

## Protective Devices for SINAMICS G120X

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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 / I<sub>cc</sub> rating may be used.
- 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 I<sub>cc</sub>:

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.

# 1 Protective devices for IEC applications

## 1.1 IEC Fuses 400 V

Converter			Fuse			Min. enclosure volume	
Frame size	Rated Power, (LO)	Article no.	Max. rated current	Article no.	ICC @ 400 V AC	Metric	Imperial (USA)
FSB	4,0 kW	6SL32.0-.YE20-...	32 A	3NA3812	100 kA	0,60 m <sup>3</sup>	2,12 ft <sup>3</sup>
	5,5 kW	6SL32.0-.YE22-...	32 A	3NA3812	100 kA		
	7,5 kW	6SL32.0-.YE24-...	32 A	3NA3812	100 kA		
FSC	11,0 kW	6SL32.0-.YE26-...	50 A	3NA3820	100 kA	0,144 m <sup>3</sup>	5,08 ft <sup>3</sup>
	15,0 kW	6SL32.0-.YE28-...	50 A	3NA3820	100 kA		
FSD	18,5 kW	6SL32.0-.YE30-...	63 A	3NA3822	100 kA		
	22,0 kW	6SL32.0-.YE32-...	80 A	3NA3824	100 kA		
	30,0 kW	6SL32.0-.YE34-...	100 A	3NA3830	100 kA		
	37,0 kW	6SL32.0-.YE36-...	100 A	3NA3830	100 kA		
FSE	45,0 kW	6SL32.0-.YE38-...	125 A	3NA3832	100 kA		
	55,0 kW	6SL32.0-.YE40-...	160 A	3NA3836	100 kA		
FSF	75,0 kW	6SL32.0-.YE42-...	200 A	3NA3140	100 kA		
	90,0 kW	6SL32.0-.YE44-...	224 A	3NA3142	100 kA		
	110,0 kW	6SL32.0-.YE46-...	300 A	3NA3250	100 kA		
	132,0 kW	6SL32.0-.YE48-...	315 A	3NA3252	100 kA		
FSG	160,0 kW	6SL32.0-.YE50-...	355 A	3NA3254	100 kA		
	200,0 kW	6SL32.0-.YE52-...	400 A	3NA3260	100 kA		
	250,0 kW	6SL32.0-.YE54-...	630 A	3NA3372	100 kA		
FSH	315,0 kW	6SL32.0-.YE56-...	710 A	3NE1437-2	100 kA		
			710 A	3NE1437-3	100 kA		
	355,0 kW	6SL32.0-.YE58-...	800 A	3NE1438-2	100 kA		
			800 A	3NE1438-3	100 kA		
	400,0 kW	6SL32.0-.YE60-...	850 A	3NE1448-2	100 kA		
			850 A	3NE1448-3	100 kA		
FSJ	450,0 kW	6SL32.0-.YE62-...	1000 A	3NB3350-1KK26	100 kA		
	500,0 kW	6SL32.0-.YE64-...	1100 A	3NB3351-1KK26	100 kA		
	560,0 kW	6SL32.0-.YE66-...	1250 A	3NB3352-1KK26	100 kA		

Siemens 3NA, 3NE or 3NB low-voltage fuses are recommended.

## 1.2 IEC Fuses 690 V

Converter			Fuse			Min. enclosure volume	
Frame size	Rated Power, (LO)	Article no.	Max. rated current	Article no.	ICC @ 500 V AC	Metric	Imperial (USA)
FSD	3,0 kW	6SL32.0-.YH18-...	16 A	3NA3805-6	100 kA		
	4,0 kW	6SL32.0-.YH20-...	16 A	3NA3805-6	100 kA		
	5,5 kW	6SL32.0-.YH22-...	16 A	3NA3805-6	100 kA		
	7,5 kW	6SL32.0-.YH24-...	16 A	3NA3805-6	100 kA		
	11,0 kW	6SL32.0-.YH26-...	20 A	3NA3807-6	100 kA		
	15,0 kW	6SL32.0-.YH28-...	25 A	3NA3810-6	100 kA		
	18,5 kW	6SL32.0-.YH30-...	32 A	3NA3812-6	100 kA		
	22,0 kW	6SL32.0-.YH32-...	40 A	3NA3817-6KJ	100 kA		
	30,0 kW	6SL32.0-.YH34-...	50 A	3NA3820-6KJ	100 kA		
	37,0 kW	6SL32.0-.YH36-...	63 A	3NA3822-6	100 kA		
FSE	45,0 kW	6SL32.0-.YH38-...	80 A	3NA3824-6	100 kA		
	55,0 kW	6SL32.0-.YH40-...	80 A	3NA3824-6	100 kA		
FSF	75,0 kW	6SL32.0-.YH42-...	100 A	3NA3830-6	100 kA		
	90,0 kW	6SL32.0-.YH44-...	125 A	3NA3132-6	100 kA		
	110,0 kW	6SL32.0-.YH46-...	160 A	3NA3136-6	100 kA		
	132,0 kW	6SL32.0-.YH48-...	200 A	3NA3140-6	100 kA		
FSG	160,0 kW	6SL32.0-.YH50-...	250 A	3NE1227-0	100 kA		
	200,0 kW	6SL32.0-.YH52-...	315 A	3NE1230-0	100 kA		
	250,0 kW	6SL32.0-.YH54-...	350 A	3NE1331-0	100 kA		
FSH	315,0 kW	6SL32.0-.YH56-...	450 A	3NE1333-2	100 kA		
			450 A	3NE1333-3	100 kA		
	355,0 kW	6SL32.0-.YH58-...	500 A	3NE1334-2	100 kA		
			500 A	3NE1334-3	100 kA		
	400,0 kW	6SL32.0-.YH60-...	560 A	3NE1335-2	100 kA		
			560 A	3NE1335-3	100 kA		
	450,0 kW	6SL32.0-.YH62-...	630 A	3NE1336-2	100 kA		
			630 A	3NE1336-3	100 kA		
FSJ	500,0 kW	6SL32.0-.YH64-...	710 A	3NE1437-2	100 kA		
			710 A	3NE1437-3	100 kA		
	560,0 kW	6SL32.0-.YH66-...	800 A	3NE1438-2	100 kA		
			800 A	3NE1438-3	100 kA		
	630,0 kW	6SL32.0-.YH68-...	850 A	3NE1448-2	100 kA		
			850 A	3NE1448-3	100 kA		

Siemens 3NA or 3NE low-voltage fuses are recommended.

### 1.3 IEC Motor Starter Protectors 400 V

Converter			MSP			Min. enclosure volume				
Frame Size	Rated Power, (LO)	Article no.	Max. rated current	Article no.	ICC @ 400 V AC	Metric	Imperial (USA)			
FSB	4,0 kW	6SL32.0-.YE20-...	32 A	3RV2021-4EA..	55 kA	0,09 m³	3,18 ft³			
			32 A	3RV2031-4EA..	65 kA			up to 5kA		
	5,5 kW	6SL32.0-.YE22-...	32 A	3RV2021-4EA..	55 kA	0,144 m³	5,08 ft³			
			32 A	3RV2031-4EA..	65 kA			up to 50 / 65kA		
	7,5 kW	6SL32.0-.YE24-...	32 A	3RV2021-4EA..	55 kA	0,144 m³	5,08 ft³			
			32 A	3RV2031-4EA..	65 kA					
FSC	11,0 kW	6SL32.0-.YE26-...	52 A	3RV2031-4WA..	5 kA	0,144 m³	5,08 ft³			
			50 A	3RV2041-4HA..	5 kA					
	15,0 kW	6SL32.0-.YE28-...	52 A	3RV2031-4WA..	5 kA					
			50 A	3RV2041-4HA..	5 kA					
FSD	18,5 kW	6SL32.0-.YE30-...	65 A	3RV2031-4JA..	55 kA					
			65 A	3RV2032-4JA..	65 kA					
			63 A	3RV204.-4JA..	65 kA					
	22,0 kW	6SL32.0-.YE32-...	73 A	3RV2031-4KA..	65 kA					
			73 A	3RV2032-4KA..	65 kA					
			75 A	3RV204.-4KA..	65 kA					
	30,0 kW	6SL32.0-.YE34-...	93 A	3RV204.-4YA..	65 kA					
	37,0 kW	6SL32.0-.YE36-...	100 A	3RV204.-4MA..	65 kA					
	FSE	45 kW	6SL3210-1PE28-0...							
		55 kW	6SL3210-1PE31-1...							
FSF	75 kW	6SL3210-1PE31-5...								
	90 kW	6SL3210-1PE31-8...								
	110 kW	6SL3210-1PE32-1...								
	132 kW	6SL3210-1PE32-5...								
FSE	45 kW	6SL3210-1PH25-2...								
	55 kW	6SL3210-1PH26-2...								
FSF	75 kW	6SL3210-1PH28-0...								
	90 kW	6SL3210-1PH31-0...								
	110 kW	6SL3210-1PH31-2...								
	132 kW	6SL3210-1PH31-4...								

ICC values are only valid for supply grids with grounded star point (solidly grounded wye TN or TT systems)

## 1.4 IEC Motor Starter Protectors 690 V

Converter			MSP			Min. enclosure volume	
Frame Size	Rated Power, (LO)	Article no.	Max. rated current	Article no.	ICC @ 500 V AC	Metric	Imperial (USA)
FSD	3,0 kW	6SL32.0-.YH18-...	8 A	3RV20.1-1HA..	42 kA		
			14 A	3RV2031-4SA..	12 kA		
			14 A	3RV2032-4SA..	18 kA		
	4,0 kW	6SL32.0-.YH20-...	10 A	3RV20.1-1JA..	42 kA		
			14 A	3RV2031-4SA..	12 kA		
			14 A	3RV2032-4SA..	18 kA		
	5,5 kW	6SL32.0-.YH22-...	13 A	3RV20.1-1KA..	42 kA		
			17 A	3RV2031-4TA..	12 kA		
			17 A	3RV2032-4TA..	18 kA		
	7,5 kW	6SL32.0-.YH24-...	17 A	3RV2031-4TA..	12 kA		
			17 A	3RV2032-4TA..	18 kA		
	11,0 kW	6SL32.0-.YH26-...	20 A	3RV2031-4BA..	12 kA		
			20 A	3RV2032-4BA..	18 kA		
	15,0 kW	6SL32.0-.YH28-...	32 A	3RV2031-4EA..	10 kA		
			32 A	3RV2032-4EA..	15 kA		
	18,5 kW	6SL32.0-.YH30-...	32 A	3RV2031-4EA..	10 kA		
			32 A	3RV2032-4EA..	15 kA		
	22,0 kW	6SL32.0-.YH32-...	40 A	3RV2031-4UA..	10 kA		
			40 A	3RV2032-4UA..	15 kA		
			40 A	3RV2041-4FA..	12 kA		
			40 A	3RV2042-4FA..	18 kA		
	30,0 kW	6SL32.0-.YH34-...	52 A	3RV2031-4WA..	10 kA		
			52 A	3RV2032-4WA..	15 kA		
			50 A	3RV2041-4HA..	12 kA		
50 A			3RV2042-4HA..	15 kA			
37,0 kW	6SL32.0-.YH36-...	59 A	3RV2031-4XA..	8 kA			
		59 A	3RV2032-4XA..	10 kA			
		63 A	3RV2041-4JA..	12 kA			
		63 A	3RV2042-4JA..	15 kA			
FSE	45 kW	6SL3210-1PH25-2...					
	55 kW	6SL3210-1PH26-2...					
FSF	75 kW	6SL3210-1PH28-0...					
	90 kW	6SL3210-1PH31-0...					
	110 kW	6SL3210-1PH31-2...					
	132 kW	6SL3210-1PH31-4...					

ICC values are only valid for supply grids with grounded star point (solidly grounded wye TN or TT systems)

## 1.5 IEC Circuit Breakers 400 V

Converter			Circuit Breaker			Min. enclosure volume	
Frame Size	Rated Power, (LO)	Article no.	Max. rated current	Article no.	ICC @ 400 V AC	Metric	Imperial (USA)
FSB	4,0 kW	6SL32.0-.YE20-...	35 A	3RV2742-5FD..	5 kA	0,09 m³	3,18 ft³
			32 A	3VA1032-.E	5 kA		
			32 A	3VA1132-.E...	5 kA		
	5,5 kW	6SL32.0-.YE22-...	35 A	3RV2742-5FD..	5 kA		
			32 A	3VA1032-.E	5 kA		
			32 A	3VA1132-.E...	5 kA		
	7,5 kW	6SL32.0-.YE24-...	35 A	3RV2742-5FD..	5 kA		
			32 A	3VA1032-.E	5 kA		
			32 A	3VA1132-.E...	5 kA		
FSC	11,0 kW	6SL32.0-.YE26-...	50 A	3RV2742-5JD..	5 kA	0,144 m³	5,08 ft³
			50 A	3VA1050-.E	5 kA		
			50 A	3VA1150-.E...	5 kA		
	15,0 kW	6SL32.0-.YE28-...	50 A	3RV2742-5JD..	5 kA		
			50 A	3VA1050-.E	5 kA		
			50 A	3VA1150-.E...	5 kA		
FSD	18,5 kW	6SL32.0-.YE30-...	60 A	3RV2742-5LD..	100 kA		
			63 A	3VA1063-4ED...	36 kA		
			63 A	3VA1163-6E...	70 kA		
	22,0 kW	6SL32.0-.YE32-...	80 A	3RV2742-5QD..	100 kA		
			80 A	3VA1080-4ED...	36 kA		
			80 A	3VA1180-6E...	70 kA		
	30,0 kW	6SL32.0-.YE34-...	100 A	3VA1010-4ED...	36 kA		
			100 A	3VA1110-6E...	70 kA		
			100 A	3VA2010-7...	100 kA		
			100 A	3VA2110-7...	100 kA		
	37,0 kW	6SL32.0-.YE36-...	100 A	3VA1010-4ED...	36 kA		
			100 A	3VA1110-6E...	70 kA		
			100 A	3VA2010-7...	100 kA		
			100 A	3VA2110-7...	100 kA		
	FSE	45,0 kW	6SL32.0-.YE38-...	125 A	3VA1112-6E...		
160 A				3VA2016-7...	100 kA		
160 A				3VA2116-7...	100 kA		
55,0 kW		6SL32.0-.YE40-...	160 A	3VA1116-6E...	70 kA		
			160 A	3VA2016-7...	100 kA		
			160 A	3VA2116-7...	100 kA		
FSF	75,0 kW	6SL32.0-.YE42-...	200 A	3VA1220-6E...	70 kA		
			250 A	3VA2225-7...	100 kA		
			250 A	3VA2325-7...	100 kA		
	90,0 kW	6SL32.0-.YE44-...	250 A	3VA1225-6E...	70 kA		
			250 A	3VA2225-7...	100 kA		
			250 A	3VA2325-7...	100 kA		
	110,0 kW	6SL32.0-.YE46-...	400 A	3VA2340-7...	100 kA		
			400 A	3VA2440-7...	100 kA		
			132,0 kW	6SL32.0-.YE48-...	400 A		
	400 A	3VA2440-7...			100 kA		
	400 A	3VA2440-7...			100 kA		

Converter			Circuit Breaker			Min. enclosure volume	
Frame Size	Rated Power, (LO)	Article no.	Max. rated current	Article no.	ICC @ 400 V AC	Metric	Imperial (USA)
FSG	160,0 kW	6SL32.0-.YE50-...	400 A	3VA2340-7...	100 kA		
			400 A	3VA2440-7...	100 kA		
	200,0 kW	6SL32.0-.YE52-...	500 A	3VA2450-7...	100 kA		
			630 A	3VA2463-7...	100 kA		
FSH	315,0 kW	6SL32.0-.YE56-...					
	355,0 kW	6SL32.0-.YE58-...					
	400,0 kW	6SL32.0-.YE60-...					
FSJ	450,0 kW	6SL32.0-.YE62-...					
	500,0 kW	6SL32.0-.YE64-...					
	560,0 kW	6SL32.0-.YE66-...					



## 1.6 IEC Circuit Breakers 690 V

Converter			Circuit Breaker			Min. enclosure volume		
Frame Size	Rated Power, (LO)	Article no.	Max. rated current	Article no.	ICC @ 500 V AC	Metric	Imperial (USA)	
FSD	3,0 kW	6SL32.0-.YH18-...	10 A	3RV2742-5AD..				
			8 A	3RV2711-1HD				
			16 A	3VA1096-4ED..				
			16 A	3VA1196-6E..				
	4,0 kW	6SL32.0-.YH20-...	10 A	3RV2742-5AD..				
			10 A	3RV2711-1JD				
			16 A	3VA1096-4ED..				
			16 A	3VA1196-6E..				
	5,5 kW	6SL32.0-.YH22-...	15 A	3RV2742-5BD..				
			12,5 A	3RV2711-1KD				
			16 A	3VA1096-4ED..				
			16 A	3VA1196-6E..				
	7,5 kW	6SL32.0-.YH24-...	15 A	3RV2742-5BD..				
			15 A	3RV2711-4AD				
			16 A	3VA1096-4ED..				
			16 A	3VA1196-6E..				
	11,0 kW	6SL32.0-.YH26-...	20 A	3RV2742-5BD..				
			20 A	3VA1020-4ED..				
			20 A	3VA1120-6E..				
	15,0 kW	6SL32.0-.YH28-...	25 A	3RV2742-5DD..				
			32 A	3VA1032-4ED..	16 kA			
			32 A	3VA1132-6E..	20 kA			
	18,5 kW	6SL32.0-.YH30-...	30 A	3RV2742-5ED..				
			32 A	3VA1032-4ED..	16 kA			
32 A			3VA1132-6E..	20 kA				
22,0 kW	6SL32.0-.YH32-...	40 A	3RV2742-5GD..					
		40 A	3VA1040-4ED...	16 kA				
		40 A	3VA1140-6E...	20 kA				
30,0 kW	6SL32.0-.YH34-...	50 A	3RV2742-5JD..					
		50 A	3VA1050-4ED...	16 kA				
		50 A	3VA1150-6E...	20 kA				
37,0 kW	6SL32.0-.YH36-...	50 A	3RV2742-5LD..					
		63 A	3VA1063-4ED...	16 kA				
		63 A	3VA1163-6E...	20 kA				
FSE	45,0 kW	6SL32.0-.YH38-...	80 A	3RV2742-5QD..				
			80 A	3VA1080-4ED...	16 kA			
			80 A	3VA1180-6E...	20 kA			
	55,0 kW	6SL32.0-.YH40-...	100 A	3VA1010-4ED...	16 kA			
			100 A	3VA1110-6E..	20 kA			
			100 A	3VA2010-7E..	100 kA			
			100 A	3VA2110-7E..	100 kA			

Converter			Circuit Breaker			Min. enclosure volume	
Frame Size	Rated Power, (LO)	Article no.	Max. rated current	Article no.	ICC @ 500 V AC	Metric	Imperial (USA)
FSF	75,0 kW	6SL32.0-.YH42-...	125 A	3VA1112-6ED..	20 kA		
			160 A	3VA2116-7E..	100 kA		
			160 A	3VA2216-7E...	100 kA		
	90,0 kW	6SL32.0-.YH44-...	125 A	3VA1112-6ED..	20 kA		
			160 A	3VA2116-7E..	100 kA		
			160 A	3VA2216-7E...	100 kA		
	110,0 kW	6SL32.0-.YH46-...	160 A	3VA1116-6E...	20 kA		
			160 A	3VA1216-6E..	15 kA		
			160 A	3VA2116-7E..	100 kA		
160 A			3VA2216-7E...	100 kA			
132,0 kW	6SL32.0-.YH48-...	200 A	3VA1220-6E..	15 kA			
		200 A	3VA2220-7E..	100 kA			
		200 A	3VA2320-7E...	100 kA			
FSG	160,0 kW	6SL32.0-.YH50-...					
	200,0 kW	6SL32.0-.YH52-...					
	250,0 kW	6SL32.0-.YH54-...					
FSH	315,0 kW	6SL32.0-.YH56-...					
	355,0 kW	6SL32.0-.YH58-...					
	400,0 kW	6SL32.0-.YH60-...					
	450,0 kW	6SL32.0-.YH62-...					
FSJ	500,0 kW	6SL32.0-.YH64-...					
	560,0 kW	6SL32.0-.YH66-...					
	630,0 kW	6SL32.0-.YH68-...					

## 2 Protective devices for UL/CSA applications

### 2.1 UL/CSA non-semiconductor fuses 400 V

Converter			Fuse		Min. enclosure volume	
Frame Size	Rated Power, (LO)	Article no.	Max. rated current	SCCR @ 480 V	Metric	Imperial (USA)
FSB	4,0 kW	6SL32.0-.YE20-...	35 A	100 kA	0,06 m <sup>3</sup>	2,12 ft <sup>3</sup>
	5,5 kW	6SL32.0-.YE22-...	35 A	100 kA		
	7,5 kW	6SL32.0-.YE24-...	35 A	100 kA		
FSC	11,0 kW	6SL32.0-.YE26-...	50 A	100 kA	0,144 m <sup>3</sup>	5,08 ft <sup>3</sup>
	15,0 kW	6SL32.0-.YE28-...	50 A	100 kA		
FSD	18,5 kW	6SL32.0-.YE30-...	60 A	100 kA		
	22,0 kW	6SL32.0-.YE32-...	70 A	100 kA		
	30,0 kW	6SL32.0-.YE34-...	90 A	100 kA		
	37,0 kW	6SL32.0-.YE36-...	100 A	100 kA		
FSE	45,0 kW	6SL32.0-.YE38-...	125 A	100 kA		
	55,0 kW	6SL32.0-.YE40-...	150 A	100 kA		
FSF	75,0 kW	6SL32.0-.YE42-...	200 A	100 kA		
	90,0 kW	6SL32.0-.YE44-...	250 A	100 kA		
	110,0 kW	6SL32.0-.YE46-...	300 A	100 kA		
	132,0 kW	6SL32.0-.YE48-...	350 A	100 kA		
FSG	160,0 kW	6SL32.0-.YE50-...	400 A	100 kA		
	200,0 kW	6SL32.0-.YE52-...	500 A	100 kA		
	250,0 kW	6SL32.0-.YE54-...	600 A	100 kA		

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

Additionally, Class CC and G fuses may be used for Frame Size A to Frame Size C.

Converter			Fuse			Min. enclosure volume	
Frame Size	Rated Power, (LO)	Article no.	Max. rated current	Article no.	SCCR @ 480 V	Metric	Imperial (USA)
FSH	315,0 kW	6SL32.0-.YE56-...	710 A	3NE1437-2	100 kA		
			710 A	3NE1437-3	100 kA		
	355,0 kW	6SL32.0-.YE58-...	800 A	3NE1438-2	100 kA		
			800 A	3NE1438-3	100 kA		
	400,0 kW	6SL32.0-.YE60-...	850 A	3NE1448-2	100 kA		
			850 A	3NE1448-3	100 kA		
FSJ	450,0 kW	6SL32.0-.YE62-...	1000 A	3NB3350-1KK26	100 kA		
	500,0 kW	6SL32.0-.YE64-...	1100 A	3NB3351-1KK26	100 kA		
	560,0 kW	6SL32.0-.YE66-...	1250 A	3NB3352-1KK26	100 kA		

## 2.2 UL/CSA non-semiconductor fuses 600 V

Converter			Fuse		Min. enclosure volume	
Frame Size	Rated Power, (LO)	Article no.	Max. rated current	SCCR @ 600 V	Metric	Imperial (USA)
FSD	3,0 kW	6SL32.0.YH18-...	8 A	100 kA		
	4,0 kW	6SL32.0.YH20-...	10 A	100 kA		
	5,5 kW	6SL32.0.YH22-...	15 A	100 kA		
	7,5 kW	6SL32.0.YH24-...	15 A	100 kA		
	11,0 kW	6SL32.0.YH26-...	20 A	100 kA		
	15,0 kW	6SL32.0.YH28-...	25 A	100 kA		
	18,5 kW	6SL32.0.YH30-...	30 A	100 kA		
	22,0 kW	6SL32.0.YH32-...	35 A	100 kA		
	30,0 kW	6SL32.0.YH34-...	50 A	100 kA		
	37,0 kW	6SL32.0.YH36-...	60 A	100 kA		
FSE	45,0 kW	6SL32.0.YH38-...	80 A	100 kA		
	55,0 kW	6SL32.0.YH40-...	80 A	100 kA		
FSF	75,0 kW	6SL32.0.YH42-...	110 A	100 kA		
	90,0 kW	6SL32.0.YH44-...	150 A	100 kA		
	110,0 kW	6SL32.0.YH46-...	150 A	100 kA		
	132,0 kW	6SL32.0.YH48-...	200 A	100 kA		

Any non-semiconductor fuse Class J, CF, T, or L (JDDZ) from any manufacturer may be used for Frame Sizes D to F.

Converter			Fuse			Min. enclosure volume	
Frame Size	Rated Power, (LO)	Article no.	Max. rated current	Article no.	SCCR @ 480 V	Metric	Imperial (USA)
FSG	160,0 kW	6SL32.0.YH50-...	250 A	3NE1227-0	100 kA		
	200,0 kW	6SL32.0.YH52-...	315 A	3NE1230-0	100 kA		
	250,0 kW	6SL32.0.YH54-...	350 A	3NE1331-0	100 kA		
FSH	315,0 kW	6SL32.0.YH56-...	450 A	3NE1333-2	100 kA		
			450 A	3NE1333-3	100 kA		
	355,0 kW	6SL32.0.YH58-...	500 A	3NE1334-2	100 kA		
			500 A	3NE1334-3	100 kA		
	400,0 kW	6SL32.0.YH60-...	560 A	3NE1335-2	100 kA		
			560 A	3NE1335-3	100 kA		
	450,0 kW	6SL32.0.YH62-...	630 A	3NE1336-2	100 kA		
			630 A	3NE1336-3	100 kA		
FSJ	500,0 kW	6SL32.0.YH64-...	710 A	3NE1437-2	100 kA		
			710 A	3NE1437-3	100 kA		
	560,0 kW	6SL32.0.YH66-...	800 A	3NE1438-2	100 kA		
			800 A	3NE1438-3	100 kA		
	630,0 kW	6SL32.0.YH68-...	850 A	3NE1448-2	100 kA		
			850 A	3NE1448-3	100 kA		

## 2.3 UL/CSA Type E Combination Motor Controllers 400 V

Converter			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 V	Metric	Imperial (USA)
FSB	4,0 kW	6SL32.0-.YE20-...	32 A	20 HP	3RV2021-4EA..	50 kA	0,09 m <sup>3</sup>	3,18 ft <sup>3</sup>
			32 A	25 HP	3RV2031-4EA..	65 kA		
	5,5 kW	6SL32.0-.YE22-...	32 A	20 HP	3RV2021-4EA..	50 kA	0,144 m <sup>3</sup>	5,08 ft <sup>3</sup>
			32 A	25 HP	3RV2031-4EA..	65 kA		
FSC	11,0 kW	6SL32.0-.YE26-...	52 A	40 HP	3RV2031-4WA..	5 kA	0,144 m <sup>3</sup>	5,08 ft <sup>3</sup>
			50 A	40 HP	3RV2041-4HA..	5 kA		
	15,0 kW	6SL32.0-.YE28-...	52 A	40 HP	3RV2031-4WA..	5 kA		
			50 A	40 HP	3RV2041-4HA..	5 kA		
FSD	18,5 kW	6SL32.0-.YE30-...	65 A	50 HP	3RV2031-4JA..	20 kA		
			65 A	50 HP	3RV2032-4JA..	30 kA		
			63 A	50 HP	3RV204.-4JA..	65 kA		
	22,0 kW	6SL32.0-.YE32-...	73 A	60 HP	3RV2031-4KA..	20 kA		
			73 A	60 HP	3RV2032-4KA..	30 kA		
			75 A	60 HP	3RV204.-4KA..	65 kA		
	30,0 kW	6SL32.0-.YE34-...	93 A	75 HP	3RV204.-4YA..	65 kA		
	37,0 kW	6SL32.0-.YE36-...	100 A	75 HP	3RV204.-4MA..	65 kA		

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 3RV2928-1H
- 3RV203. with 3RV2938-1K
- 3RV204. with 3RT2946-4GA07

Not necessary for CSA

## 2.4 UL/CSA Type E Combination Motor Controllers 600 V

Frame Size	Converter		CMC				Min. enclosure volume	
	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	3,0 kW	6SL32.0-.YH18-...	8 A	5 HP	3RV20.1-1HA..	30 kA		
			14 A	15 HP	3RV203.-4SA..	25 kA		
	4,0 kW	6SL32.0-.YH20-...	10 A	8 HP	3RV20.1-1JA..	30 kA		
			14 A	15 HP	3RV203.-4SA..	25 kA		
	5,5 kW	6SL32.0-.YH22-...	13 A	8 HP	3RV20.1-1KA..	30 kA		
			17 A	15 HP	3RV203.-4TA..	25 kA		
	7,5 kW	6SL32.0-.YH24-...	17 A	15 HP	3RV203.-4TA..	25 kA		
	11,0 kW	6SL32.0-.YH26-...	20 A	20 HP	3RV203.-4BA..	25 kA		
	15,0 kW	6SL32.0-.YH28-...	32 A	30 HP	3RV203.-4EA..	25 kA		
	18,5 kW	6SL32.0-.YH30-...	32 A	30 HP	3RV203.-4EA..	25 kA		
	22,0 kW	6SL32.0-.YH32-...	40 A	40 HP	3RV203.-4UA..	22 kA		
			40 A	40 HP	3RV204.-4FA..	30 kA		
	30,0 kW	6SL32.0-.YH34-...	52 A	50 HP	3RV203.-4WA..	22 kA		
			50 A	50 HP	3RV204.-4HA..	30 kA		
	37,0 kW	6SL32.0-.YH36-...	59 A	50 HP	3RV203.-4XA..	25 kA		
			63 A	60 HP	3RV204.-4JA..	30 kA		

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 3RV2928-1H
- 3RV203. with 3RV2938-1K
- 3RV204. with 3RT2946-4GA07

Not necessary for CSA

## 2.5 UL/CSA Circuit Breakers 400 V

Converter			Circuit Breaker					Min. enclosure volume		
Frame Size	Rated Power, (LO)	Article no.	Max. rated current			SCCR @		Metric	Imperial (USA)	
						480 V	480 Y / 277 V			
FSB	4,0 kW	6SL32.0-.YE20-...	35 A	3RV2742		---	5 kA	0,09 m³	3,18 ft³	
			35 A	3VA51	3VA5135-.E	5 kA	<sup>1)</sup>			
	5,5 kW	6SL32.0-.YE22-...	35 A	3RV2742		---	5 kA			
			35 A	3VA51	3VA5135-.E	5 kA	<sup>1)</sup>			
	7,5 kW	6SL32.0-.YE24-...	35 A	3RV2742		---	5 kA			
			35 A	3VA51	3VA5135-.E	5 kA	<sup>1)</sup>			
FSC	11,0 kW	6SL32.0-.YE26-...	50 A	3RV2742		---	5 kA	0,144 m³	5,08 ft³	
			50 A	3VA51	3VA5150-.E	5 kA	<sup>1)</sup>			
	15,0 kW	6SL32.0-.YE28-...	50 A	3RV2742		---	5 kA			
			50 A	3VA51	3VA5150-.E	5 kA	<sup>1)</sup>			
	FSD	18,5 kW	6SL32.0-.YE30-...	60 A	3RV2742	3RV2742-5LD..	---			65 kA
				60 A	NGG	-	25 kA			<sup>1)</sup>
60 A				HGG	-	35 kA	<sup>1)</sup>			
60 A				LGG	-	65 kA	<sup>1)</sup>			
60 A				CED6	-	100 kA	<sup>1)</sup>			
60 A				3VA51	3VA5160-4E..	25 kA	<sup>1)</sup>			
60 A				3VA51	3VA5160-5E..	35 kA	<sup>1)</sup>			
60 A				3VA51	3VA5160-6E..	65 kA	<sup>1)</sup>			
22,0 kW		6SL32.0-.YE32-...	70 A	3RV2742	3RV2742-5QD..	---	65 kA			
			70 A	NGG	-	25 kA	<sup>1)</sup>			
			70 A	HGG	-	35 kA	<sup>1)</sup>			
			70 A	LGG	-	65 kA	<sup>1)</sup>			
			70 A	CED6	-	100 kA	<sup>1)</sup>			
			70 A	FXD6-A	-	35 kA	<sup>1)</sup>			
			70 A	FD6-A	-	35 kA	<sup>1)</sup>			
			70 A	HFD6	-	65 kA	<sup>1)</sup>			
			70 A	HFXD6	-	65 kA	<sup>1)</sup>			
			70 A	HHFD6	-	100 kA	<sup>1)</sup>			
			70 A	HHFXD6	-	100 kA	<sup>1)</sup>			
			70 A	CFD6	-	100 kA	<sup>1)</sup>			
			70 A	3VA51	3VA5170-4E..	25 kA	<sup>1)</sup>			
			70 A	3VA51	3VA5170-5E..	35 kA	<sup>1)</sup>			
70 A	3VA51	3VA5170-6E..	65 kA	<sup>1)</sup>						
30,0 kW	6SL32.0-.YE34-...	90 A	NGG	-	25 kA	<sup>1)</sup>				
		90 A	HGG	-	35 kA	<sup>1)</sup>				
		90 A	LGG	-	65 kA	<sup>1)</sup>				
		90 A	CED6	-	100 kA	<sup>1)</sup>				
		90 A	FXD6-A	-	35 kA	<sup>1)</sup>				
		90 A	FD6-A	-	35 kA	<sup>1)</sup>				
		90 A	HFD6	-	65 kA	<sup>1)</sup>				
		90 A	HFXD6	-	65 kA	<sup>1)</sup>				
		90 A	HHFD6	-	100 kA	<sup>1)</sup>				
		90 A	HHFXD6	-	100 kA	<sup>1)</sup>				
		90 A	CFD6	-	100 kA	<sup>1)</sup>				
		100 A	3VA51	3VA5110-4E..	---	25 kA				
		100 A	3VA51	3VA5110-5E..	---	35 kA				
		100 A	3VA51	3VA5110-6E..	---	65 kA				
100 A	3VA52	3VA5210-7E..	100 kA	<sup>1)</sup>						

Converter			Circuit Breaker					Min. enclosure volume		
Frame Size	Rated Power, (LO)	Article no.	Max. rated current			SCCR @		Metric	Imperial (USA)	
						480 V	480 Y / 277 V			
	37,0 kW	6SL32.0-.YE36-...	100 A	NGG	-	25 kA	1)			
			100 A	HGG	-	35 kA	1)			
			100 A	LGG	-	65 kA	1)			
			100 A	CED6	-	100 kA	1)			
			100 A	FXD6-A	-	35 kA	1)			
			100 A	FD6-A	-	35 kA	1)			
			100 A	HFD6	-	65 kA	1)			
			100 A	HFXD6	-	65 kA	1)			
			100 A	HHFD6	-	100 kA	1)			
			100 A	HHFXD6	-	100 kA	1)			
			100 A	CFD6	-	100 kA	1)			
			100 A	3VA51	3VA5110-4E..	---	25 kA			
			100 A	3VA51	3VA5110-5E..	---	35 kA			
			100 A	3VA51	3VA5110-6E..	---	65 kA			
FSE	45,0 kW	6SL32.0-.YE38-...	125 A	NGG	-	25 kA	1)			
			125 A	HGG	-	35 kA	1)			
			125 A	LGG	-	65 kA	1)			
			125 A	CED6	-	100 kA	1)			
			125 A	FXD6-A	-	35 kA	1)			
			125 A	FD6-A	-	35 kA	1)			
			125 A	HFD6	-	65 kA	1)			
			125 A	HFXD6	-	65 kA	1)			
			125 A	HHFD6	-	100 kA	1)			
			125 A	HHFXD6	-	100 kA	1)			
			125 A	CFD6	-	100 kA	1)			
			125 A	3VA51	3VA5112-4E..	---	25 kA			
			125 A	3VA51	3VA5112-5E..	---	35 kA			
			125 A	3VA51	3VA5112-6E..	---	65 kA			
	125 A	3VA52	3VA5212-7E..	100 kA	1)					
	55,0 kW	6SL32.0-.YE40-...	150 A	FXD6-A	-	35 kA	1)			
			150 A	FD6-A	-	35 kA	1)			
			150 A	HFD6	-	65 kA	1)			
			150 A	HFXD6	-	65 kA	1)			
			150 A	HHFD6	-	100 kA	1)			
			150 A	HHFXD6	-	100 kA	1)			
			150 A	CFD6	-	100 kA	1)			
			150 A	3VA52	3VA5215-5E..	35 kA	1)			
	150 A	3VA52	3VA5215-6E..	65 kA	1)					
			150 A	3VA52	3VA5215-7E..	100 kA	1)			



Converter			Circuit Breaker					Min. enclosure volume	
Frame Size	Rated Power, (LO)	Article no.	Max. rated current			SCCR @		Metric	Imperial (USA)
						480 V	480 Y / 277 V		
FSF	75,0 kW	6SL32.0-.YE42-...	200 A	FXD6-A	-	35 kA	<sup>1)</sup>		
			200 A	FD6-A	-	35 kA	<sup>1)</sup>		
			200 A	HFD6	-	65 kA	<sup>1)</sup>		
			200 A	HFXD6	-	65 kA	<sup>1)</sup>		
			200 A	HHFD6	-	100 kA	<sup>1)</sup>		
			200 A	HHFXD6	-	100 kA	<sup>1)</sup>		
			200 A	CFD6	-	100 kA	<sup>1)</sup>		
			200 A	JXD6-A	-	35 kA	<sup>1)</sup>		
			200 A	JD6-A	-	35 kA	<sup>1)</sup>		
			200 A	HJD6-A	-	65 kA	<sup>1)</sup>		
			200 A	HJXD6-A	-	65 kA	<sup>1)</sup>		
			200 A	HHJD6	-	100 kA	<sup>1)</sup>		
			200 A	HHJXD6	-	100 kA	<sup>1)</sup>		
			200 A	CJD6-A	-	100 kA	<sup>1)</sup>		
			200 A	3VA52	3VA5220-5E..	35 kA	<sup>1)</sup>		
	200 A	3VA52	3VA5220-6E..	65 kA	<sup>1)</sup>				
	200 A	3VA52	3VA5220-7E..	100 kA	<sup>1)</sup>				
	90,0 kW	6SL32.0-.YE44-...	250 A	FXD6-A	-	35 kA	<sup>1)</sup>		
			250 A	FD6-A	-	35 kA	<sup>1)</sup>		
			250 A	HFD6	-	65 kA	<sup>1)</sup>		
			250 A	HFXD6	-	65 kA	<sup>1)</sup>		
			250 A	HHFD6	-	100 kA	<sup>1)</sup>		
			250 A	HHFXD6	-	100 kA	<sup>1)</sup>		
			250 A	CFD6	-	100 kA	<sup>1)</sup>		
			250 A	JXD6-A	-	35 kA	<sup>1)</sup>		
			250 A	JD6-A	-	35 kA	<sup>1)</sup>		
			250 A	HJD6-A	-	65 kA	<sup>1)</sup>		
			250 A	HJXD6-A	-	65 kA	<sup>1)</sup>		
			250 A	HHJD6	-	100 kA	<sup>1)</sup>		
			250 A	HHJXD6	-	100 kA	<sup>1)</sup>		
250 A			CJD6-A	-	100 kA	<sup>1)</sup>			
250 A			3VA52	3VA5225-5E..	35 kA	<sup>1)</sup>			
250 A	3VA52	3VA5225-6E..	65 kA	<sup>1)</sup>					
250 A	3VA52	3VA5225-7E..	100 kA	<sup>1)</sup>					
110,0 kW	6SL32.0-.YE46-...	300 A	JXD6-A	-	35 kA	<sup>1)</sup>			
		300 A	JD6-A	-	35 kA	<sup>1)</sup>			
		300 A	HJD6-A	-	65 kA	<sup>1)</sup>			
		300 A	HJXD6-A	-	65 kA	<sup>1)</sup>			
		300 A	HHJD6	-	100 kA	<sup>1)</sup>			
		300 A	HHJXD6	-	100 kA	<sup>1)</sup>			
		300 A	CJD6-A	-	100 kA	<sup>1)</sup>			
		300 A	LD6-A	-	35 kA	<sup>1)</sup>			
		300 A	HLD6-A	-	65 kA	<sup>1)</sup>			
		300 A	HLXD6-A	-	65 kA	<sup>1)</sup>			
		300 A	HHLD6	-	100 kA	<sup>1)</sup>			
		300 A	HHLXD6	-	100 kA	<sup>1)</sup>			
		400 A	3VA63	3VA6340-5..	35 kA	<sup>1)</sup>			
		400 A	3VA63	3VA6340-6..	65 kA	<sup>1)</sup>			
		400 A	3VA63	3VA6340-7..	100 kA	<sup>1)</sup>			
400 A	3VA63	3VA6340-8..	100 kA	<sup>1)</sup>					

Converter			Circuit Breaker					Min. enclosure volume	
Frame Size	Rated Power, (LO)	Article no.	Max. rated current			SCCR @		Metric	Imperial (USA)
						480 V	480 Y / 277 V		
	132,0 kW	6SL32.0-.YE48-...	350 A	JXD6-A	-	35 kA	<sup>1)</sup>		
			350 A	JD6-A	-	35 kA	<sup>1)</sup>		
			350 A	HJD6-A	-	65 kA	<sup>1)</sup>		
			350 A	HJXD6-A	-	65 kA	<sup>1)</sup>		
			350 A	HHJD6	-	100 kA	<sup>1)</sup>		
			350 A	HHJXD6	-	100 kA	<sup>1)</sup>		
			350 A	CJD6-A	-	100 kA	<sup>1)</sup>		
			350 A	LD6-A	-	35 kA	<sup>1)</sup>		
			350 A	HLD6-A	-	65 kA	<sup>1)</sup>		
			350 A	HLXD6-A	-	65 kA	<sup>1)</sup>		
			350 A	HHLD6	-	100 kA	<sup>1)</sup>		
			350 A	HHLXD6	-	100 kA	<sup>1)</sup>		
			400 A	3VA63	3VA6340-5..	35 kA	<sup>1)</sup>		
			400 A	3VA63	3VA6340-6..	65 kA	<sup>1)</sup>		
			400 A	3VA63	3VA6340-7..	100 kA	<sup>1)</sup>		
400 A	3VA63	3VA6340-8..	100 kA	<sup>1)</sup>					
FSG	160,0 kW	6SL32.0-.YE50-...	400 A	JXD6-A	-	35 kA	<sup>1)</sup>		
			400 A	JD6-A	-	35 kA	<sup>1)</sup>		
			400 A	HJD6-A	-	65 kA	<sup>1)</sup>		
			400 A	HJXD6-A	-	65 kA	<sup>1)</sup>		
			400 A	HHJD6	-	100 kA	<sup>1)</sup>		
			400 A	HHJXD6	-	100 kA	<sup>1)</sup>		
			400 A	CJD6-A	-	100 kA	<sup>1)</sup>		
			400 A	LD6-A	-	35 kA	<sup>1)</sup>		
			450 A	LXD6-A	-	35 kA	<sup>1)</sup>		
			400 A	HLD6-A	-	65 kA	<sup>1)</sup>		
			400 A	HLXD6-A	-	65 kA	<sup>1)</sup>		
			400 A	HHLD6	-	100 kA	<sup>1)</sup>		
			400 A	HHLXD6	-	100 kA	<sup>1)</sup>		
			450 A	CLD6-A	-	100 kA	<sup>1)</sup>		
			400 A	3VA63	3VA6340-5..	35 kA	<sup>1)</sup>		
400 A	3VA63	3VA6340-6..	65 kA	<sup>1)</sup>					
400 A	3VA63	3VA6340-7..	100 kA	<sup>1)</sup>					
400 A	3VA63	3VA6340-8..	100 kA	<sup>1)</sup>					
	200,0 kW	6SL32.0-.YE52-...	500 A	LD6-A	-	35 kA	<sup>1)</sup>		
			500 A	LXD6-A	-	35 kA	<sup>1)</sup>		
			500 A	HLD6-A	-	65 kA	<sup>1)</sup>		
			500 A	HLXD6-A	-	65 kA	<sup>1)</sup>		
			500 A	HHLD6	-	100 kA	<sup>1)</sup>		
			500 A	HHLXD6	-	100 kA	<sup>1)</sup>		
			500 A	CLD6-A	-	100 kA	<sup>1)</sup>		
			600 A	3VA64	3VA6460-5..	35 kA	<sup>1)</sup>		
			600 A	3VA64	3VA6460-6..	65 kA	<sup>1)</sup>		
			600 A	3VA64	3VA6460-7..	100 kA	<sup>1)</sup>		
600 A	3VA64	3VA6460-8..	100 kA	<sup>1)</sup>					

Converter			Circuit Breaker					Min. enclosure volume	
Frame Size	Rated Power, (LO)	Article no.	Max. rated current			SCCR @		Metric	Imperial (USA)
						480 V	480 Y / 277 V		
	250,0 kW	6SL32.0-.YE54-...	600 A	LD6-A	-	35 kA	<sup>1)</sup>		
			600 A	LXD6-A	-	35 kA	<sup>1)</sup>		
			600 A	HLD6-A	-	65 kA	<sup>1)</sup>		
			600 A	HLXD6-A	-	65 kA	<sup>1)</sup>		
			600 A	HHLD6	-	100 kA	<sup>1)</sup>		
			600 A	HHLXD6	-	100 kA	<sup>1)</sup>		
			600 A	CLD6-A	-	100 kA	<sup>1)</sup>		
			600 A	3VA64	3VA6460-5..	35 kA	<sup>1)</sup>		
			600 A	3VA64	3VA6460-6..	65 kA	<sup>1)</sup>		
			600 A	3VA64	3VA6460-7..	100 kA	<sup>1)</sup>		
FSH	315,0 kW	6SL32.0-.YE56-...							
	355,0 kW	6SL32.0-.YE58-...							
	400,0 kW	6SL32.0-.YE60-...							
FSH	450,0 kW	6SL32.0-.YE62-...							
	500,0 kW	6SL32.0-.YE64-...							
	560,0 kW	6SL32.0-.YE66-...							

<sup>1)</sup>The SCCR shown in the table for 3 phase straight rated 480V AC supply can also be applied to a 3 phase center point grounded (slash rated) supply of 480Y/277 V AC. However, the SCCR shown in the table for a 3 phase center point grounded (slash rated) supply CANNOT be applied to a straight rated supply.

## 2.6 UL/CSA Circuit Breakers 600 V

Converter			Circuit Breaker					Min. enclosure volume	
Frame Size	Rated Power, (LO)	Article no.	Max. rated current			SCCR @		Metric	Imperial (USA)
						600 V	600 Y / 347 V		
FSD	3,0 kW	6SL32.0-.YH18-...	10 A	3RV2742	3RV2742-5AD..	---	20 kA		
			15 A	NGG	-	---	14 kA		
			15 A	HGG	-	---	14 kA		
			15 A	LGG	-	---	14 kA		
			15 A	CED6	-	15 kA	2)		
			8 A	3RV2711	3RV2711-1HD	---	10 kA		
			15 A	3VA51	3VA5196-6E...	---	25 kA		
			10 A	3RV2742	3RV2742-5AD..	---	20 kA		
	4,0 kW	6SL32.0-.YH20-...	15 A	NGG	-	---	14 kA		
			15 A	HGG	-	---	14 kA		
			15 A	LGG	-	---	14 kA		
			15 A	CED6	-	15 kA	2)		
			10 A	3RV2711	3RV2711-1JD	---	10 kA		
			15 A	3VA51	3VA5196-4E...	---	14 kA		
			15 A	3VA51	3VA5196-5E...	---	18 kA		
			15 A	3VA51	3VA5196-6E...	---	25 kA		
	5,5 kW	6SL32.0-.YH22-...	15 A	3RV2742	3RV2742-5BD..	---	20 kA		
			15 A	NGG	-	---	14 kA		
			15 A	HGG	-	---	14 kA		
			15 A	LGG	-	---	14 kA		
			15 A	CED6	-	15 kA	2)		
			12,5 A	3RV2711	3RV2711-1KD	---	10 kA		
			15 A	3VA51	3VA5196-4E...	---	14 kA		
			15 A	3VA51	3VA5196-5E...	---	18 kA		
	7,5 kW	6SL32.0-.YH24-...	15 A	3RV2742	3RV2742-5BD..	---	20 kA		
			15 A	NGG	-	---	14 kA		
			15 A	HGG	-	---	14 kA		
			15 A	LGG	-	---	14 kA		
15 A			CED6	-	15 kA	2)			
15 A			3VA51	3VA5196-4E...	---	14 kA			
15 A			3VA51	3VA5196-5E...	---	18 kA			
15 A			3VA51	3VA5196-6E...	---	25 kA			
11,0 kW	6SL32.0-.YH26-...	20 A	3RV2742	3RV2742-5CD..	---	20 kA			
		20 A	NGG	-	---	14 kA			
		20 A	HGG	-	---	14 kA			
		20 A	LGG	-	---	14 kA			
		20 A	CED6	-	100 kA	2)			
		20 A	3VA51	3VA5120-4E..	---	14 kA			
		20 A	3VA51	3VA5120-5E..	---	18 kA			
		20 A	3VA51	3VA5120-6E..	---	25 kA			
15,0 kW	6SL32.0-.YH28-...	25 A	3RV2742	3RV2742-5DD..	---	20 kA			
		30 A	NGG	-	---	14 kA			
		30 A	HGG	-	---	14 kA			
		30 A	LGG	-	---	14 kA			
		30 A	CED6	-	100 kA	2)			
		30 A	3VA51	3VA5130-4E..	---	14 kA			
		30 A	3VA51	3VA5130-5E..	---	18 kA			
		30 A	3VA51	3VA5130-6E..	---	25 kA			

Converter			Circuit Breaker					Min. enclosure volume	
Frame Size	Rated Power, (LO)	Article no.	Max. rated current			SCCR @		Metric	Imperial (USA)
						600 V	600 Y / 347 V		
	18,5 kW	6SL32.0-.YH30-...	30 A	3RV2742	3RV2742-5ED..	---	20 kA		
			30 A	NGG	-	---	14 kA		
			30 A	HGG	-	---	14 kA		
			30 A	LGG	-	---	14 kA		
			30 A	CED6	-	100 kA	<sup>2)</sup>		
			30 A	3VA51	3VA5130-4E..	---	14 kA		
			30 A	3VA51	3VA5130-5E..	---	18 kA		
	22,0 kW	6SL32.0-.YH32-...	40 A	3RV2742	3RV2742-5GD..	---	20 kA		
			40 A	NGG	-	---	14 kA		
			40 A	HGG	-	---	14 kA		
			40 A	LGG	-	---	14 kA		
			40 A	CED6	-	100 kA	<sup>2)</sup>		
			40 A	3VA51	3VA5140-4E..	---	14 kA		
			40 A	3VA51	3VA5140-5E..	---	18 kA		
	30,0 kW	6SL32.0-.YH34-...	50 A	3RV2742	3RV1742-5JD..	---	20 kA		
			50 A	NGG	-	---	14 kA		
			50 A	HGG	-	---	14 kA		
			50 A	LGG	-	---	14 kA		
			50 A	CED6	-	100 kA	<sup>2)</sup>		
			50 A	3VA51	3VA5150-4E..	---	14 kA		
			50 A	3VA51	3VA5150-5E..	---	18 kA		
37,0 kW	6SL32.0-.YH36-...	60 A	3RV2742	3RV2742-5LD..	---	20 kA			
		60 A	NGG	-	---	14 kA			
		60 A	HGG	-	---	14 kA			
		60 A	LGG	-	---	14 kA			
		60 A	CED6	-	100 kA	<sup>2)</sup>			
		60 A	3VA51	3VA5160-4E..	---	14 kA			
		60 A	3VA51	3VA5160-5E..	---	18 kA			
FSE	45,0 kW	6SL32.0-.YH38-...	80 A	NGG	-	---	14 kA		
			80 A	HGG	-	---	14 kA		
			80 A	LGG	-	---	14 kA		
			80 A	CED6	-	100 kA	<sup>2)</sup>		
			80 A	FXD6-A	-	22 kA	<sup>2)</sup>		
			80 A	FD6-A	-	22 kA	<sup>2)</sup>		
			80 A	HFD6	-	25 kA	<sup>2)</sup>		
			80 A	HFXD6	-	25 kA	<sup>2)</sup>		
			80 A	HHFD6	-	25 kA	<sup>2)</sup>		
			80 A	HHFXD6	-	25 kA	<sup>2)</sup>		
			80 A	CFD6	-	100 kA	<sup>2)</sup>		
			80 A	3VA51	3VA5180-4E..	---	14 kA		
			80 A	3VA51	3VA5180-5E..	---	18 kA		
80 A	3VA51	3VA5180-6E..	---	18 kA					

Converter			Circuit Breaker					Min. enclosure volume	
Frame Size	Rated Power, (LO)	Article no.	Max. rated current			SCCR @		Metric	Imperial (USA)
						600 V	600 Y / 347 V		
	55,0 kW	6SL32.0-.YH40-...	90 A	NGG	-	---	14 kA		
			90 A	HGG	-	---	14 kA		
			90 A	LGG	-	---	14 kA		
			90 A	CED6	-	100 kA	<sup>2)</sup>		
			90 A	FXD6-A	-	22 kA	<sup>2)</sup>		
			90 A	FD6-A	-	22 kA	<sup>2)</sup>		
			90 A	HFD6	-	25 kA	<sup>2)</sup>		
			90 A	HFXD6	-	25 kA	<sup>2)</sup>		
			90 A	HHFD6	-	25 kA	<sup>2)</sup>		
			90 A	HHFXD6	-	25 kA	<sup>2)</sup>		
			90 A	CFD6	-	100 kA	<sup>2)</sup>		
			90 A	3VA51	3VA5180-4E..	---	14 kA		
			90 A	3VA51	3VA5180-5E..	---	18 kA		
			90 A	3VA51	3VA5180-6E..	---	18 kA		
			100 A	3VA52	3VA5210-7E..	35 kA	<sup>2)</sup>		
FSF	75,0 kW	6SL32.0-.YH42-...	110 A	NGG	-	---	14 kA		
			110 A	HGG	-	---	14 kA		
			110 A	LGG	-	---	14 kA		
			110 A	CED6	-	100 kA	<sup>2)</sup>		
			110 A	FXD6-A	-	22 kA	<sup>2)</sup>		
			110 A	FD6-A	-	22 kA	<sup>2)</sup>		
			110 A	HFD6	-	25 kA	<sup>2)</sup>		
			110 A	HFXD6	-	25 kA	<sup>2)</sup>		
			110 A	HHFD6	-	25 kA	<sup>2)</sup>		
			110 A	HHFXD6	-	25 kA	<sup>2)</sup>		
			110 A	CFD6	-	100 kA	<sup>2)</sup>		
			110 A	3VA51	3VA5111-4E..	---	14 kA		
			110 A	3VA51	3VA5111-5E..	---	14 kA		
			110 A	3VA51	3VA5111-6E..	---	14 kA		
			110 A	3VA52	3VA5211-7E..	35 kA	<sup>2)</sup>		
	90,0 kW	6SL32.0-.YH44-...	125 A	NGG	-	---	14 kA		
			125 A	HGG	-	---	14 kA		
			125 A	LGG	-	---	14 kA		
			125 A	CED6	-	100 kA	<sup>2)</sup>		
			150 A	FXD6-A	-	22 kA	<sup>2)</sup>		
			150 A	FD6-A	-	22 kA	<sup>2)</sup>		
			150 A	HFD6	-	25 kA	<sup>2)</sup>		
			150 A	HFXD6	-	25 kA	<sup>2)</sup>		
			150 A	HHFD6	-	25 kA	<sup>2)</sup>		
			150 A	HHFXD6	-	25 kA	<sup>2)</sup>		
			150 A	CFD6	-	100 kA	<sup>2)</sup>		
			150 A	3VA52	3VA5215-5E..	18 kA	<sup>2)</sup>		
			150 A	3VA52	3VA5215-6E..	25 kA	<sup>2)</sup>		
			150 A	3VA52	3VA5215-7E..	35 kA	<sup>2)</sup>		

Converter			Circuit Breaker					Min. enclosure volume	
Frame Size	Rated Power, (LO)	Article no.	Max. rated current			SCCR @		Metric	Imperial (USA)
						600 V	600 Y / 347 V		
	110,0 kW	6SL32.0-.YH46-...	150 A	FXD6-A	-	22 kA	<sup>2)</sup>		
			150 A	FD6-A	-	22 kA	<sup>2)</sup>		
			150 A	HFD6	-	25 kA	<sup>2)</sup>		
			150 A	HFXD6	-	25 kA	<sup>2)</sup>		
			150 A	HHFD6	-	25 kA	<sup>2)</sup>		
			150 A	HHFXD6	-	25 kA	<sup>2)</sup>		
			150 A	CFD6	-	100 kA	<sup>2)</sup>		
			150 A	3VA52	3VA5215-5E..	18 kA	<sup>2)</sup>		
			150 A	3VA52	3VA5215-6E..	25 kA	<sup>2)</sup>		
			150 A	3VA52	3VA5215-7E..	35 kA	<sup>2)</sup>		
	132,0 kW	6SL32.0-.YH48-...	200 A	FXD6-A	-	22 kA	<sup>2)</sup>		
			200 A	FD6-A	-	22 kA	<sup>2)</sup>		
			200 A	HFD6	-	25 kA	<sup>2)</sup>		
			200 A	HFXD6	-	25 kA	<sup>2)</sup>		
			200 A	HHFD6	-	25 kA	<sup>2)</sup>		
			200 A	HHFXD6	-	25 kA	<sup>2)</sup>		
			200 A	CFD6	-	100 kA	<sup>2)</sup>		
			200 A	JXD6-A	-	25 kA	<sup>2)</sup>		
			200 A	JD6-A	-	25 kA	<sup>2)</sup>		
			200 A	HJD6-A	-	35 kA	<sup>2)</sup>		
			200 A	HJXD6-A	-	35 kA	<sup>2)</sup>		
			200 A	HHJD6	-	50 kA	<sup>2)</sup>		
			200 A	HHJXD6	-	50 kA	<sup>2)</sup>		
			200 A	CJD6-A	-	100 kA	<sup>2)</sup>		
			200 A	3VA52	3VA5220-5E..	18 kA	<sup>2)</sup>		
			200 A	3VA52	3VA5220-6E..	25 kA	<sup>2)</sup>		
			200 A	3VA52	3VA5220-7E..	35 kA	<sup>2)</sup>		

Converter			Circuit Breaker					Min. enclosure volume	
Frame Size	Rated Power, (LO)	Article no.	Max. rated current			SCCR @		Metric	Imperial (USA)
						600 V	600 Y / 347 V		
FSG	160,0 kW	6SL32.0-.YH50-...	250 A	FXD6-A	-	22 kA	<sup>2)</sup>		
			250 A	FD6-A	-	22 kA	<sup>2)</sup>		
			250 A	HFD6	-	25 kA	<sup>2)</sup>		
			250 A	HFXD6	-	25 kA	<sup>2)</sup>		
			250 A	HHFD6	-	25 kA	<sup>2)</sup>		
			250 A	HHFXD6	-	25 kA	<sup>2)</sup>		
			250 A	CFD6	-	100 kA	<sup>2)</sup>		
			250 A	JXD6-A	-	25 kA	<sup>2)</sup>		
			250 A	JD6-A	-	25 kA	<sup>2)</sup>		
			250 A	HJD6-A	-	35 kA	<sup>2)</sup>		
			250 A	HJXD6-A	-	35 kA	<sup>2)</sup>		
			250 A	HHJD6	-	50 kA	<sup>2)</sup>		
			250 A	HHJXD6	-	50 kA	<sup>2)</sup>		
			250 A	CJD6-A	-	100 kA	<sup>2)</sup>		
			250 A	3VA52	3VA5225-5E..	18 kA	<sup>2)</sup>		
			250 A	3VA52	3VA5225-6E..	25 kA	<sup>2)</sup>		
			250 A	3VA52	3VA5225-7E..	35 kA	<sup>2)</sup>		
			250 A	3VA62	3VA6225-5..	---	18 kA		
			250 A	3VA62	3VA6225-6..	---	22 kA		
			250 A	3VA62	3VA6225-7..	---	35 kA		
			250 A	3VA62	3VA6225-8..	---	50 kA		
	250 A	3VA63	3VA6325-5..	18 kA	<sup>2)</sup>				
	250 A	3VA63	3VA6325-6..	22 kA	<sup>2)</sup>				
	250 A	3VA63	3VA6325-7..	35 kA	<sup>2)</sup>				
	250 A	3VA63	3VA6325-8..	50 kA	<sup>2)</sup>				
	200,0 kW	6SL32.0-.YH52-...	300 A	JXD6-A	-	25 kA	<sup>2)</sup>		
			300 A	JD6-A	-	25 kA	<sup>2)</sup>		
			300 A	HJD6-A	-	35 kA	<sup>2)</sup>		
			300 A	HJXD6-A	-	35 kA	<sup>2)</sup>		
			300 A	HHJD6	-	50 kA	<sup>2)</sup>		
			300 A	HHJXD6	-	50 kA	<sup>2)</sup>		
			300 A	CJD6-A	-	100 kA	<sup>2)</sup>		
			450 A	LXD6-A	-	25 kA	<sup>2)</sup>		
300 A			LD6-A	-	25 kA	<sup>2)</sup>			
300 A			HLD6-A	-	35 kA	<sup>2)</sup>			
300 A			HLXD6-A	-	35 kA	<sup>2)</sup>			
300 A			HHLD6	-	50 kA	<sup>2)</sup>			
300 A			HHLXD6	-	50 kA	<sup>2)</sup>			
450 A			CLD6-A	-	100 kA	<sup>2)</sup>			
400 A			3VA63	3VA6340-5..	18 kA	<sup>2)</sup>			
400 A			3VA63	3VA6340-6..	22 kA	<sup>2)</sup>			
400 A			3VA63	3VA6340-7..	35 kA	<sup>2)</sup>			
400 A			3VA63	3VA6340-8..	50 kA	<sup>2)</sup>			



Converter			Circuit Breaker					Min. enclosure volume	
Frame Size	Rated Power, (LO)	Article no.	Max. rated current			SCCR @		Metric	Imperial (USA)
						600 V	600 Y / 347 V		
	250,0 kW	6SL32.0-.YH54-...	350 A	JXD6-A	-	25 kA	<sup>2)</sup>		
			350 A	JD6-A	-	25 kA	<sup>2)</sup>		
			350 A	HJD6-A	-	35 kA	<sup>2)</sup>		
			350 A	HJXD6-A	-	35 kA	<sup>2)</sup>		
			350 A	HHJD6	-	50 kA	<sup>2)</sup>		
			350 A	HHJXD6	-	50 kA	<sup>2)</sup>		
			350 A	CJD6-A	-	100 kA	<sup>2)</sup>		
			450 A	LXD6-A	-	25 kA	<sup>2)</sup>		
			350 A	LD6-A	-	25 kA	<sup>2)</sup>		
			350 A	HLD6-A	-	35 kA	<sup>2)</sup>		
			350 A	HLXD6-A	-	35 kA	<sup>2)</sup>		
			350 A	HHLD6	-	50 kA	<sup>2)</sup>		
			350 A	HHLXD6	-	50 kA	<sup>2)</sup>		
			450 A	CLD6-A	-	100 kA	<sup>2)</sup>		
			400 A	3VA63	3VA6340-5..	18 kA	<sup>2)</sup>		
			400 A	3VA63	3VA6340-6..	22 kA	<sup>2)</sup>		
			400 A	3VA63	3VA6340-7..	35 kA	<sup>2)</sup>		
			400 A	3VA63	3VA6340-8..	50 kA	<sup>2)</sup>		
FSH	315,0 kW	6SL32.0-.YH56-...							
	355,0 kW	6SL32.0-.YH58-...							
	400,0 kW	6SL32.0-.YH60-...							
	450,0 kW	6SL32.0-.YH62-...							
FSH	500,0 kW	6SL32.0-.YH64-...							
	560,0 kW	6SL32.0-.YH66-...							
	630,0 kW	6SL32.0-.YH68-...							

<sup>2)</sup> The SCCR shown in the table for 3 phase straight rated 600V AC supply can also be applied to a 3 phase center point grounded (slash rated) supply of 600Y/347 V AC. However, the SCCR shown in the table for a 3 phase center point grounded (slash rated) supply CANNOT be applied to a straight rated supply.

### 3 Further information



Further information is available on the internet:

- Manuals  
<https://support.industry.siemens.com/cs/ww/de/ps/13206/man>
- Siemens SENTRON fuses / 3NA fuses  
<https://support.industry.siemens.com/cs/ww/en/view/45314810>
- Low-Voltage Power Distribution and Electrical Installation Technology  
<https://support.industry.siemens.com/cs/ww/en/view/109482234>
- SIRIUS Industrial Controls  
<https://support.industry.siemens.com/cs/ww/en/view/109747945>
- IEC Circuit Breakers, 3VA1 series  
<https://support.industry.siemens.com/cs/ww/en/view/109743932>
- UL Molded Case Circuit Breakers, 3VA5 series Circuit Breakers  
<https://support.industry.siemens.com/cs/ww/en/view/109744301>
- UL Molded Case Circuit Breakers, SENTRON & VL series, see Siemens SPEEDFAX Product Catalog, Section 7  
<https://w3.usa.siemens.com/powerdistribution/us/en/speedfax-product-catalog/Pages/speedfax-product-catalog.aspx>