1)	21,19 ft <sup>3</sup> 1)
	15,0 kW	6SL3210-1PH22-0...	25 A	3NA3810-6			
	18,5 kW	6SL3210-1PH22-3...	32 A	3NA3812-6			
	22,0 kW	6SL3210-1PH22-7...	40 A	3NA3817-6KJ			
	30,0 kW	6SL3210-1PH23-5...	50 A	3NA3820-6KJ			
	37,0 kW	6SL3210-1PH24-2...	63 A	3NA3822-6	100 kA		
FSE	45,0 kW	6SL3210-1PH25-2...	80 A	3NA3824-6			
	55,0 kW	6SL3210-1PH26-2...					
FSF	75,0 kW	6SL3210-1PH28-0...	100 A	3NA3830-6	100 kA		
	90,0 kW	6SL3210-1PH31-0...	125 A	3NA3132-6			
	110,0 kW	6SL3210-1PH31-2...	160 A	3NA3136-6			
	132,0 kW	6SL3210-1PH31-4...	200 A	3NA3140-6			

1) No enclosure size restrictions apply for 65 kA ICC rating

Note: Siemens 3NA low-voltage fuse series is recommended.

## 1.2 IEC Motor Starter Protectors

### 1.2.1 IEC Motor Starter Protectors, 200 V ... 240 V

Power Module			MSP			Min. enclosure volume	
Frame Size	Rated Power, (LO)	Article no.	Max. rated current	Article no.	ICC @ 240 V AC	Metric	Imperial (USA)
FSA	0,55 kW	6SL3210-1PB13-0...	16 A	3RV1031-4AA..	65 kA	0,03 m <sup>3</sup>	1,06 ft <sup>3</sup>
	0,75 kW	6SL3210-1PB13-8...		3RV2011-4AA..			
		6SL3211-1PB13-8...		3RV2021-4AA..			
FSB	1,1 kW	6SL3210-1PB15-5...	32 A	3RV1031-4EA..	65 kA	0,06 m <sup>3</sup>	2,12 ft <sup>3</sup>
	1,5 kW	6SL3210-1PB17-4...		3RV2021-4EA..			
		6SL3210-1PB21-0...		3RV2031-4EA..			
		2,2 kW		6SL3211-1PB21-0...			
FSC	3,0 kW	6SL3210-1PB21-4...	50 A	3RV1031-4HA.. 3RV1041-4HA..	65 kA	0,14 m <sup>3</sup>	4,94 ft <sup>3</sup>
	4,0 kW	6SL3210-1PB21-8...					
		6SL3211-1PB21-8...					
	5,5 kW	6SL3210-1PC22-2...					
		6SL3211-1PC22-2...					
	7,5 kW	6SL3210-1PC22-8...					
6SL3211-1PC22-8...							
FSD	11,0 kW	6SL3210-1PC24-2...	65 A	3RV2031-4JA..	65 kA	0,6 m <sup>3</sup>	21,19 ft <sup>3</sup>
			65 A	3RV2032-4JA..			
			63 A	3RV1041-4JA..			
			63 A	3RV1042-4JA..			
			50 A	3RV1031-4HA..			
	15,0 kW	6SL3210-1PC25-4...	73 A	3RV2031-4KA..			
			73 A	3RV2032-4KA..			
			75 A	3RV1041-4KA..			
			75 A	3RV1042-4KA..			
	18,5 kW	6SL3210-1PC26-8...	90 A	3RV1041-4LA..			
			90 A	3RV1042-4LA..			
			73 A	3RV2031-4KA..			
			73 A	3RV2032-4KA..			

**1.2.2 IEC Motor Starter Protectors, 380 V ... 480 V**

Power Module			MSP			Min. enclosure volume	
Frame Size	Rated Power, (LO)	Article no.	Max. rated current	Article no.	ICC @ 400 V AC	Metric	Imperial (USA)
FSA	0,55 kW	6SL3210-1PE11-8...	10 A	3RV2011-1JA..	65 kA	0,03 m <sup>3</sup>	1,06 ft <sup>3</sup>
	0,75 kW	6SL3210-1PE12-3...		3RV2021-1JA..			
	1,1 kW	6SL3210-1PE13-2...	16 A	3RV1031-4AA..	50 kA		
	1,5 kW	6SL3210-1PE14-3...		3RV2011-4AA..	55 kA		
	2,2 kW	6SL3210-1PE16-1...		3RV2021-4AA..	55 kA		
	3,0 kW	6SL3210-1PE18-0...					
6SL3211-1PE18-0...							
FSB	4,0 kW	6SL3210-1PE21-1...	32 A	3RV1031-4EA..	50 kA	0,06 m <sup>3</sup>	2,12 ft <sup>3</sup>
	5,5 kW	6SL3210-1PE21-4...		3RV2021-4EA..	55 kA		
	7,5 kW	6SL3210-1PE21-8...		3RV2031-4EA..	65 kA		
		6SL3211-1PE21-8...					
FSC	11,0 kW	6SL3210-1PE22-7...	50 A	3RV1031-4HA..	50 kA	0,14 m <sup>3</sup>	4,94 ft <sup>3</sup>
	15,0 kW	6SL3210-1PE23-3...		3RV1041-4HA..	50 kA		
		6SL3211-1PE23-3...					
FSD	18,5 kW	6SL3210-1PE23-8...	63 A	3RV1041-4JA..	50 kA	0,6 m <sup>3</sup>	21,19 ft <sup>3</sup>
				3RV1042-4JA..	65 kA		
			65 A	3RV2031-4JA..	65 kA		
				3RV2032-4JA..	65 kA		
	22,0 kW	6SL3210-1PE24-5...	75 A	3RV1041-4KA..	50 kA		
				3RV1042-4KA..	65 kA		
			73 A	3RV2031-4KA..	65 kA		
				3RV2032-4KA..	65 kA		
	30,0 kW	6SL3210-1PE26-0...	90 A	3RV1041-4LA..	50 kA		
				3RV1042-4LA..	65 kA		
37,0 kW	6SL3210-1PE27-5...	100 A	3RV1041-4MA..	50 kA			
			3RV1042-4MA..	65 kA			

Note: The Icc values are valid for TN grid

**1.2.3 IEC Motor Starter Protectors, 500 V ... 690 V**

Power Module			MSP			Min. enclosure volume	
Frame Size	Rated Power, (LO)	Article no.	Max. rated current	Article no.	ICC @ 500 V AC	Metric	Imperial (USA)
FSD	11,0 kW	6SL3210-1PH21-4...	20 A	3RV1031-4BA..	12 kA	0,6 m <sup>3</sup>	21,19 ft <sup>3</sup>
				3RV2031-4BA..	12 kA		
				3RV2032-4BA..	18 kA		
	15,0 kW	6SL3210-1PH22-0...	32 A	3RV1031-4EA..	10 kA		
				3RV2031-4EA..	10 kA		
				3RV2032-4EA..	15 kA		
	18,5 kW	6SL3210-1PH22-3...	32 A	3RV1031-4EA..	10 kA		
				3RV2031-4EA..	10 kA		
				3RV2032-4EA..	15 kA		
	22,0 kW	6SL3210-1PH22-7...	40 A	3RV1031-4FA..	10 kA		
				3RV1041-4FA..	12 kA		
				3RV1042-4FA..	18 kA		
				3RV2031-4UA..	10 kA		
				3RV2032-4UA..	15 kA		
	30,0 kW	6SL3210-1PH23-5...	50 A	3RV1031-4HA..	10 kA		
				3RV1041-4HA..	12 kA		
			52 A	3RV1042-4HA..	15 kA		
				3RV2031-4WA..	8 kA		
				3RV2032-4WA..	10 kA		
	37,0 kW	6SL3210-1PH24-2...	59 A	3RV2032-4XA..	10 kA		
			52 A	3RV2031-4WA..	22 kA		
52 A			3RV2032-4WA..	22 kA			
63 A			3RV1041-4JA..	30 kA			
50 A			3RV1031-4HA..	25 kA			
63 A			3RV1042-4JA..	15 kA			



## 1.3 IEC Circuit Breakers

### 1.3.1 IEC Circuit Breakers, 200 V ... 240 V

Power Module			Circuit Breaker			Min. enclosure volume	
Frame Size	Rated Power, (LO)	Article no.	Max. rated current	Type	ICC @ 240 V	Metric	Imperial (USA)
FSD	11,0 kW	6SL3210-1PC24-2...	63 A	3VL1706-2D...	100 kA	0,6 m <sup>3</sup>	21,19 ft <sup>3</sup>
				3VL2706-3DC...	100 kA		
				3VA1063-4ED...	55 kA		
				3VA1163-6E...	100 kA		
	15,0 kW	6SL3210-1PC25-4...	80 A	3VL1708-2D...	100 kA		
				3VL2708-3DC...	100 kA		
				3VA1080-4ED..	55 kA		
				3VA1180-6E...	100 kA		
	18,5 kW	6SL3210-1PC26-8...	100 A	3VL1710-2D...	100 kA		
				3VL2710-3DC...	100 kA		
				3VA1010-4ED...	55 kA		
				3VA1110-6E...	100 kA		
FSE	22,0 kW	6SL3210-1PC28-0...	125 A	3VL1712-2D...	100 kA		
				3VL2712-3DC...			
				3VA1112-6E...			
	30,0 kW	6SL3210-1PC31-1...	160 A	3VL1716-2D...	100 kA		
				3VL2716-3DC...			
				3VA1116-6E...			
FSF	37,0 kW	6SL3210-1PC31-1...	200 A	3VL3720-3DC...	100 kA		
				3VA1220-6EF...			
	45,0 kW	6SL3210-1PC31-1...	200 A	3VL3720-3DC...	100 kA		
				3VA1220-6EF...			
	55,0 kW	6SL3210-1PC31-1...	250 A	3VL3725-3DC...	100 kA		
				3VA1225-6EF...			

**1.3.2 IEC Circuit Breakers, 380 V ... 480 V**

Power Module			Circuit Breaker			Min. enclosure volume	
Frame Size	Rated Power, (LO)	Article no.	Max. rated current	Type	ICC @ 415 V	Metric	Imperial (USA)
FSD	18,5 kW	6SL3210-1PE23-8...	63 A	3VL1706-2D...	70 kA	0,6 m <sup>3</sup>	21,19 ft <sup>3</sup>
				3VL2706-3DC...	100 kA		
				3VA1063-4ED...	36 kA		
				3VA1163-6E...	70 kA		
	22,0 kW	6SL3210-1PE24-5...	80 A	3VL1708-2D...	70 kA		
				3VL2708-3DC...	100 kA		
				3VA1080-4ED...	36 kA		
				3VA1180-6E...	70 kA		
	30,0 kW	6SL3210-1PE26-0...	100 A	3VL1710-2D...	70 kA		
				3VL2710-3DC...	100 kA		
				3VA1010-4ED...	36 kA		
				3VA1110-6E...	70 kA		
	37,0 kW	6SL3210-1PE27-5...	100 A	3VL1710-2D...	70 kA		
				3VL2710-3DC...	100 kA		
				3VA1010-4ED...	36 kA		
				3VA1110-6E...	70 kA		
FSE	45,0 kW	6SL3210-1PE28-0...	125 A	3VL1712-2D...	70 kA		
				3VL2712-3DC...	100 kA		
				3VA1112-6E...	70 kA		
	55,0 kW	6SL3210-1PE31-1...	160 A	3VL1716-2D...	70 kA		
				3VL2716-3DC...	100 kA		
				3VA1116-6E...	70 kA		
FSF	75,0 kW	6SL3210-1PE31-5...	200 A	3VL3720-3DC...	100 kA		
				3VA1220-6EF...	70 kA		
	90,0 kW	6SL3210-1PE31-8...	250 A	3VL3725-3DC...	100 kA		
				3VA1225-6EF...	70 kA		
	110,0 kW	6SL3210-1PE32-1...	315 A	3VL4731-3DC...	100 kA		
	132,0 kW	6SL3210-1PE32-5...	400 A	3VL4740-3DC...	100 kA		

**1.3.3 IEC Circuit Breakers, 500 V ... 690 V**

Power Module			Circuit Breaker			Min. enclosure volume	
Frame Size	Rated Power, (LO)	Article no.	Max. rated current	Type	ICC @ 500 V	Metric	Imperial (USA)
FSD	11,0 kW	6SL3210-1PH21-4...	20 A	3VL1702-2D...	30 kA	0,6 m <sup>3</sup>	21,19 ft <sup>3</sup>
				3VA1020-4ED...	16 kA		
				3VA1120-6E...	20 kA		
	15,0 kW	6SL3210-1PH22-0...	32 A	3VL1703-2D...	30 kA		
				3VA1032-4ED...	16 kA		
				3VA1132-6E...	20 kA		
	18,5 kW	6SL3210-1PH22-3...	32 A	3VL1703-2D...	30 kA		
				3VA1032-4ED...	16 kA		
				3VA1132-6E...	20 kA		
	22,0 kW	6SL3210-1PH22-7...	40 A	3VL1704-2D...	30 kA		
				3VA1040-4ED...	16 kA		
				3VA1140-6E...	20 kA		
	30,0 kW	6SL3210-1PH23-5...	50 A	3VL1705-2D...	30 kA		
				3VL2705-3DC...	50 kA		
				3VA1050-4ED...	16 kA		
3VA1150-6E...				20 kA			
37,0 kW	6SL3210-1PH24-2...	63 A	3VL1706-2D...	30 kA			
			3VL2706-3DC...	50 kA			
			3VA1063-4ED...	16 kA			
			3VA1163-6E...	20 kA			
FSE	45,0 kW	6SL3210-1PH25-2...	80 A	3VL1708-2D...	30 kA		
				3VL2708-3DC...	50 kA		
				3VA1080-4ED...	16 kA		
				3VA1180-6E...	20 kA		
	55,0 kW	6SL3210-1PH26-2...	100 A	3VL1710-2D...	30 kA		
3VL2710-3DC...				50 kA			
3VA1010-4ED...				16 kA			
				3VA1110-6E...	20 kA		

Power Module			Circuit Breaker			Min. enclosure volume	
Frame Size	Rated Power, (LO)	Article no.	Max. rated current	Type	ICC @ 500 V	Metric	Imperial (USA)
FSF	75,0 kW	6SL3210-1PH28-0...	125 A	3VL1712-2D...	30 kA	0,6 m <sup>3</sup>	21,19 ft <sup>3</sup>
				3VL2712-3DC...	50 kA		
				3VA1112-4ED...	20 kA		
	90,0 kW	6SL3210-1PH31-0...	125 A	3VL1712-2D...	33 kA		
				3VL2712-3DC...	50 kA		
				3VA1112-4ED...	20 kA		
	110,0 kW	6SL3210-1PH31-2...	160 A	3VL1716-2D...	30 kA		
				3VL2716-3DC...	50 kA		
				3VA1116-6E...	10 kA		
	132,0 kW	6SL3210-1PH31-4...	200 A	3VA1216-6EF...	15 kA		
				3VL3720-3DC...	50 kA		
				3VA1220-6EF...	15 kA		

## 2 Protective devices for UL/CSA applications

### 2.1 UL/CSA non-semiconductor fuses

#### 2.1.1 UL/CSA non-semiconductor fuses, 200 V ... 240 V

Power Module			Fuse		Min. enclosure volume	
Frame Size	Rated Power, (LO)	Article no.	Max. rated current	SCCR @ 240 V	Metric	Imperial (USA)
FSA	0,55 kW	6SL3210-1PB13-0...	15 A	100 kA	0,03 m <sup>3</sup> 1)	1,06 ft <sup>3</sup> 1)
	0,75 kW	6SL3210-1PB13-8...				
FSB	1,1 kW	6SL3210-1PB15-5...	35 A	100 kA	0,06 m <sup>3</sup> 1)	2,12 ft <sup>3</sup> 1)
	1,5 kW	6SL3210-1PB17-4...				
	2,2 kW	6SL3210-1PB21-0...				
		6SL3211-1PB21-0...				
FSC	3,0 kW	6SL3210-1PB21-4...	50 A	100 kA	0,14 m <sup>3</sup> 1)	4,94 ft <sup>3</sup> 1)
	4,0 kW	6SL3210-1PB21-8...				
		6SL3211-1PB21-8...				
	5,5 kW	6SL3210-1PC22-2...				
		6SL3211-1PC22-2...				
	7,5 kW	6SL3210-1PC22-8...				
6SL3211-1PC22-8...						
FSD	11,0 kW	6SL3210-1PC24-2...	60 A	100 kA	0,6 m <sup>3</sup> 2)	21,19 ft <sup>3</sup> 2)
	15,0 kW	6SL3210-1PC25-4...	70 A			
	18,5 kW	6SL3210-1PC26-8...	90 A			
FSE	22,0 kW	6SL3210-1PC28-0...	110 A	100 kA		
	30,0 kW	6SL3210-1PC31-1...	150 A			
FSF	37,0 kW	6SL3210-1PC31-1...	175 A	100 kA		
	45,0 kW	6SL3210-1PC31-1...	200 A			
	55,0 kW	6SL3210-1PC31-1...	250 A			

1) No enclosure size restrictions apply when Mersen (Ferraz Shawmut) type AJT fuses are used.

2) No enclosure size restrictions apply for 65 kA SCCR rating

Note: Any non-semiconductor fuse Class J, CF, T, or L (JDDZ) from any manufacturer can be used for all Frame Sizes. Additionally, Class CC and G fuses can be used for Frame Size A to Frame Size C.

**2.1.2 UL/CSA non-semiconductor fuses, 380 V ... 480 V**

Power Module			Fuse		Min. enclosure volume	
Frame Size	Rated Power, (LO)	Article no.	Max. rated current	SCCR @ 480 V	Metric	Imperial (USA)
FSA	0,55 kW	6SL3210-1PE11-8...	10 A	100 kA	0,03 m <sup>3</sup> 1)	1,06 ft <sup>3</sup> 1)
	0,75 kW	6SL3210-1PE12-3...				
	1,1 kW	6SL3210-1PE13-2...	15 A			
	1,5 kW	6SL3210-1PE14-3...				
	2,2 kW	6SL3210-1PE16-1...				
	3,0 kW	6SL3210-1PE18-0... 6SL3211-1PE18-0...				
FSB	4,0 kW	6SL3210-1PE21-1...	35 A	100 kA	0,06 m <sup>3</sup> 1)	2,12 ft <sup>3</sup> 1)
	5,5 kW	6SL3210-1PE21-4...				
	7,5 kW	6SL3210-1PE21-8...				
		6SL3211-1PE21-8...				
FSC	11,0 kW	6SL3210-1PE22-7...	50 A	100 kA	0,14 m <sup>3</sup> 1)	4,94 ft <sup>3</sup> 1)
	15,0 kW	6SL3210-1PE23-3...				
		6SL3211-1PE23-3...				
FSD	18,5 kW	6SL3210-1PE23-8...	60 A	100 kA	0,6 m <sup>3</sup> 2)	21,19 ft <sup>3</sup> 2)
	22,0 kW	6SL3210-1PE24-5...	70 A			
	30,0 kW	6SL3210-1PE26-0...	90 A			
	37,0 kW	6SL3210-1PE27-5...	100 A			
FSE	45,0 kW	6SL3210-1PE28-0...	125 A	100 kA	0,6 m <sup>3</sup> 2)	21,19 ft <sup>3</sup> 2)
	55,0 kW	6SL3210-1PE31-1...	150 A			
FSF	75,0 kW	6SL3210-1PE31-5...	200 A	100 kA	0,6 m <sup>3</sup> 2)	21,19 ft <sup>3</sup> 2)
	90,0 kW	6SL3210-1PE31-8...	250 A			
	110,0 kW	6SL3210-1PE32-1...	300 A			
	132,0 kW	6SL3210-1PE32-5...	350 A			

1) No enclosure size restrictions apply when Mersen (Ferraz Shawmut) type AJT fuses are used.

2) No enclosure size restrictions apply for 65 kA SCCR rating

Note: Any non-semiconductor fuse Class J, CF, T, or L (JDDZ) from any manufacturer can be used for all Frame Sizes. Additionally, Class CC and G fuses can be used for Frame Size A to Frame Size C.

### 2.1.3 UL/CSA non-semiconductor fuses, 500 V ... 600 V

Power Module			Fuse		Min. enclosure volume	
Frame Size	Rated Power, (LO)	Article no.	Max. rated current	SCCR @ 600 V	Metric	Imperial (USA)
FSD	11,0 kW	6SL3210-1PH21-4...	20 A	100 kA	0,6 m <sup>3</sup> 2)	21,19 ft <sup>3</sup> 2)
	15,0 kW	6SL3210-1PH22-0...	25 A			
	18,5 kW	6SL3210-1PH22-3...	30 A			
	22,0 kW	6SL3210-1PH22-7...	35 A			
	30,0 kW	6SL3210-1PH23-5...	50 A			
	37,0 kW	6SL3210-1PH24-2...	60 A			
FSE	45,0 kW	6SL3210-1PH25-2...	80 A	100 kA	0,6 m <sup>3</sup> 2)	21,19 ft <sup>3</sup> 2)
	55,0 kW	6SL3210-1PH26-2...				
FSF	75,0 kW	6SL3210-1PH28-0...	110 A	100 kA	0,6 m <sup>3</sup> 2)	21,19 ft <sup>3</sup> 2)
	90,0 kW	6SL3210-1PH31-0...	150 A			
	110,0 kW	6SL3210-1PH31-2...	150 A			
	132,0 kW	6SL3210-1PH31-4...	200 A			

2) No enclosure size restrictions apply for 65 kA SCCR rating

Note: Any non-semiconductor fuse Class J, CF, T, or L (JDDZ) from any manufacturer can be used for all Frame Sizes.

## 2.2 UL/CSA Type E Combination Motor Controllers

### 2.2.1 UL/CSA Type E Combination Motor Controllers, 200 V ... 240 V

Power Module			CMC				Min. enclosure volume		
Frame Size	Rated Power, (LO)	Article no.	Max. rated current	Rated power @		Article no.	SCCR @ 240 V	Metric	Imperial (USA)
				1 AC 230 V	3 AC 230 V				
FSA	0,55 kW	6SL3210-1PB13-0...	16 A	2 HP	5 HP	3RV1031-4AA.. 3RV2011-4AA.. 3RV2021-4AA..	65 kA	0,03 m <sup>3</sup>	1,06 ft <sup>3</sup>
	0,75 kW	6SL3210-1PB13-8...							
		6SL3211-1PB13-8...							
FSB	1,1 kW	6SL3210-1PB15-5...	32 A	5 HP	10 HP	3RV1031-4EA.. 3RV2021-4EA.. 3RV2031-4EA..	65 kA 50 kA 65 kA	0,06 m <sup>3</sup>	2,12 ft <sup>3</sup>
	1,5 kW	6SL3210-1PB17-4...							
	2,2 kW	6SL3210-1PB21-0...							
		6SL3211-1PB21-0...							
FSC	3,0 kW	6SL3210-1PB21-4...	50 A	10 HP	20 HP	3RV1031-4HA.. 3RV1041-4HA..	65 kA	0.14m <sup>3</sup>	4,49 ft <sup>3</sup>
	4,0 kW	6SL3210-1PB21-8...							
		6SL3211-1PB21-8...							
	5,5 kW	6SL3210-1PC22-2...							
		6SL3211-1PC22-2...							
7,5 kW	6SL3210-1PC22-8... 6SL3211-1PC22-8...								
FSD	11,0 kW	6SL3210-1PC24-2...	50 A	---	25 HP	3RV1031-4HA.. 3RV1041-4JA.. 3RV1042-4JA.. 3RV2032-4JA.. 3RV2031-4JA..	65 kA	0,6 m <sup>3</sup>	21,19 ft <sup>3</sup>
			63 A						
			63 A						
			65 A						
			65 A						
	15,0 kW	6SL3210-1PC25-4...	73 A	---	30 HP	3RV2032-4KA.. 3RV2031-4KA.. 3RV1041-4KA.. 3RV1042-4KA..			
			73 A						
			75 A						
			75 A						
	18,5 kW	6SL3210-1PC26-8...	90 A	---	40 HP	3RV1041-4LA.. 3RV1042-4LA.. 3RV2031-4KA.. 3RV2032-4KA..			
			90 A						
			73 A						
			73 A						
			73 A						

3RV20 motor starter protectors are approved in accordance with UL 508/UL60947-4-1 in combination with the terminal blocks listed below:  
 - 3RV2011 and 3RV2021 with 3RV2928-1H4                      - 3RV2031 with 3RV2938-1K4                      - 3RV2032 with 3RV2938-1K

3RV104 motor starter protectors are approved in accordance with UL 508/UL60947-4-1 in combination with the 3RT1946-4Ga07 terminal blocks.



**2.2.2 UL/CSA Type E Combination Motor Controllers, 380 V ... 480 V**

Power Module			CMC				Min. enclosure volume	
Frame Size	Rated Power, (LO)	Article no.	Max. rated current	Rated power @ 3 AC 460 V	Article no.	SCCR @ 480 Y / 277	Metric	Imperial (USA)
FSA	0,55 kW	6SL3210-1PE11-8...	10 A	5HP	3RV2011-1JA..	65 kA	0,03 m <sup>3</sup>	1,06 ft <sup>3</sup>
	0,75 kW	6SL3210-1PE12-3...			3RV2021-1JA..			
	1,1 kW	6SL3210-1PE13-2...	16 A	10 HP	3RV1031-4AA..	65 kA		
	1,5 kW	6SL3210-1PE14-3...			3RV2011-4AA..			
	2,2 kW	6SL3210-1PE16-1...			3RV2021-4AA..			
	3,0 kW	6SL3210-1PE18-0... 6SL3211-1PE18-0...						
FSB	4,0 kW	6SL3210-1PE21-1...	32 A	25 HP 20 HP 25 HP	3RV1031-4EA..	65 kA	0,06 m <sup>3</sup>	2,12 ft <sup>3</sup>
	5,5 kW	6SL3210-1PE21-4...			3RV2021-4EA..	50 kA		
	7,5 kW	6SL3210-1PE21-8...			3RV2031-4EA..	65 kA		
		6SL3211-1PE21-8...						
FSC	11,0 kW	6SL3210-1PE22-7...	50 A	40 HP	3RV1031-4HA..	65 kA	0,14 m <sup>3</sup>	4,49 ft <sup>3</sup>
	15,0 kW	6SL3210-1PE23-3...			3RV1041-4HA..			
		6SL3211-1PE23-3...						
FSD	18,5 kW	6SL3210-1PE23-8...	63 A	50 HP	3RV1041-4JA..	65 kA	0,6 m <sup>3</sup>	21,19 ft <sup>3</sup>
			65 A	50 HP	3RV1042-4JA..			
	22,0 kW	6SL3210-1PE24-5...	75 A	60 HP	3RV2031-4JA..	20 kA		
			73 A	60 HP	3RV2032-4JA..	30 kA		
					3RV1041-4KA..	65 kA		
			3RV1042-4KA..					
	30,0 kW	6SL3210-1PE26-0...	90 A	75 HP	3RV2031-4KA..	20 kA		
					3RV2032-4KA..	30 kA		
	37,0 kW	6SL3210-1PE27-5...	100 A	75 HP	3RV1041-4LA..	65 kA		
					3RV1042-4LA..			
37,0 kW	6SL3210-1PE27-5...	100 A	75 HP	3RV1041-4MA..	65 kA			
				3RV1042-4MA..				

3RV20 motor starter protectors are approved in accordance with UL 508/UL60947-4-1 in combination with the terminal blocks listed below:

- 3RV2011 and 3RV2021 with 3RV2928-1H4                      - 3RV2031 with 3RV2938-1K4                      - 3RV2032 with 3RV2938-1K

3RV104 motor starter protectors are approved in accordance with UL 508/UL60947-4-1 in combination with the 3RT1946-4Ga07 terminal blocks.

### 2.2.3 UL/CSA Type E Combination Motor Controllers, 500 V ... 600 V

Power Module			CMC				Min. enclosure volume	
Frame Size	Rated Power, (LO)	Article no.	Max. rated current	Rated power @ 3 AC 575 V	Article no.	SCCR @ 600 Y / 347 V	Metric	Imperial (USA)
FSD	11,0 kW	6SL3210-1PH21-4...	20 A	20 HP	3RV1031-4BA..	25 kA	0,6 m³	21,19 ft³
					3RV2031-4BA..			
					3RV2032-4BA..			
	15,0 kW	6SL3210-1PH22-0...	32 A	30 HP	3RV1031-4EA..	25 kA		
					3RV2031-4EA..			
					3RV2032-4EA..			
	18,5 kW	6SL3210-1PH22-3...	32 A	30 HP	3RV1031-4EA..	25 kA		
					3RV2031-4EA..			
					3RV2032-4EA..			
	22,0 kW	6SL3210-1PH22-7...	40 A	40 HP	3RV1031-4FA..	25 kA		
					3RV1041-4FA..	30 kA		
					3RV1042-4FA..	22 kA		
					3RV2031-4UA..			
	30,0 kW	6SL3210-1PH23-5...	50 A	50 HP	3RV1031-4HA..	25 kA		
					3RV1041-4HA..	30 kA		
			52 A	50 HP	3RV2031-4WA..	22 kA		
					3RV2032-4WA..			
	37,0 kW	6SL3210-1PH24-2...	50 A	60 HP	3RV1031-4HA..	25 kA		
52 A			3RV2031-4WA..		22 kA			
			3RV2032-4WA..					
63 A			3RV1041-4JA..		30 kA			
	3RV1042-4JA..							

3RV20 motor starter protectors are approved in accordance with UL 508/UL60947-4-1 in combination with the terminal blocks listed below:

- 3RV2031 with 3RV2938-1K4

- 3RV2032 with 3RV2938-1K

3RV104 motor starter protectors are approved in accordance with UL 508/UL60947-4-1 in combination with the 3RT1946-4Ga07 terminal blocks.

## 2.3 UL/CSA Circuit Breakers

### 2.3.1 UL/CSA Circuit Breakers, 200 V ... 240 V

Power Module			Circuit Breaker				Min. enclosure volume	
Frame Size	Rated Power, (LO)	Article no.	Max. rated current	UL/CSA Type <sup>1)</sup>	Article no. Example (European) <sup>2)</sup>	SCCR @ 240 V	Metric	Imperial (USA)
FSA	0,55 kW	6SL3210-1PB13-0...	15 A	3RV1742	3RV1742-5BD..	65 kA	0,03 m <sup>3</sup>	1,06 ft <sup>3</sup>
	0,75 kW	6SL3210-1PB13-8...		3RV2711	3RV2711-4AD..			
		6SL3211-1PB13-8...		LGG	-			
FSB	1,1 kW	6SL3210-1PB15-5...	35 A	LGG	-	65 kA	0,06 m <sup>3</sup>	2,12 ft <sup>3</sup>
	1,5 kW	6SL3210-1PB17-4...		CED6	-			
	2,2 kW	6SL3210-1PB21-0...		NCGA	3VL1135-1KM..			
		6SL3211-1PB21-0...		HCGA	3VL1135-2KM..			
FSC	3,0 kW	6SL3210-1PB21-4...	50 A	LGG	-	65 kA	0,14m <sup>3</sup>	4,49 ft <sup>3</sup>
	4,0 kW	6SL3210-1PB21-8...		CED6	-			
		6SL3211-1PB21-8...		NCGA	3VL1105-1KM..			
	5,5 kW	6SL3210-1PC22-2...		HCGA	3VL1105-2KM..			
		6SL3211-1PC22-2...		3RV1742	3RV1742-5JD..			
	7,5 kW	6SL3210-1PC22-8...						
6SL3211-1PC22-8...								
FSD	11,0 kW	6SL3210-1PC24-2...	60 A	LGG	-	65 kA	0,6 m <sup>3</sup>	21,19 ft <sup>3</sup>
				NCGA	3VL1106-1KM..	65 kA		
				HCGA	3VL1106-2KM..	65 kA		
				NDGB	3VL2506-1KN..	65 kA		
				HDGB	3VL2506-2KN..	65 kA		
				LDGB	3VL2506-3KN..	65 kA		
				CED6	-	100 kA		

1) NCGA & HCGA are UL listed 3VL11 series (Siemens type VL150x UL) circuit breakers shown in the European circuit breaker catalog LV 16. Other Frame Sizes alike.

2) For more breaker article numbers, please refer to the European circuit breaker catalog LV 16.

Power Module			Circuit Breaker				Min. enclosure volume	
Frame Size	Rated Power, (LO)	Article no.	Max. rated current	UL/CSA Type <sup>1)</sup>	Article no. Example (European) <sup>2)</sup>	SCCR @ 240 V	Metric	Imperial (USA)
FSD	15,0 kW	6SL3210-1PC25-4...	70 A	LGG	-	65 kA	0,6 m <sup>3</sup>	21,19 ft <sup>3</sup>
				NCGA	3VL1107-1KM..	65 kA		
				HCGA	3VL1107-2KM..	65 kA		
				NDGB	3VL2507-1KN..	65 kA		
				HDGB	3VL2507-2KN..	65 kA		
				LDGB	3VL2507-3KN..	65 kA		
				CED6	-	100 kA		
				FXD6-A	-	65 kA		
				FD6-A	-	65 kA		
				HFD6	-	100 kA		
				HFXD6	-	100 kA		
				HHFD6	-	100 kA		
	HHFXD6	-	100 kA					
	CFD6	-	100 kA					
	18,5 kW	6SL3210-1PC26-8...	90 A	LGG	-	65 kA		
				NCGA	3VL1191-1KM..	65 kA		
				HCGA	3VL1191-2KM..	65 kA		
				NDGB	3VL2591-1KN..	65 kA		
				HDGB	3VL2591-2KN..	65 kA		
				LDGB	3VL2591-3KN..	65 kA		
				CED6	-	100 kA		
				FXD6-A	-	65 kA		
				FD6-A	-	65 kA		
				HFD6	-	100 kA		
HFXD6				-	100 kA			
HHFD6				-	100 kA			
HHFXD6	-	100 kA						
CFD6	-	100 kA						

1) NCGA & HCGA are UL listed 3VL11 series (Siemens type VL150x UL) circuit breakers shown in the European circuit breaker catalog LV 16. Other Frame Sizes alike.

2) For more breaker article numbers, please refer to the European circuit breaker catalog LV 16.

Power Module			Circuit Breaker				Min. enclosure volume	
Frame Size	Rated Power, (LO)	Article no.	Max. rated current	UL/CSA Type <sup>1)</sup>	Article no. Example (European) <sup>2)</sup>	SCCR @ 240 V	Metric	Imperial (USA)
FSE	22,0 kW	6SL3210-1PC28-0...	100 A	NCGA	3VL1110-1KM..	65 kA	0,6 m <sup>3</sup>	21,19 ft <sup>3</sup>
				HCGA	3VL1110-2KM..	65 kA		
			110 A	NDGB	3VL2511-1KN..	65 kA		
				HDGB	3VL2511-2KN..	65 kA		
				LDGB	3VL2511-3KN..	65 kA		
				LGG	-	65 kA		
				NFGB	3VL3511-1KN..	65 kA		
				HFGB	3VL3511-2KN..	65 kA		
				LFGB	3VL3511-3KN..	65 kA		
				CED6	-	100 kA		
				FXD6-A	-	65 kA		
				FD6-A	-	65 kA		
				HFD6	-	100 kA		
				HFXD6	-	100 kA		
	HHFD6	-	100 kA					
	HHFXD6	-	100 kA					
	CFD6	-	100 kA					
	30,0 kW	6SL3210-1PC31-1...	150 A	NCGA	3VL1115-1KM..	65 kA		
				HCGA	3VL1115-2KM..	65 kA		
				NDGB	3VL2515-1KN..	65 kA		
				HDGB	3VL2515-2KN..	65 kA		
				LDGB	3VL2515-3KN..	65 kA		
				NFGB	3VL3515-1KN..	65 kA		
				HFGB	3VL3515-2KN..	65 kA		
				LFGB	3VL3515-3KN..	65 kA		
				FXD6-A	-	65 kA		
				FD6-A	-	65 kA		
HFD6				-	100 kA			
HFXD6				-	100 kA			
HHFD6				-	100 kA			

1) NCGA & HCGA are UL listed 3VL11 series (Siemens type VL150x UL) circuit breakers shown in the European circuit breaker catalog LV 16. Other Frame Sizes alike.

2) For more breaker article numbers, please refer to the European circuit breaker catalog LV 16.

Power Module			Circuit Breaker				Min. enclosure volume	
Frame Size	Rated Power, (LO)	Article no.	Max. rated current	UL/CSA Type <sup>1)</sup>	Article no. Example (European) <sup>2)</sup>	SCCR @ 240 V	Metric	Imperial (USA)
FSE	30,0 kW	6SL3210-1PC31-1...	150 A	HHFXD6	-	100 kA	0,6 m <sup>3</sup>	21,9 ft <sup>3</sup>
				CFD6	-	100 kA		
FSF	37,0 kW	6SL3210-1PC31-1...	175 A	NFGB	3VL3517-1KN..	65 kA	0,6 m <sup>3</sup>	21,19 ft <sup>3</sup>
				HFGB	3VL3517-2KN..	65 kA		
				LFGB	3VL3517-3KN..	65 kA		
				FXD6-A	-	65 kA		
				FD6-A	-	65 kA		
				HFD6	-	100 kA		
				HFXD6	-	100 kA		
				HHFD6	-	100 kA		
				HHFXD6	-	100 kA		
	CFD6	-	100 kA					
	45,0 kW	6SL3210-1PC31-1...	200 A	NFGB	3VL3520-1KN..	65 kA		
				HFGB	3VL3520-2KN..	65 kA		
				LFGB	3VL3520-3KN..	65 kA		
				FXD6-A	-	65 kA		
				FD6-A	-	65 kA		
				HFD6	-	100 kA		
				HFXD6	-	100 kA		
				HHFD6	-	100 kA		
				HHFXD6	-	100 kA		
CFD6				-	100 kA			
JXD6-A	-	65 kA						
JD6-A	-	65 kA						
HJD6-A	-	65 kA						
HJXD6-A	-	65 kA						
HHJD6	-	100 kA						
HHJXD6	-	100 kA						
CJD6-A	-	100 kA						

1) NCGA & HCGA are UL listed 3VL11 series (Siemens type VL150x UL) circuit breakers shown in the European circuit breaker catalog LV 16. Other Frame Sizes alike.

2) For more breaker article numbers, please refer to the European circuit breaker catalog LV 16.

Power Module			Circuit Breaker				Min. enclosure volume	
Frame Size	Rated Power, (LO)	Article no.	Max. rated current	UL/CSA Type <sup>1)</sup>	Article no. Example (European) <sup>2)</sup>	SCCR @ 240 V	Metric	Imperial (USA)
FSF	55,0 kW	6SL3210-1PC31-1...	250 A	NFGB	3VL3525-1KN..	65 kA	0,6 m <sup>3</sup>	21,19 ft <sup>3</sup>
				HFGB	3VL3525-2KN..	65 kA		
				LFGB	3VL3525-3KN..	65 kA		
				FXD6-A	-	65 kA		
				FD6-A	-	65 kA		
				HFD6	-	100 kA		
				HFXD6	-	100 kA		
				HHFD6	-	100 kA		
				HHFXD6	-	100 kA		
				CFD6	-	100 kA		
				JXD6-A	-	65 kA		
				JD6-A	-	65 kA		
				HJD6-A	-	65 kA		
				HJXD6-A	-	65 kA		
				HHJD6	-	100 kA		
				HHJXD6	-	100 kA		
CJD6-A	-	100 kA						

1) NCGA & HCGA are UL listed 3VL11 series (Siemens type VL150x UL) circuit breakers shown in the European circuit breaker catalog LV 16. Other Frame Sizes alike."

2) For more breaker article numbers, please refer to the European circuit breaker catalog LV 16.

**2.3.2 UL/CS Circuit Breakers, 380 V ... 480 V**

Power Module			Circuit Breaker					Min. enclosure volume	
Frame Size	Rated Power, (LO)	Article no.	Max. rated current	UL/CSA Type <sup>1)</sup>	Article no. Example (European) <sup>2)</sup>	SCCR @		Metric	Imperial (USA)
						480 V	480 Y / 277 V		
FSA	0,55 kW	6SL3210-1PE11-8...	15 A					0,03 m <sup>3</sup>	1,06 ft <sup>3</sup>
	0,75 kW	6SL3210-1PE12-3...		LGG	-	65 kA	---		
	1,1 kW	6SL3210-1PE13-2...		CED6	-	65 kA	---		
	1,5 kW	6SL3210-1PE14-3...		3RV1742	3RV1742-5BD..	65 kA	---		
	2,2 kW	6SL3210-1PE16-1...		3RV2711	3RV2711-4AD..	---	65 kA		
	3,0 kW	6SL3210-1PE18-0... 6SL3211-1PE18-0...							
FSB	4,0 kW	6SL3210-1PE21-1...	35 A	LGG	-	65 kA	---	0,06 m <sup>3</sup>	2,12 ft <sup>3</sup>
	5,5 kW	6SL3210-1PE21-4...		CED6	-	65 kA	---		
	7,5 kW	6SL3210-1PE21-8...		NCGA	3VL1135-1KM..	35 kA	---		
		6SL3211-1PE21-8...		HCGA	3VL1135-2KM..	65 kA	---		
FSC	11,0 kW	6SL3210-1PE22-7...	50 A	LGG	-	65 kA	---	0,14 m <sup>3</sup>	4,49 ft <sup>3</sup>
		6SL3210-1PE23-3...		CED6	-	65 kA	---		
	15,0 kW	6SL3211-1PE23-3...		NCGA	3VL1105-1KM..	35 kA	---		
				HCGA	3VL1105-2KM..	65 kA	---		
				3RV1742	3RV1742-5JD..	---	65 kA		
FSD	18,5 kW	6SL3210-1PE23-8...	60 A	3RV1742	3RV1742-5LD..	---	65 kA	0,6 m <sup>3</sup>	21,19 ft <sup>3</sup>
				LGG	-	65 kA	---		
				NCGA	3VL1106-1KM..	35 kA	---		
				HCGA	3VL1106-2KM..	65 kA	---		
				NDGB	3VL2506-1KN..	35 kA	---		
				HDGB	3VL2506-2KN..	65 kA	---		
				LDGB	3VL2506-3KN..	65 kA	---		
CED6	-	100 kA	---						

1) NCGA & HCGA are UL listed 3VL11 series (Siemens type VL150x UL) circuit breakers shown in the European circuit breaker catalog LV 16. Other Frame Sizes alike.

2) For more breaker article numbers, please refer to the European circuit breaker catalog LV 16.



Power Module			Circuit Breaker				Min. enclosure volume		
Frame Size	Rated Power, (LO)	Article no.	Max. rated current	UL/CSA Type <sup>1)</sup>	Article no. Example (European) <sup>2)</sup>	SCCR @		Metric	Imperial (USA)
						480 V	480 Y / 277 V		
FSD	22,0 kW	6SL3210-1PE24-5...	70 A	3RV1742	3RV1742-5QD..	---	65 kA	0,6 m <sup>3</sup>	21,19 ft <sup>3</sup>
				LGG	-	65 kA	---		
				NCGA	3VL1107-1KM..	35 kA	---		
				HCGA	3VL1107-2KM..	65 kA	---		
				NDGB	3VL2507-1KN..	35 kA	---		
				HDGB	3VL2507-2KN..	65 kA	---		
				LDGB	3VL2507-3KN..	65 kA	---		
				CED6	-	100 kA	---		
				FXD6-A	-	35 kA	---		
				FD6-A	-	35 kA	---		
	HFD6	-	65 kA	---					
	HFXD6	-	65 kA	---					
	HHFD6	-	100 kA	---					
	HHFXD6	-	100 kA	---					
	CFD6	-	100 kA	---					
	30,0 kW	6SL3210-1PE26-0...	90 A	LGG	-	65 kA	---		
				NCGA	3VL1191-1KM..	35 kA	---		
				HCGA	3VL1191-2KM..	65 kA	---		
				NDGB	3VL2591-1KN..	35 kA	---		
				HDGB	3VL2591-2KN..	65 kA	---		
LDGB				3VL2591-3KN..	65 kA	---			
CED6				-	100 kA	---			
FXD6-A				-	35 kA	---			
FD6-A				-	35 kA	---			
HFD6				-	65 kA	---			
HFXD6	-	65 kA	---						
HHFD6	-	100 kA	---						
HHFXD6	-	100 kA	---						
CFD6	-	100 kA	---						

1) NCGA & HCGA are UL listed 3VL11 series (Siemens type VL150x UL) circuit breakers shown in the European circuit breaker catalog LV 16. Other Frame Sizes alike.

2) For more breaker article numbers, please refer to the European circuit breaker catalog LV 16.

Power Module			Circuit Breaker				Min. enclosure volume		
Frame Size	Rated Power, (LO)	Article no.	Max. rated current	UL/CSA Type <sup>1)</sup>	Article no. Example (European) <sup>2)</sup>	SCCR @		Metric	Imperial (USA)
						480 V	480 Y / 277 V		
FSD	37,0 kW	6SL3210-1PE27-5...	100 A	LGG	-	65 kA	---	0,6 m <sup>3</sup>	21,19 ft <sup>3</sup>
				NCGA	3VL1110-1KM..	35 kA	---		
				HCGA	3VL1110-2KM..	65 kA	---		
				NDGB	3VL2510-1KN..	35 kA	---		
				HDGB	3VL2510-2KN..	65 kA	---		
				LDGB	3VL2510-3KN..	65 kA	---		
				NFGB	3VL3510-1KN..	35 kA	---		
				HFGB	3VL3510-2KN..	65 kA	---		
				LFGB	3VL3510-3KN..	65 kA	---		
				CED6	-	100 kA	---		
				FXD6-A	-	35 kA	---		
				FD6-A	-	35 kA	---		
				HFD6	-	65 kA	---		
				HFXD6	-	65 kA	---		
				HHFD6	-	100 kA	---		
HHFXD6	-	100 kA	---						
CFD6	-	100 kA	---						
FSE	45,0 kW	6SL3210-1PE28-0...	125 A	LGG	-	65 kA	---	0,6 m <sup>3</sup>	21,19 ft <sup>3</sup>
				NCGA	3VL1112-1KM..	35 kA	---		
				HCGA	3VL1112-2KM..	65 kA	---		
				NDGB	3VL2512-1KN..	35 kA	---		
				HDGB	3VL2512-2KN..	65 kA	---		
				LDGB	3VL2512-3KN..	65 kA	---		
				NFGB	3VL3512-1KN..	35 kA	---		
				HFGB	3VL3512-2KN..	65 kA	---		
				LFGB	3VL3512-3KN..	65 kA	---		
				FXD6-A	-	35 kA	---		

1) NCGA & HCGA are UL listed 3VL11 series (Siemens type VL150x UL) circuit breakers shown in the European circuit breaker catalog LV 16. Other Frame Sizes alike.

2) For more breaker article numbers, please refer to the European circuit breaker catalog LV 16.

Power Module			Circuit Breaker				Min. enclosure volume		
Frame Size	Rated Power, (LO)	Article no.	Max. rated current	UL/CSA Type <sup>1)</sup>	Article no. Example (European) <sup>2)</sup>	SCCR @		Metric	Imperial (USA)
						480 V	480 Y / 277 V		
FSE	45,0 kW	6SL3210-1PE28-0...	125 A	FD6-A	-	35 kA	---	0,6 m <sup>3</sup>	21,19 ft <sup>3</sup>
				HFD6	-	65 kA	---		
				HFXD6	-	65 kA	---		
				HHFD6	-	100 kA	---		
				HHFXD6	-	100 kA	---		
				CFD6	-	100 kA	---		
	55,0 kW	6SL3210-1PE31-1...	150 A	NCGA	3VL1115-1KM..	35 kA	---		
				HCGA	3VL1115-2KM..	65 kA	---		
				NDGB	3VL2515-1KN..	35 kA	---		
				HDGB	3VL2515-2KN..	65 kA	---		
				LDGB	3VL2515-3KN..	65 kA	---		
				NFGB	3VL3515-1KN..	35 kA	---		
				HFGB	3VL3515-2KN..	65 kA	---		
				LFGB	3VL3515-3KN..	65 kA	---		
				FXD6-A	-	35 kA	---		
				FD6-A	-	35 kA	---		
				HFD6	-	65 kA	---		
				HFXD6	-	65 kA	---		
				HHFD6	-	100 kA	---		
HHFXD6	-	100 kA	---						
CFD6	-	100 kA	---						
FSF	75,0 kW	6SL3210-1PE31-5...	200 A	NFGB	3VL3520-1KN..	35 kA	---		
				HFGB	3VL3520-2KN..	65 kA	---		
				LFGB	3VL3520-3KN..	65 kA	---		
				FXD6-A	-	35 kA	---		
				FD6-A	-	35 kA	---		
				HFD6	-	65 kA	---		
				HFXD6	-	65 kA	---		
				HHFD6	-	100 kA	---		
HHFXD6	-	100 kA	---						

1) NCGA & HCGA are UL listed 3VL11 series (Siemens type VL150x UL) circuit breakers shown in the European circuit breaker catalog LV 16. Other Frame Sizes alike.

2) For more breaker article numbers, please refer to the European circuit breaker catalog LV 16.

Power Module			Circuit Breaker				Min. enclosure volume		
Frame Size	Rated Power, (LO)	Article no.	Max. rated current	UL/CSA Type <sup>1)</sup>	Article no. Example (European) <sup>2)</sup>	SCCR @		Metric	Imperial (USA)
						480 V	480 Y / 277 V		
FSF	75,0 kW	6SL3210-1PE31-5...	200 A	CFD6	-	100 kA	---	0,6 m <sup>3</sup>	21,19 ft <sup>3</sup>
				JXD6-A	-	35 kA	---		
				JD6-A	-	35 kA	---		
				HJD6-A	-	65 kA	---		
				HJXD6-A	-	65 kA	---		
				HHJD6	-	100 kA	---		
				HHJXD6	-	100 kA	---		
				CJD6-A	-	100 kA	---		
	90,0 kW	6SL3210-1PE31-8...	250 A	NFGB	3VL3525-1KN..	35 kA	---		
				HFGB	3VL3525-2KN..	65 kA	---		
				LFGB	3VL3525-3KN..	65 kA	---		
				FXD6-A	-	35 kA	---		
				FD6-A	-	35 kA	---		
				HFD6	-	65 kA	---		
				HFXD6	-	65 kA	---		
				HHFD6	-	100 kA	---		
				HHFXD6	-	100 kA	---		
				CFD6	-	100 kA	---		
				JXD6-A	-	35 kA	---		
				JD6-A	-	35 kA	---		
				HJD6-A	-	65 kA	---		
				HJXD6-A	-	65 kA	---		
	110,0 kW	6SL3210-1PE32-1...	300 A	NJGA	3VL4130-1KN..	35 kA	---		
				HJGA	3VL4130-2KN..	65 kA	---		
				LJGA	3VL4130-3KN..	65 kA	---		
				JXD6-A	-	35 kA	---		
				JD6-A	-	35 kA	---		

1) NCGA & HCGA are UL listed 3VL11 series (Siemens type VL150x UL) circuit breakers shown in the European circuit breaker catalog LV 16. Other Frame Sizes alike.

2) For more breaker article numbers, please refer to the European circuit breaker catalog LV 16.

Power Module			Circuit Breaker				Min. enclosure volume		
Frame Size	Rated Power, (LO)	Article no.	Max. rated current	UL/CSA Type <sup>1)</sup>	Article no. Example (European) <sup>2)</sup>	SCCR @		Metric	Imperial (USA)
						480 V	480 Y / 277 V		
FSF	110,0 kW	6SL3210-1PE32-1...	300 A	HJD6	-	65 kA	---	0,6 m <sup>3</sup>	21,19 ft <sup>3</sup>
				HJXD6	-	65 kA	---		
				HHJD6	-	100 kA	---		
				HHJXD6	-	100 kA	---		
				CJD6-A	-	100 kA	---		
				LXD6-A	-	35 kA	---		
				LD6-A	-	35 kA	---		
				HLD6-A	-	65 kA	---		
				HLXD6-A	-	65 kA	---		
				HHL6	-	65 kA	---		
				HHLXD6	-	65 kA	---		
				CLD6-A	-	100 kA	---		
	132,0 kW	6SL3210-1PE32-5...	350 A	NJGA	3VL4135-1KN..	35 kA	---		
				HJGA	3VL4135-2KN..	65 kA	---		
				LJGA	3VL4135-3KN..	65 kA	---		
				JXD6-A	-	35 kA	---		
				JD6-A	-	35 kA	---		
				HJD6	-	65 kA	---		
				HJXD6	-	65 kA	---		
				HHJD6	-	100 kA	---		
				HHJXD6	-	100 kA	---		
				CJD6-A	-	100 kA	---		
LXD6-A	-	35 kA	---						
LD6-A	-	35 kA	---						
HLD6-A	-	65 kA	---						
HLXD6-A	-	65 kA	---						
HHL6	-	65 kA	---						
HHLXD6	-	65 kA	---						
CLD6-A	-	100 kA	---						

1) NCGA & HCGA are UL listed 3VL11 series (Siemens type VL150x UL) circuit breakers shown in the European circuit breaker catalog LV 16. Other Frame Sizes alike.

2) For more breaker article numbers, please refer to the European circuit breaker catalog LV 16.

**2.3.3 UL/CS Circuit Breakers, 500 V ... 600 V**

Power Module			Circuit Breaker					Min. enclosure volume		
Frame Size	Rated Power, (LO)	Article no.	Max. rated current	UL/CSA Type <sup>1)</sup>	Article no. Example (European) <sup>2)</sup>	SCCR @		Metric	Imperial (USA)	
						600 V	600 Y / 347 V			
FSD	11,0 kW	6SL3210-1PH21-4...	20 A	3RV1742	3RV1742-5CD..	---	20 kA	0,6 m <sup>3</sup>	21,19 ft <sup>3</sup>	
				LGG	-	---	25 kA			
				NCGA	3VL1102-1KM..	---	10 kA			
				HCGA	3VL1102-2KM..	---	10 kA			
				CED6	-	100 kA	---			
	15,0 kW	6SL3210-1PH22-0...	30A	25 A	3RV1742	3RV1742-5DD..	---			20 kA
				LGG	-	---	25 kA			
				NCGA	3VL1103-1KM..	---	10 kA			
				HCGA	3VL1103-2KM..	---	10 kA			
				CED6	-	100 kA	---			
	18,5 kW	6SL3210-1PH22-3...	30 A	3RV1742	3RV1742-5ED..	---	20 kA			
				LGG	-	---	25 kA			
				NCGA	3VL1103-1KM..	---	10 kA			
				HCGA	3VL1103-2KM..	---	10 kA			
				CED6	-	100 kA	---			
	22,0 kW	6SL3210-1PH22-7...	40 A	3RV1742	3RV1742-5GD..	---	20 kA			
				LGG	-	---	25 kA			
				NCGA	3VL1104-1KM..	---	10 kA			
				HCGA	3VL1104-2KM..	---	10 kA			
				CED6	-	100 kA	---			
30,0 kW	6SL3210-1PH23-5...	50 A	3RV1742	3RV1742-5JD..	---	20 kA				
			LGG	-	---	25 kA				
			NCGA	3VL1105-1KM..	---	10 kA				
			HCGA	3VL1105-2KM..	---	10 kA				
			NDGB	3VL2505-1KN..	---	18 kA				
			HDGB	3VL2505-2KN..	---	18 kA				
			LDGB	3VL2505-2KN..	---	18 kA				
			CED6	-	100 kA	---				

1) NCGA & HCGA are UL listed 3VL11 series (Siemens type VL150x UL) circuit breakers shown in the European circuit breaker catalog LV 16. Other Frame Sizes alike.

2) For more breaker article numbers, please refer to the European circuit breaker catalog LV 16.

Power Module			Circuit Breaker				Min. enclosure volume		
Frame Size	Rated Power, (LO)	Article no.	Max. rated current	UL/CSA Type <sup>1)</sup>	Article no. Example (European) <sup>2)</sup>	SCCR @		Metric	Imperial (USA)
						600 V	600 Y / 347 V		
FSD	37,0 kW	6SL3210-1PH24-2...	60 A	3RV1742	3RV1742-5LD..	---	20 kA	0,6 m <sup>3</sup>	21,19 ft <sup>3</sup>
				LGG	-	---	25 kA		
				NCGA	3VL1106-1KM..	---	10 kA		
				HCGA	3VL1106-2KM..	---	10 kA		
				NDGB	3VL2506-1KN..	---	18 kA		
				HDGB	3VL2505-2KN..	---	18 kA		
				LDGB	3VL2506-3KN..	---	18 kA		
				CED6	-	100 kA	---		
FSE	45,0 kW	6SL3210-1PH25-2...	80 A	LGG	-	---	25 kA		
				NCGA	3VL1108-1KM..	---	10 kA		
				HCGA	3VL1108-2KM..	---	10 kA		
				NDGB	3VL2508-1KN..	---	18 kA		
				HDGB	3VL2508-2KN..	---	18 kA		
				LDGB	3VL2508-3KN..	---	18 kA		
				CED6	-	100 kA	---		
				FXD6-A	-	22 kA	---		
	FD6-A	-	22 kA	---					
	HFD6	-	25 kA	---					
	HFXD6	-	25 kA	---					
	HHFD6	-	25 kA	---					
	HHFXD6	-	25 kA	---					
	CFD6	-	100 kA	---					
55,0 kW	6SL3210-1PH26-2...	90 A	LGG	-	---	25 kA			
			NCGA	3VL1191-1KM..	---	10 kA			
			HCGA	3VL1191-2KM..	---	10 kA			
			NDGB	3VL2591-1KN..	---	18 kA			
			HDGB	3VL2591-2KN..	---	18 kA			
			LDGB	3VL2591-3KN..	---	18 kA			
			CED6	-	100 kA	---			

1) NCGA & HCGA are UL listed 3VL11 series (Siemens type VL150x UL) circuit breakers shown in the European circuit breaker catalog LV 16. Other Frame Sizes alike.

2) For more breaker article numbers, please refer to the European circuit breaker catalog LV 16.

Power Module			Circuit Breaker				Min. enclosure volume		
Frame Size	Rated Power, (LO)	Article no.	Max. rated current	UL/CSA Type <sup>1)</sup>	Article no. Example (European) <sup>2)</sup>	SCCR @		Metric	Imperial (USA)
						600 V	600 Y / 347 V		
FSE	55,0 kW	6SL3210-1PH26-2...	90 A	FXD6-A	-	22 kA	---	0,6 m <sup>3</sup>	21,19 ft <sup>3</sup>
				FD6-A	-	22 kA	---		
				HFD6	-	25 kA	---		
				HFXD6	-	25 kA	---		
				HHFD6	-	25 kA	---		
				HHFXD6	-	25 kA	---		
				CFD6	-	100 kA	---		
FSF	75,0 kW	6SL3210-1PH28-0...	100 A	NCGA	3VL1110-1KM..	---	10 kA		
				HCGA	3VL1110-2KM..	---	10 kA		
			110 A	NDGB	3VL2511-1KN..	---	18 kA		
				HDGB	3VL2511-2KN..	---	18 kA		
				LDGB	3VL2511-3KN..	---	18 kA		
				LGG	-	---	25 kA		
				NFGB	3VL3511-1KN..	---	18 kA		
				HFGB	3VL3511-2KN..	---	18 kA		
				LFGB	3VL3511-3KN..	---	18 kA		
				CED6	-	100 kA	---		
				FXD6-A	-	22 kA	---		
				FD6-A	-	22 kA	---		
	HFD6	-	25 kA	---					
	HFXD6	-	25 kA	---					
	HHFD6	-	25 kA	---					
	HHFXD6	-	25 kA	---					
	CFD6	-	100 kA	---					
	90,0 kW	6SL3210-1PH31-0...	125 A	LGG	-	---	25 kA		
				CED6	-	100 kA	---		

1) NCGA & HCGA are UL listed 3VL11 series (Siemens type VL150x UL) circuit breakers shown in the European circuit breaker catalog LV 16. Other Frame Sizes alike.

2) For more breaker article numbers, please refer to the European circuit breaker catalog LV 16.



Power Module			Circuit Breaker				Min. enclosure volume		
Frame Size	Rated Power, (LO)	Article no.	Max. rated current	UL/CSA Type <sup>1)</sup>	Article no. Example (European) <sup>2)</sup>	SCCR @		Metric	Imperial (USA)
						600 V	600 Y / 347 V		
FSF	90,0 kW	6SL3210-1PH31-0...	150 A	NCGA	3VL1115-1KM..	---	10 kA	0,6 m <sup>3</sup>	21,19 ft <sup>3</sup>
				HCGA	3VL1115-2KM..	---	10 kA		
				NDGB	3VL2515-1KN..	---	18 kA		
				HDGB	3VL2515-2KN..	---	18 kA		
				LDGB	3VL2515-3KN..	---	18 kA		
				NFGB	3VL3515-1KN..	---	18 kA		
				HFGB	3VL3515-2KN..	---	18 kA		
				LFGB	3VL3515-3KN..	---	18 kA		
				FXD6-A	-	22 kA	---		
				FD6-A	-	22 kA	---		
				HFD6	-	25 kA	---		
				HFXD6	-	25 kA	---		
				HHFD6	-	25 kA	---		
				HHFXD6	-	25 kA	---		
	CFD6	-	100 kA	---					
	110,0 kW	6SL3210-1PH31-2...	150 A	NCGA	3VL1115-1KM..	---	10 kA		
				HCGA	3VL1115-2KM..	---	10 kA		
				NDGB	3VL2515-1KN..	---	18 kA		
				HDGB	3VL2515-2KN..	---	18 kA		
				LDGB	3VL2515-3KN..	---	18 kA		
				NFGB	3VL3515-1KN..	---	18 kA		
				HFGB	3VL3515-2KN..	---	18 kA		
				LFGB	3VL3515-3KN..	---	18 kA		
				FXD6-A	-	22 kA	---		
				FD6-A	-	22 kA	---		
				HFD6	-	25 kA	---		
HFXD6				-	25 kA	---			

1) NCGA & HCGA are UL listed 3VL11 series (Siemens type VL150x UL) circuit breakers shown in the European circuit breaker catalog LV 16. Other Frame Sizes alike.

2) For more breaker article numbers, please refer to the European circuit breaker catalog LV 16.

Power Module			Circuit Breaker				Min. enclosure volume		
Frame Size	Rated Power, (LO)	Article no.	Max. rated current	UL/CSA Type <sup>1)</sup>	Article no. Example (European) <sup>2)</sup>	SCCR @		Metric	Imperial (USA)
						600 V	600 Y / 347 V		
FSF	132,0 kW	6SL3210-1PH31-4...	200 A	NFGB	3VL3520-1KN..	---	18 kA	0,6 m <sup>3</sup>	21,19 ft <sup>3</sup>
				HFGGB	3VL3520-2KN..	---	18 kA		
				LFGB	3VL3520-3KN..	---	18 kA		
				FXD6-A	-	22 kA	---		
				FD6-A	-	22 kA	---		
				HFD6	-	25 kA	---		
				HFXD6	-	25 kA	---		
				HHFD6	-	25 kA	---		
				HHFXD6	-	25 kA	---		
				CFD6	-	100 kA	---		
				JXD6-A	-	25 kA	---		
				JD6-A	-	25 kA	---		
				HJD6-A	-	35 kA	---		
				HJXD6-A	-	35 kA	---		
				HHJD6	-	50 kA	---		
HHJXD6	-	50 kA	---						
CJD6-A	-	100 kA	---						

1) NCGA & HCGA are UL listed 3VL11 series (Siemens type VL150x UL) circuit breakers shown in the European circuit breaker catalog LV 16. Other Frame Sizes alike.

2) For more breaker article numbers, please refer to the European circuit breaker catalog LV 16.

For more information:  <https://support.industry.siemens.com/cs/ww/de/ps/13206/man>