



Edition

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PRODUCT INFORMATION

# SINAMICS

G220

Protective Devices

**SIEMENS**

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# 1 IEC applications

## 1.1 General Notes

Protection for safety must be provided in accordance with

- IEC 60364 standard series
- Any additional local standards and regulations for electrical installations.

The tables below provide information for each converter type and article number on the following items:

- Suitable protective devices: The specification includes the type or article number of the overcurrent protective devices (OCPD). In many cases, two values of rated current are shown for the same converter. The higher one represents the maximum permissible nominal current of the OCPD that provides protection, the lower one is a typical nominal current that better fits to the converter. Current ratings between these two values are suitable as well.
- Maximum ICC (conditional short circuit current): This is the maximum RMS value of a prospective short circuit current, available from a supply source.
- Minimum enclosure volume: In the end application, the converter shall be installed in an outer enclosure or control cabinet which shall meet the minimum enclosure volume requirement.
- Minimum  $I_{cp,mr}$  (prospective short-circuit current): RMS value of a minimum prospective short-circuit current, which shall be available from the source to ensure operation of the specific type of short-circuit protective device.

Notes on the selection of protective devices

- Protective devices of the same type as specified in the tables with a lower ampere rating may be used, if suitable for the application.
- Protective devices of the same type as specified in the tables with a lower interrupting rating may be used, if suitable for the application. In such case, this lower interrupting current rating of a protective device shall be specified as the ICC of a converter and protective device combination.
- The voltage rating of the protective device must be at least the voltage rating of the supply circuit.

The converter provides:

- Integral Motor Overload Protection which reduces the output current flow under overload conditions. Refer to manual for adjustments.
- Integral Output Short-Circuit Protection.

## 1.2 SINAMICS G220

### 1.2.1 Protection class IP20

#### 1.2.1.1 IEC standard fuses

IEC standard fuses for IP20, 3AC 200...240V

Converter			Protective device				Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no. 1)	I <sub>cp,mf</sub> /kA	I <sub>cc</sub> /kA	Metric	Imperial
FSA	0.55 kW	6SL4112-OCA05-0.F0	6	3NA3801	0.15	100 @ 240 V	0.192 m <sup>3</sup>	6.78 ft <sup>3</sup>
			16	3NA3805	0.4	100 @ 240 V		
	0.75 kW	6SL4112-OCA06-0.F0	10	3NA3803	0.25	100 @ 240 V		
			16	3NA3805	0.4	100 @ 240 V		
	1.1 kW	6SL4112-OCA08-0.F0	10	3NA3803	0.25	100 @ 240 V		
			16	3NA3805	0.4	100 @ 240 V		
1.5 kW	6SL4112-OCA10-0.F0	16	3NA3805	0.4	100 @ 240 V			
2.2 kW	6SL4112-OCA11-0.F0	16	3NA3805	0.4	100 @ 240 V			
FSB	3 kW	6SL4112-OCA12-0.F0	20	3NA3807	0.5	100 @ 240 V	0.24 m <sup>3</sup>	8.48 ft <sup>3</sup>
			32	3NA3812	0.8	100 @ 240 V		
	4 kW	6SL4112-OCA13-0.F0	25	3NA3810	0.62	100 @ 240 V		
			32	3NA3812	0.8	100 @ 240 V		

Converter			Protective device				Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no. 1)	I <sub>cp,mf</sub> /kA	I <sub>cc</sub> /kA	Metric	Imperial
FSC	5.5 kW	6SL4112-OCA15-0.FO	40	3NA3817	1.0	100 @ 240 V	0.12 m <sup>3</sup>	4.24 ft <sup>3</sup>
			50	3NA3820	1.25	100 @ 240 V		
	7.5 kW	6SL4112-OCA16-0.FO	50	3NA3820	1.25	100 @ 240 V		
FSD2	11 kW	6SL4112-OCA17-0.FO	80	3NA3824	2.0	100 @ 240 V	0.36 m <sup>3</sup>	12.71 ft <sup>3</sup>
			125	3NA3832	3.12	100 @ 240 V		
	15 kW	6SL4112-OCA18-0.FO	80	3NA3824	2.0	100 @ 240 V		
			100	3NA3830	2.5	100 @ 240 V		
			125	3NA3832	3.12	100 @ 240 V		
	18.5 kW	6SL4112-OCA20-0.FO	100	3NA3830	2.5	100 @ 240 V		
125			3NA3832	3.12	100 @ 240 V			
FSE	22 kW	6SL4112-OCA21-0.FO	125	3NA3832	3.12	100 @ 240 V	0.384 m <sup>3</sup>	13.56 ft <sup>3</sup>
			160	3NA3836	4.0	100 @ 240 V		
	30 kW	6SL4112-OCA23-0.FO	160	3NA3836	4.0	100 @ 240 V		
FSF1	37 kW	6SL4112-OCA24-0.FO	160	3NA3836	4.0	100 @ 240 V	0.48 m <sup>3</sup>	16.95 ft <sup>3</sup>
			315	3NA3252	9.45	100 @ 240 V		
	45 kW	6SL4112-OCA26-0.FO	200	3NA3140	5.0	100 @ 240 V		
			315	3NA3252	9.45	100 @ 240 V		

Converter			Protective device				Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no. <sup>1)</sup>	I <sub>cp,mf</sub> /kA	I <sub>cc</sub> /kA	Metric	Imperial
	55 kW	6SL4112-OCA27-0.F0	250	3NA3144	7.5	100 @ 240 V		
			315	3NA3252	9.45	100 @ 240 V		

<sup>1)</sup> Siemens 3NA low-voltage fuses are recommended

### IEC standard fuses for IP20, 3AC 380...415/440...500V

Converter			Protective device				Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no. <sup>1)</sup>	I <sub>cp,mf</sub> /kA	I <sub>cc</sub> /kA	Metric	Imperial
FSA	1.1 kW	6SL4113-OCA08-..F0	6	3NA3801	0.15	100 @ 500 V	0.192 m <sup>3</sup>	6.78 ft <sup>3</sup>
			16	3NA3805	0.4	100 @ 500 V		
	1.5 kW	6SL4113-OCA10-..F0	10	3NA3803	0.25	100 @ 500 V		
			16	3NA3805	0.4	100 @ 500 V		
	2.2 kW	6SL4113-OCA11-..F0	10	3NA3803	0.25	100 @ 500 V		
			16	3NA3805	0.4	100 @ 500 V		
3 kW	6SL4113-OCA12-..F0	16	3NA3805	0.4	100 @ 500 V			
4 kW	6SL4113-OCA13-..F0	16	3NA3805	0.4	100 @ 500 V			
FSB	5.5 kW	6SL4113-OCA15-..F0	20	3NA3807	0.5	100 @ 500 V	0.24 m <sup>3</sup>	8.48 ft <sup>3</sup>
			32	3NA3812	0.8	100 @ 500 V		
	7.5 kW	6SL4113-OCA16-..F0	25	3NA3810	0.62	100 @ 500 V		
			32	3NA3812	0.8	100 @ 500 V		
FSC	11 kW	6SL4113-OCA17-..F0	40	3NA3817	1.0	100 @ 500 V	0.12 m <sup>3</sup>	4.24 ft <sup>3</sup>
			50	3NA3820	1.25	100 @ 500 V		
	15 kW	6SL4113-OCA18-..F0	50	3NA3820	1.25	100 @ 500 V		
FSD1	18.5 kW	6SL4113-OCA20-..F0	63	3NA3822	1.57	100 @ 500 V	0.16 m <sup>3</sup>	5.65 ft <sup>3</sup>
			80	3NA3824	2.0	100 @ 500 V		
	22 kW	6SL4113-OCA21-..F0	80	3NA3824	2.0	100 @ 500 V		

Converter			Protective device				Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no. <sup>1)</sup>	I <sub>cp,mf</sub> /kA	I <sub>cc</sub> /kA	Metric	Imperial
FSD2	30 kW	6SL4113-0CA23-..F0	80	3NA3824	2.0	100 @ 500 V	0.36 m <sup>3</sup>	12.71 ft <sup>3</sup>
			100	3NA3830	2.5	100 @ 500 V		
			125	3NA3832	3.12	100 @ 500 V		
	37 kW	6SL4113-0CA24-..F0	100	3NA3830	2.5	100 @ 500 V		
			125	3NA3832	3.12	100 @ 500 V		
FSE	45 kW	6SL4113-0CA26-..F0	125	3NA3832	3.12	100 @ 500 V	0.384 m <sup>3</sup>	13.56 ft <sup>3</sup>
			160	3NA3836	4.0	100 @ 500 V		
	55 kW	6SL4113-0CA27-..F0	160	3NA3836	4.0	100 @ 500 V		
FSF1	75 kW	6SL4113-0CA30-..F0	160	3NA3836	4.0	100 @ 500 V	0.48 m <sup>3</sup>	16.95 ft <sup>3</sup>
			315	3NA3252	9.45	100 @ 500 V		
	90 kW	6SL4113-0CA31-..F0	200	3NA3140	5.0	100 @ 500 V		
			315	3NA3252	9.45	100 @ 500 V		
	110 kW	6SL4113-0CA33-..F0	250	3NA3144	7.5	100 @ 500 V		
			315	3NA3252	9.45	100 @ 500 V		
FSF2	132 kW	6SL4113-0CA35-..F0	300	3NA3250	9.0	100 @ 500 V		
			315	3NA3252	9.45	100 @ 500 V		
	160 kW	6SL4113-0CA36-..F0	355	3NA3254	10.65	100 @ 500 V		
				3NA3354	10.65	100 @ 500 V		
			400	3NA3260	12.0	100 @ 500 V		
				3NA3360	12.0	100 @ 500 V		

<sup>1)</sup> Siemens 3NA low-voltage fuses are recommended

## 1.2.1.2 IEC semiconductor fuses

## IEC semiconductor fuses for IP20, 3AC 200...240V

Converter			Protective device				Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no.	I <sub>cp,mf</sub> /kA	I <sub>cc</sub> /kA @ 240 V	Metric	Imperial
FSA	0.55 kW	6SL4112-OCA05-0.FO	16	3NE1813-0	0.24	100	0.192 m <sup>3</sup>	6.78 ft <sup>3</sup>
	0.75 kW	6SL4112-OCA06-0.FO	16	3NE1813-0	0.24	100		
	1.1 kW	6SL4112-OCA08-0.FO	16	3NE1813-0	0.24	100		
	1.5 kW	6SL4112-OCA10-0.FO	16	3NE1813-0	0.24	100		
	2.2 kW	6SL4112-OCA11-0.FO	16	3NE1813-0	0.24	100		
FSB	3 kW	6SL4112-OCA12-0.FO	20	3NE1814-0	0.3	100	0.24 m <sup>3</sup>	8.48 ft <sup>3</sup>
			35	3NE1803-0	0.53	100		
	4 kW	6SL4112-OCA13-0.FO	25	3NE1815-0	0.38	100		
			35	3NE1803-0	0.53	100		
FSC	5.5 kW	6SL4112-OCA15-0.FO	40	3NE1802-0	0.6	100	0.12 m <sup>3</sup>	4.24 ft <sup>3</sup>
			50	3NE1817-0	0.75	100		
	7.5 kW	6SL4112-OCA16-0.FO	50	3NE1817-0	0.75	100		
FSD2	11 kW	6SL4112-OCA17-0.FO	80	3NE1820-0	1.2	100	0.36 m <sup>3</sup>	12.71 ft <sup>3</sup>
			125	3NE1022-0	1.88	100		
	15 kW	6SL4112-OCA18-0.FO	100	3NE1021-0	1.5	100		
			125	3NE1022-0	1.88	100		
	18.5 kW	6SL4112-OCA20-0.FO	100	3NE1021-0	1.5	100		
			125	3NE1022-0	1.88	100		
FSE	22 kW	6SL4112-OCA21-0.FO	125	3NE1022-0	1.88	100	0.384 m <sup>3</sup>	13.56 ft <sup>3</sup>
			160	3NE1224-0	2.4	100		
	30 kW	6SL4112-OCA23-0.FO	160	3NE1224-0	2.4	100		
FSF1	37 kW	6SL4112-OCA24-0.FO	160	3NE1224-0	2.4	100	0.48 m <sup>3</sup>	16.95 ft <sup>3</sup>
			315	3NE1230-0	6.3	100		
	45 kW	6SL4112-OCA26-0.FO	200	3NE1225-0	3.0	100		

Converter			Protective device				Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no.	I <sub>cp,mf</sub> /kA	I <sub>cc</sub> /kA @ 240 V	Metric	Imperial
	55 kW	6SL4112-OCA27-0.F0	315	3NE1230-0	6.3	100		
			250	3NE1227-0	5.0	100		
			315	3NE1230-0	6.3	100		

## IEC semiconductor fuses for IP20, 3AC 380...415/440...500V

Converter			Protective device				Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no.	I <sub>cp,mf</sub> /kA	I <sub>cc</sub> /kA @ 500 V	Metric	Imperial
FSA	1.1 kW	6SL4113-OCA08-..F0	16	3NE1813-0	0.24	100	0.192 m <sup>3</sup>	6.78 ft <sup>3</sup>
	1.5 kW	6SL4113-OCA10-..F0	16	3NE1813-0	0.24	100		
	2.2 kW	6SL4113-OCA11-..F0	16	3NE1813-0	0.24	100		
	3 kW	6SL4113-OCA12-..F0	16	3NE1813-0	0.24	100		
	4 kW	6SL4113-OCA13-..F0	16	3NE1813-0	0.24	100		
FSB	5.5 kW	6SL4113-OCA15-..F0	20	3NE1814-0	0.3	100	0.24 m <sup>3</sup>	8.48 ft <sup>3</sup>
			35	3NE1803-0	0.53	100		
	7.5 kW	6SL4113-OCA16-..F0	25	3NE1815-0	0.38	100		
			35	3NE1803-0	0.53	100		
FSC	11 kW	6SL4113-OCA17-..F0	40	3NE1802-0	0.6	100	0.12 m <sup>3</sup>	4.24 ft <sup>3</sup>
			50	3NE1817-0	0.75	100		
	15 kW	6SL4113-OCA18-..F0	50	3NE1817-0	0.75	100		
FSD1	18.5 kW	6SL4113-OCA20-..F0	63	3NE1818-0	0.94	100	0.16 m <sup>3</sup>	5.65 ft <sup>3</sup>
			80	3NE1820-0	1.2	100		
	22 kW	6SL4113-OCA21-..F0	80	3NE1820-0	1.2	100		
FSD2	30 kW	6SL4113-OCA23-..F0	100	3NE1021-0	1.5	100	0.36 m <sup>3</sup>	12.71 ft <sup>3</sup>
			125	3NE1022-0	1.88	100		
	37 kW	6SL4113-OCA24-..F0	100	3NE1021-0	1.5	100		
			125	3NE1022-0	1.88	100		

Converter			Protective device				Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no.	I <sub>op,mf</sub> /kA	I <sub>cc</sub> /kA @ 500 V	Metric	Imperial
FSE	45 kW	6SL4113-OCA26-..F0	125	3NE1022-0	1.88	100	0.384 m <sup>3</sup>	13.56 ft <sup>3</sup>
			160	3NE1224-0	2.4	100		
	55 kW	6SL4113-OCA27-..F0	160	3NE1224-0	2.4	100		
FSF1	75 kW	6SL4113-OCA30-..F0	160	3NE1224-0	2.4	100	0.48 m <sup>3</sup>	16.95 ft <sup>3</sup>
			315	3NE1230-0	6.3	100		
	90 kW	6SL4113-OCA31-..F0	200	3NE1225-0	3.0	100		
			315	3NE1230-0	6.3	100		
	110 kW	6SL4113-OCA33-..F0	250	3NE1227-0	5.0	100		
			315	3NE1230-0	6.3	100		
FSF2	132 kW	6SL4113-OCA35-..F0	315	3NE1230-0	6.3	100		
			350	3NE1331-0	7.0	100		
	160 kW	6SL4113-OCA36-..F0	350	3NE1331-0	7.0	100		
			400	3NE1332-0	8.0	100		
			450	3NE1333-0	9.0	100		
			500	3NE1334-0	10.0	100		

## 1.2.1.3 IEC motor starter protectors

## IEC motor starter protectors for IP20, 3AC 200...240V

Converter			Protective device				Min. enclosure volume			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no. <sup>1)</sup>	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA @ 240 V <sup>2)</sup>	Metric	Imperial		
FSA	0.55 kW	6SL4112-OCA05-0.FO	6	3RV2011-1GA..	0.1	65	0.192 m <sup>3</sup>	6.78 ft <sup>3</sup>		
				3RV2021-1GA..	0.1	65				
			14	3RV2031-4SA..	0.25	65				
				3RV2032-4SA..	0.25	65				
			16	3RV2011-4AA..	0.25	65				
				3RV2021-4AA..	0.25	65				
			17	3RV2031-4TA..	0.31	65				
				3RV2032-4TA..	0.31	65				
			0.75 kW	6SL4112-OCA06-0.FO	8	3RV2011-1HA..			0.12	65
						3RV2021-1HA..			0.12	65
					14	3RV2031-4SA..			0.25	65
						3RV2032-4SA..			0.25	65
	16	3RV2011-4AA..			0.25	65				
		3RV2021-4AA..			0.25	65				
	17	3RV2031-4TA..			0.31	65				
		3RV2032-4TA..			0.31	65				
	1.1 kW	6SL4112-OCA08-0.FO			10	3RV2011-1JA..			0.16	65
						3RV2021-1JA..			0.16	65
					14	3RV2031-4SA..			0.25	65
						3RV2032-4SA..			0.25	65
			16	3RV2011-4AA..	0.25	65				
				3RV2021-4AA..	0.25	65				
			17	3RV2031-4TA..	0.31	65				
				3RV2032-4TA..	0.31	65				

Converter			Protective device				Min. enclosure volume		
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no. <sup>1)</sup>	I <sub>op,mr</sub> / kA	I <sub>cc</sub> / kA @ 240 V <sup>2)</sup>	Metric	Imperial	
FSB	1.5 kW	6SL4112-OCA10-0.FO	12	3RV2011-1KA..	0.2	65	0.24 m <sup>3</sup>	8.48 ft <sup>3</sup>	
				3RV2021-1KA..	0.2	65			
			14	3RV2031-4SA..	0.25	65			
				3RV2032-4SA..	0.25	65			
			16	3RV2011-4AA..	0.25	65			
				3RV2021-4AA..	0.25	65			
	17	3RV2031-4TA..	0.31	65					
		3RV2032-4TA..	0.31	65					
	2.2 kW	6SL4112-OCA11-0.FO	16	3RV2011-4AA..	0.25	65			
				3RV2021-4AA..	0.25	65			
			17	3RV2031-4TA..	0.31	65			
				3RV2032-4TA..	0.31	65			
	FSB	3 kW	6SL4112-OCA12-0.FO	20	3RV2021-4BA..	0.31			65
					3RV2031-4BA..	0.31			65
3RV2032-4BA..					0.31	65			
32				3RV2021-4EA..	0.48	65			
				3RV2031-4EA..	0.5	65			
				3RV2032-4EA..	0.5	65			
4 kW		6SL4112-OCA13-0.FO	25	3RV2021-4DA..	0.39	65			
				3RV2031-4DA..	0.39	65			
				3RV2032-4DA..	0.39	65			
			32	3RV2021-4EA..	0.48	65			
				3RV2031-4EA..	0.5	65			
				3RV2032-4EA..	0.5	65			
FSC	5.5 kW	6SL4112-OCA15-0.FO	40	3RV2031-4UA..	0.7	5	0.12 m <sup>3</sup>	4.24 ft <sup>3</sup>	
					0.7	65	0.32 m <sup>3</sup>	11.30 ft <sup>3</sup>	

Converter			Protective device				Min. enclosure volume			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no. <sup>1)</sup>	I <sub>op,mr</sub> / kA	I <sub>cc</sub> / kA @ 240 V <sup>2)</sup>	Metric	Imperial		
				3RV2032-4UA..	0.7	5	0.12 m <sup>3</sup>	4.24 ft <sup>3</sup>		
					0.7	65	0.32 m <sup>3</sup>	11.30 ft <sup>3</sup>		
				3RV2041-4FA..	0.62	5	0.12 m <sup>3</sup>	4.24 ft <sup>3</sup>		
					3RV2042-4FA..	0.62			5	
			50	3RV2041-4HA..	0.78	5				
				3RV2042-4HA..	0.78	5				
			52	3RV2031-4WA..	0.89	5	0.32 m <sup>3</sup>	11.30 ft <sup>3</sup>		
					0.89	65				
				3RV2032-4WA..	0.89	5	0.12 m <sup>3</sup>	4.24 ft <sup>3</sup>		
					0.89	65	0.32 m <sup>3</sup>	11.30 ft <sup>3</sup>		
			7.5 kW	6SL4112-OCA16-0.F0	50	3RV2041-4HA..	0.78	5	0.12 m <sup>3</sup>	4.24 ft <sup>3</sup>
						3RV2042-4HA..	0.78	5		
					52	3RV2031-4WA..	0.89	5	0.32 m <sup>3</sup>	11.30 ft <sup>3</sup>
							0.89	65		
						3RV2032-4WA..	0.89	5	0.12 m <sup>3</sup>	4.24 ft <sup>3</sup>
							0.89	65	0.32 m <sup>3</sup>	11.30 ft <sup>3</sup>
FSD2	11 kW	6SL4112-OCA17-0.F0			73	3RV2031-4KA..	1.14	100	0.36 m <sup>3</sup>	12.71 ft <sup>3</sup>
						3RV2032-4KA..	1.14	100		
			75	3RV2041-4KA..	1.17	100				
				3RV2042-4KA..	1.17	100				
			100	3RV2041-4MA..	1.56	100				
				3RV2042-4MA..	1.56	100				
	15 kW	6SL4112-OCA18-0.F0	93	3RV2041-4YA..	1.56	100				
				3RV2042-4YA..	1.56	100				
			100	3RV2041-4MA..	1.56	100				
				3RV2042-4MA..	1.56	100				

Converter			Protective device				Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no. <sup>1)</sup>	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA @ 240 V <sup>2)</sup>	Metric	Imperial
	18.5 kW	6SL4112-OCA20-0.F0	100	3RV2041-4MA..	1.56	100		
				3RV2042-4MA..	1.56	100		
FSE	22 kW	6SL4112-OCA21-0.F0		Use a circuit breaker instead.			-	-
	30 kW	6SL4112-OCA23-0.F0		Use a circuit breaker instead.				

<sup>1)</sup> .. stands for type of electrical connection and can be replaced by: 10 (screw terminal); 20 (spring type terminal)

<sup>2)</sup> Icc values are only valid for supply grids with grounded star point (solidly grounded wye TN or TT systems)

### IEC motor starter protectors for IP20, 3AC 380...415/440...500V

Converter			Protective device				Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no. <sup>1)</sup>	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA @ 415 V <sup>2)</sup>	Metric	Imperial
FSA	1.1 kW	6SL4113-OCA08- ..F0	6	3RV2011-1GA..	0.1	65	0.192 m <sup>3</sup>	6.78 ft <sup>3</sup>
				3RV2021-1GA..	0.1	65		
			14	3RV2031-4SA..	0.25	65		
				3RV2032-4SA..	0.25	65		
			16	3RV2011-4AA..	0.25	55		
				3RV2021-4AA..	0.25	55		
			17	3RV2031-4TA..	0.31	65		
				3RV2032-4TA..	0.31	65		
	1.5 kW	6SL4113-OCA10- ..F0	8	3RV2011-1HA..	0.12	65		
				3RV2021-1HA..	0.12	65		
			14	3RV2031-4SA..	0.25	65		
				3RV2032-4SA..	0.25	65		
			16	3RV2011-4AA..	0.25	55		
				3RV2021-4AA..	0.25	55		
17	3RV2031-4TA..	0.31	65					

Converter			Protective device				Min. enclosure volume			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. <sup>1)</sup>	I <sub>op,mr</sub> / kA	I <sub>cc</sub> / kA @ 415 V <sup>2)</sup>	Metric	Imperial		
	2.2 kW	6SL4113-OCA11- ..F0	10	3RV2032-4TA..	0.31	65	0.24 m <sup>3</sup>	8.48 ft <sup>3</sup>		
				3RV2011-1JA..	0.16	65				
				3RV2021-1JA..	0.16	65				
			14	3RV2031-4SA..	0.25	65				
				3RV2032-4SA..	0.25	65				
				16	3RV2011-4AA..	0.25			55	
					3RV2021-4AA..	0.25			55	
			17	3RV2031-4TA..	0.31	65				
				3RV2032-4TA..	0.31	65				
			3 kW	6SL4113-OCA12- ..F0	12	3RV2011-1KA..			0.2	65
						3RV2021-1KA..			0.2	65
					14	3RV2031-4SA..			0.25	65
	3RV2032-4SA..	0.25				65				
	16	3RV2011-4AA..			0.25	55				
		3RV2021-4AA..			0.25	55				
	17	3RV2031-4TA..			0.31	65				
		3RV2032-4TA..			0.31	65				
	4 kW	6SL4113-OCA13- ..F0	16	3RV2011-4AA..	0.25	55				
				3RV2021-4AA..	0.25	55				
			17	3RV2031-4TA..	0.31	65				
				3RV2032-4TA..	0.31	65				
FSB			5.5 kW	6SL4113-OCA15- ..F0	20	3RV2021-4BA..	0.31	55		
						3RV2031-4BA..	0.31	65		
	3RV2032-4BA..	0.31				65				
	32	3RV2021-4EA..			0.48	55				
		3RV2031-4EA..			0.5	65				

Converter			Protective device				Min. enclosure volume						
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. <sup>1)</sup>	I <sub>op,mr</sub> / kA	I <sub>cc</sub> / kA @ 415 V <sup>2)</sup>	Metric	Imperial					
	7.5 kW	6SL4113-OCA16- ..F0	25	3RV2032-4EA..	0.5	65							
				3RV2021-4DA..	0.39	55							
				3RV2031-4DA..	0.39	65							
				3RV2032-4DA..	0.39	65							
			32	3RV2021-4EA..	0.48	55							
				3RV2031-4EA..	0.5	65							
				3RV2032-4EA..	0.5	65							
			FSC	11 kW	6SL4113-OCA17- ..F0	40			3RV2031-4UA..	0.7	5	0.12 m <sup>3</sup>	4.24 ft <sup>3</sup>
										0.7	65	0.32 m <sup>3</sup>	11.30 ft <sup>3</sup>
3RV2032-4UA..	0.7	5					0.12 m <sup>3</sup>	4.24 ft <sup>3</sup>					
	0.7	65					0.32 m <sup>3</sup>	11.30 ft <sup>3</sup>					
3RV2041-4FA..	0.62	5					0.12 m <sup>3</sup>	4.24 ft <sup>3</sup>					
	3RV2042-4FA..	0.62							5				
50	3RV2041-4HA..	0.78				5							
	3RV2042-4HA..	0.78				5							
52	3RV2031-4WA..	0.89				5							
		0.89				65			0.32 m <sup>3</sup>	11.30 ft <sup>3</sup>			
	3RV2032-4WA..	0.89				5	0.12 m <sup>3</sup>	4.24 ft <sup>3</sup>					
		0.89				65	0.32 m <sup>3</sup>	11.30 ft <sup>3</sup>					
15 kW	6SL4113-OCA18- ..F0	50		3RV2041-4HA..	0.78	5	0.12 m <sup>3</sup>	4.24 ft <sup>3</sup>					
				3RV2042-4HA..	0.78	5							
		52		3RV2031-4WA..	0.89	5							
					0.89	65			0.32 m <sup>3</sup>	11.30 ft <sup>3</sup>			
				3RV2032-4WA..	0.89	5			0.12 m <sup>3</sup>	4.24 ft <sup>3</sup>			
					0.89	65			0.32 m <sup>3</sup>	11.30 ft <sup>3</sup>			

Converter			Protective device				Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. <sup>1)</sup>	I <sub>op,mr</sub> / kA	I <sub>cc</sub> / kA @ 415 V <sup>2)</sup>	Metric	Imperial
FSD1	18.5 kW	6SL4113-OCA20- ..FO	59	3RV2031-4XA..	1.01	65	0.16 m <sup>3</sup>	5.65 ft <sup>3</sup>
				3RV2032-4XA..	1.01	100		
			63	3RV2041-4JA..	0.98	65		
				3RV2042-4JA..	0.98	100		
			73	3RV2031-4KA..	1.14	65		
				3RV2032-4KA..	1.14	100		
	75	3RV2041-4KA..	1.17	65				
		3RV2042-4KA..	1.17	100				
	22 kW	6SL4113-OCA21- ..FO	73	3RV2031-4KA..	1.14	65		
				3RV2032-4KA..	1.14	100		
			75	3RV2041-4KA..	1.17	65		
				3RV2042-4KA..	1.17	100		
FSD2	30 kW	6SL4113-OCA23- ..FO	93	3RV2041-4YA..	1.56	65	0.36 m <sup>3</sup>	12.71 ft <sup>3</sup>
				3RV2042-4YA..	1.56	100		
			100	3RV2041-4MA..	1.56	65		
				3RV2042-4MA..	1.56	100		
	37 kW	6SL4113-OCA24- ..FO	100	3RV2041-4MA..	1.56	65		
				3RV2042-4MA..	1.56	100		
FSE	45 kW	6SL4113-OCA26- ..FO		Use a circuit breaker instead.				
	55 kW	6SL4113-OCA27- ..FO		Use a circuit breaker instead.				
FSF1	75 kW	6SL4113-OCA30- ..FO		Use a circuit breaker instead.			-	-
	90 kW	6SL4113-OCA31- ..FO		Use a circuit breaker instead.				
	110 kW	6SL4113-OCA33- ..FO		Use a circuit breaker instead.				

Converter			Protective device				Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. <sup>1)</sup>	I <sub>op,mr</sub> / kA	I <sub>cc</sub> / kA @ 415 V <sup>2)</sup>	Metric	Imperial
FSF2	132 kW	6SL4113-OCA35- ..F0		Use a circuit breaker instead.				
	160 kW	6SL4113-OCA36- ..F0		Use a circuit breaker instead.				

<sup>1)</sup> .. stands for type of electrical connection and can be replaced by: 10 (screw terminal); 20 (spring type terminal)

<sup>2)</sup> I<sub>cc</sub> values are only valid for supply grids with grounded star point (solidly grounded wye TN or TT systems)

## 1.2.1.4 IEC circuit breakers

## IEC circuit breakers for IP20, 3AC 200...240V

Converter			Protective device				Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no. 1) 2) 3)	I <sub>cp,mf</sub> /kA	I <sub>cc</sub> /kA	Metric	Imperial
FSA	0.55 kW	6SL4112-OCA05-0.F0	6	5SY7306-7	0.06	15 @ 240 V	0.192 m <sup>3</sup>	6.78 ft <sup>3</sup>
			16	3VA1096-2ED3x-0AA0	0.38	25 @ 240 V		
				3VA1096-3ED3x-0AA0	0.38	36 @ 240 V		
				3VA1096-4ED3x-0AA0	0.38	55 @ 240 V		
				3VA1196-3E#3x-0AA0	0.38	36 @ 240 V		
				3VA1196-4E#3x-0AA0	0.38	55 @ 240 V		
				3VA1196-5E#3x-0AA0	0.38	65 @ 240 V		
	3VA1196-6E#3x-0AA0	0.38	65 @ 240 V					
	5SY7316-7	0.16	15 @ 240 V					
	0.75 kW	6SL4112-OCA06-0.F0	8	5SY7308-7	0.08	15 @ 240 V		
			16	3VA1096-2ED3x-0AA0	0.38	25 @ 240 V		
				3VA1096-3ED3x-0AA0	0.38	36 @ 240 V		
				3VA1096-4ED3x-0AA0	0.38	55 @ 240 V		
				3VA1196-3E#3x-0AA0	0.38	36 @ 240 V		
3VA1196-4E#3x-0AA0				0.38	55 @ 240 V			
3VA1196-5E#3x-0AA0				0.38	65 @ 240 V			

Converter			Protective device				Min. enclosure volume		
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no. 1) 2) 3)	I <sub>op.mr</sub> / kA	I <sub>cc</sub> / kA	Metric	Imperial	
				3VA1196-6E#3x-0AA0	0.38	65 @ 240 V			
				5SY7316-7	0.16	15 @ 240 V			
	1.1 kW	6SL4112-OCA08-0.FO	10	5SY7310-7	0.1	15 @ 240 V			
				16	3VA1096-2ED3x-0AA0	0.38			25 @ 240 V
					3VA1096-3ED3x-0AA0	0.38			36 @ 240 V
					3VA1096-4ED3x-0AA0	0.38			55 @ 240 V
					3VA1196-3E#3x-0AA0	0.38			36 @ 240 V
					3VA1196-4E#3x-0AA0	0.38			55 @ 240 V
					3VA1196-5E#3x-0AA0	0.38			65 @ 240 V
					3VA1196-6E#3x-0AA0	0.38			65 @ 240 V
	5SY7316-7	0.16	15 @ 240 V						
	1.5 kW	6SL4112-OCA10-0.FO	13	5SY7313-7	0.13	15 @ 240 V			
				16	3VA1096-2ED3x-0AA0	0.38			25 @ 240 V
					3VA1096-3ED3x-0AA0	0.38			36 @ 240 V
					3VA1096-4ED3x-0AA0	0.38			55 @ 240 V
3VA1196-3E#3x-0AA0					0.38	36 @ 240 V			
3VA1196-4E#3x-0AA0					0.38	55 @ 240 V			
3VA1196-5E#3x-0AA0					0.38	65 @ 240 V			

Converter			Protective device				Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no. 1) 2) 3)	I <sub>op.mf</sub> / kA	I <sub>cc</sub> / kA	Metric	Imperial
				3VA1196-6E#3x-0AA0	0.38	65 @ 240 V		
				5SY7316-7	0.16	15 @ 240 V		
	2.2 kW	6SL4112-OCA11-0.FO	16	3VA1096-2ED3x-0AA0	0.38	25 @ 240 V		
				3VA1096-3ED3x-0AA0	0.38	36 @ 240 V		
				3VA1096-4ED3x-0AA0	0.38	55 @ 240 V		
				3VA1196-3E#3x-0AA0	0.38	36 @ 240 V		
				3VA1196-4E#3x-0AA0	0.38	55 @ 240 V		
				3VA1196-5E#3x-0AA0	0.38	65 @ 240 V		
				3VA1196-6E#3x-0AA0	0.38	65 @ 240 V		
				5SY7316-7	0.16	15 @ 240 V		
FSB	3 kW	6SL4112-OCA12-0.FO	20	3VA1020-2ED3x-0AA0	0.38	25 @ 240 V	0.24 m <sup>3</sup>	8.48 ft <sup>3</sup>
				3VA1020-3ED3x-0AA0	0.38	36 @ 240 V		
				3VA1020-4ED3x-0AA0	0.38	55 @ 240 V		
				3VA1120-3E#3x-0AA0	0.38	36 @ 240 V		
				3VA1120-4E#3x-0AA0	0.38	55 @ 240 V		
				3VA1120-5E#3x-0AA0	0.38	65 @ 240 V		
				3VA1120-6E#3x-0AA0	0.38	65 @ 240 V		
				5SY7320-7	0.2	15 @ 240 V		

Converter			Protective device				Min. enclosure volume		
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no. 1) 2) 3)	I <sub>op.mr</sub> / kA	I <sub>cc</sub> / kA	Metric	Imperial	
			32	3VA1032-2ED3x-0AA0	0.38	25 @ 240 V			
				3VA1032-3ED3x-0AA0	0.38	36 @ 240 V			
				3VA1032-4ED3x-0AA0	0.38	55 @ 240 V			
				3VA1132-3E#3x-0AA0	0.38	36 @ 240 V			
				3VA1132-4E#3x-0AA0	0.38	55 @ 240 V			
				3VA1132-5E#3x-0AA0	0.38	65 @ 240 V			
				3VA1132-6E#3x-0AA0	0.38	65 @ 240 V			
				5SY7332-7	0.32	15 @ 240 V			
	4 kW	6SL4112-OCA13-0.FO		25	5SY7325-7	0.25			15 @ 240 V
				32	3VA1032-2ED3x-0AA0	0.38			25 @ 240 V
					3VA1032-3ED3x-0AA0	0.38			36 @ 240 V
					3VA1032-4ED3x-0AA0	0.38			55 @ 240 V
					3VA1132-3E#3x-0AA0	0.38			36 @ 240 V
					3VA1132-4E#3x-0AA0	0.38			55 @ 240 V
3VA1132-5E#3x-0AA0	0.38	65 @ 240 V							
				3VA1132-6E#3x-0AA0	0.38	65 @ 240 V			
				5SY7332-7	0.32	15 @ 240 V			

Converter			Protective device				Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no. 1) 2) 3)	I <sub>op.mr</sub> / kA	I <sub>cc</sub> / kA	Metric	Imperial
FSC	5.5 kW	6SL4112-OCA15-0.FO	32	3VA1032-2ED3x-0AA0	0.38	5 @ 240 V	0.12 m <sup>3</sup>	4.24 ft <sup>3</sup>
				3VA1032-3ED3x-0AA0	0.38	5 @ 240 V		
				3VA1032-4ED3x-0AA0	0.38	5 @ 240 V		
				3VA1132-3E#3x-0AA0	0.38	5 @ 240 V		
				3VA1132-4E#3x-0AA0	0.38	5 @ 240 V		
				3VA1132-5E#3x-0AA0	0.38	5 @ 240 V		
				3VA1132-6E#3x-0AA0	0.38	5 @ 240 V		
			40	5SY7340-7	0.4	5 @ 240 V		
			50	3VA1050-2ED3x-0AA0	0.6	5 @ 240 V		
				3VA1050-3ED3x-0AA0	0.6	5 @ 240 V		
				3VA1050-4ED3x-0AA0	0.6	5 @ 240 V		
				3VA1150-3E#3x-0AA0	0.6	5 @ 240 V		
				3VA1150-4E#3x-0AA0	0.6	5 @ 240 V		
				3VA1150-5E#3x-0AA0	0.6	5 @ 240 V		
	3VA1150-6E#3x-0AA0	0.6		5 @ 240 V				
	5SY7350-7	0.5	5 @ 240 V					
7.5 kW	6SL4112-OCA16-0.FO	50	3VA1050-2ED3x-0AA0	0.6	5 @ 240 V			

Converter			Protective device				Min. enclosure volume		
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>op.mf</sub> / kA	I <sub>cc</sub> / kA	Metric	Imperial	
				3VA1050-3ED3x-0AA0	0.6	5 @ 240 V			
				3VA1050-4ED3x-0AA0	0.6	5 @ 240 V			
				3VA1150-3E#3x-0AA0	0.6	5 @ 240 V			
				3VA1150-4E#3x-0AA0	0.6	5 @ 240 V			
				3VA1150-5E#3x-0AA0	0.6	5 @ 240 V			
				3VA1150-6E#3x-0AA0	0.6	5 @ 240 V			
				5SY7350-7	0.5	5 @ 240 V			
FSD2	11 kW	6SL4112-OCA17-0.F0	80	3VA1080-2ED3x-0AA0	0.96	25 @ 240 V	0.36 m <sup>3</sup>	12.71 ft <sup>3</sup>	
				3VA1080-3ED3x-0AA0	0.96	36 @ 240 V			
				3VA1080-4ED3x-0AA0	0.96	55 @ 240 V			
				3VA1180-3E#3x-0AA0	0.96	36 @ 240 V			
				3VA1180-4E#3x-0AA0	0.96	55 @ 240 V			
				3VA1180-5E#3x-0AA0	0.96	85 @ 240 V			
				3VA1180-6E#3x-0AA0	0.96	100 @ 240 V			
				100	3VA1010-2ED3x-0AA0	1.2			25 @ 240 V
					3VA1010-3ED3x-0AA0	1.2			36 @ 240 V
					3VA1010-4ED3x-0AA0	1.2			55 @ 240 V

Converter			Protective device				Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA	Metric	Imperial
				3VA1110-3E#3x-0AA0	1.2	36 @ 240 V		
				3VA1110-4E#3x-0AA0	1.2	55 @ 240 V		
				3VA1110-5E#3x-0AA0	1.2	85 @ 240 V		
				3VA1110-6E#3x-0AA0	1.2	100 @ 240 V		
				3VA2010-5##3x-0AA0	1.44	85 @ 240 V		
				3VA2010-6##3x-0AA0	1.44	100 @ 240 V		
				3VA2010-7##3x-0AA0	1.44	100 @ 240 V		
				3VA2010-8##3x-0AA0	1.44	100 @ 240 V		
				3VA2110-5##3x-0AA0	1.8	85 @ 240 V		
				3VA2110-6##3x-0AA0	1.8	100 @ 240 V		
				3VA2110-7##3x-0AA0	1.8	100 @ 240 V		
	3VA2110-8##3x-0AA0	1.8	100 @ 240 V					
	15 kW	6SL4112-0CA18-0.FO	80	3VA1080-2ED3x-0AA0	0.96	25 @ 240 V		
				3VA1080-3ED3x-0AA0	0.96	36 @ 240 V		
				3VA1080-4ED3x-0AA0	0.96	55 @ 240 V		
				3VA1180-3E#3x-0AA0	0.96	36 @ 240 V		
				3VA1180-4E#3x-0AA0	0.96	55 @ 240 V		

Converter			Protective device				Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no. 1) 2) 3)	I <sub>op.mf</sub> / kA	I <sub>cc</sub> / kA	Metric	Imperial
				3VA1180-5E#3x-0AA0	0.96	85 @ 240 V		
				3VA1180-6E#3x-0AA0	0.96	100 @ 240 V		
			100	3VA1010-2ED3x-0AA0	1.2	25 @ 240 V		
				3VA1010-3ED3x-0AA0	1.2	36 @ 240 V		
				3VA1010-4ED3x-0AA0	1.2	55 @ 240 V		
				3VA1110-3E#3x-0AA0	1.2	36 @ 240 V		
				3VA1110-4E#3x-0AA0	1.2	55 @ 240 V		
				3VA1110-5E#3x-0AA0	1.2	85 @ 240 V		
				3VA1110-6E#3x-0AA0	1.2	100 @ 240 V		
				3VA2010-5##3x-0AA0	1.44	85 @ 240 V		
				3VA2010-6##3x-0AA0	1.44	100 @ 240 V		
				3VA2010-7##3x-0AA0	1.44	100 @ 240 V		
				3VA2010-8##3x-0AA0	1.44	100 @ 240 V		
				3VA2110-5##3x-0AA0	1.8	85 @ 240 V		
				3VA2110-6##3x-0AA0	1.8	100 @ 240 V		
				3VA2110-7##3x-0AA0	1.8	100 @ 240 V		
				3VA2110-8##3x-0AA0	1.8	100 @ 240 V		

Converter			Protective device				Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>op.mr</sub> / kA	I <sub>cc</sub> / kA	Metric	Imperial
	18.5 kW	6SL4112-OCA20-0.FO	100	3VA1010-2ED3x-0AA0	1.2	25 @ 240 V		
				3VA1010-3ED3x-0AA0	1.2	36 @ 240 V		
				3VA1010-4ED3x-0AA0	1.2	55 @ 240 V		
				3VA1110-3E#3x-0AA0	1.2	36 @ 240 V		
				3VA1110-4E#3x-0AA0	1.2	55 @ 240 V		
				3VA1110-5E#3x-0AA0	1.2	85 @ 240 V		
				3VA1110-6E#3x-0AA0	1.2	100 @ 240 V		
				3VA2010-5##3x-0AA0	1.44	85 @ 240 V		
				3VA2010-6##3x-0AA0	1.44	100 @ 240 V		
				3VA2010-7##3x-0AA0	1.44	100 @ 240 V		
				3VA2010-8##3x-0AA0	1.44	100 @ 240 V		
				3VA2110-5##3x-0AA0	1.8	85 @ 240 V		
				3VA2110-6##3x-0AA0	1.8	100 @ 240 V		
				3VA2110-7##3x-0AA0	1.8	100 @ 240 V		
3VA2110-8##3x-0AA0	1.8	100 @ 240 V						
FSE	22 kW	6SL4112-OCA21-0.FO	125	3VA1112-3E#3x-0AA0	1.5	36 @ 240 V	0.384 m <sup>3</sup>	13.56 ft <sup>3</sup>
				3VA1112-4E#3x-0AA0	1.5	55 @ 240 V		

Converter			Protective device				Min. enclosure volume				
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>op.mr</sub> / kA	I <sub>cc</sub> / kA	Metric	Imperial			
				3VA1112-5E#3x-0AA0	1.5	85 @ 240 V					
				3VA1112-6E#3x-0AA0	1.5	100 @ 240 V					
			160	3VA2116-5##3x-0AA0	1.92	85 @ 240 V					
				3VA2116-6##3x-0AA0	1.92	100 @ 240 V					
				3VA2116-7##3x-0AA0	1.92	100 @ 240 V					
				3VA2116-8##3x-0AA0	1.92	100 @ 240 V					
			30 kW	6SL4112-OCA23-0.F0	125	3VA1112-3E#3x-0AA0			1.5	36 @ 240 V	
						3VA1112-4E#3x-0AA0			1.5	55 @ 240 V	
	3VA1112-5E#3x-0AA0	1.5				85 @ 240 V					
	3VA1112-6E#3x-0AA0	1.5				100 @ 240 V					
	160	3VA2116-5##3x-0AA0			1.92	85 @ 240 V					
		3VA2116-6##3x-0AA0			1.92	100 @ 240 V					
	FSF1	37 kW	6SL4112-OCA24-0.F0	160	3VA1116-3E#3x-0AA0	1.92			36 @ 240 V	0.48 m <sup>3</sup>	16.95 ft <sup>3</sup>
					3VA1116-4E#3x-0AA0	1.92			55 @ 240 V		
3VA1116-5E#3x-0AA0					1.92	85 @ 240 V					

Converter			Protective device				Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA	Metric	Imperial
			1.92	3VA1116-6E#3x-0AA0	1.92	100 @ 240 V		
				3VA1216-4EF3x-0AA0	1.92	55 @ 240 V		
				3VA1216-5EF3x-0AA0	1.92	85 @ 240 V		
				3VA1216-6EF3x-0AA0	1.92	100 @ 240 V		
				3VA2116-5##3x-0AA0	1.92	85 @ 240 V		
				3VA2116-6##3x-0AA0	1.92	100 @ 240 V		
				3VA2116-7##3x-0AA0	1.92	100 @ 240 V		
				3VA2116-8##3x-0AA0	1.92	100 @ 240 V		
				3VA2216-5##3x-0AA0	2.88	85 @ 240 V		
				3VA2216-6##3x-0AA0	2.88	100 @ 240 V		
			3VA2216-7##3x-0AA0	2.88	100 @ 240 V			
			3VA2216-8##3x-0AA0	2.88	100 @ 240 V			
			250	3VA1225-4EF3x-0AA0	3.0	55 @ 240 V		
				3VA1225-5EF3x-0AA0	3.0	85 @ 240 V		
				3VA1225-6EF3x-0AA0	3.0	100 @ 240 V		
				3VA2225-5##3x-0AA0	3.0	85 @ 240 V		
				3VA2225-6##3x-0AA0	3.0	100 @ 240 V		

Converter			Protective device				Min. enclosure volume		
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no. 1) 2) 3)	I <sub>op.mr</sub> / kA	I <sub>cc</sub> / kA	Metric	Imperial	
			400	3VA2225-7##3x-0AA0	3.0	100 @ 240 V			
				3VA2225-8##3x-0AA0	3.0	100 @ 240 V			
				3VA2340-5##3x-0AA0	4.8	85 @ 240 V			
				3VA2340-6##3x-0AA0	4.8	100 @ 240 V			
				3VA2340-7##3x-0AA0	4.8	100 @ 240 V			
				3VA2340-8##3x-0AA0	4.8	100 @ 240 V			
			200	3VA1220-4EF3x-0AA0	2.4	55 @ 240 V			
				3VA1220-5EF3x-0AA0	2.4	85 @ 240 V			
				3VA1220-6EF3x-0AA0	2.4	100 @ 240 V			
				250	3VA1225-4EF3x-0AA0	3.0			55 @ 240 V
					3VA1225-5EF3x-0AA0	3.0			85 @ 240 V
					3VA1225-6EF3x-0AA0	3.0			100 @ 240 V
	3VA2225-5##3x-0AA0	3.0	85 @ 240 V						
	3VA2225-6##3x-0AA0	3.0	100 @ 240 V						
	3VA2225-7##3x-0AA0	3.0	100 @ 240 V						
	3VA2225-8##3x-0AA0	3.0	100 @ 240 V						
	320	3VA1332-4EF32-0AA0	3.84	55 @ 240 V					
	45 kW	6SL4112-OCA26-0.F0							

Converter			Protective device				Min. enclosure volume		
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no. 1) 2) 3)	I <sub>op.mr</sub> / kA	I <sub>cc</sub> / kA	Metric	Imperial	
				3VA1332-5EF32-0AA0	3.84	85 @ 240 V			
				3VA1332-6EF32-0AA0	3.84	100 @ 240 V			
				3VA1332-7EF32-0AA0	3.84	100 @ 240 V			
			400	3VA2340-5##3x-0AA0	4.8	85 @ 240 V			
				3VA2340-6##3x-0AA0	4.8	100 @ 240 V			
				3VA2340-7##3x-0AA0	4.8	100 @ 240 V			
				3VA2340-8##3x-0AA0	4.8	100 @ 240 V			
			55 kW	6SL4112-OCA27-0.F0		250			3VA1225-4EF3x-0AA0
	3VA1225-5EF3x-0AA0	3.0							85 @ 240 V
	3VA1225-6EF3x-0AA0	3.0							100 @ 240 V
	3VA2225-5##3x-0AA0	3.0							85 @ 240 V
	3VA2225-6##3x-0AA0	3.0							100 @ 240 V
	3VA2225-7##3x-0AA0	3.0							100 @ 240 V
	3VA2225-8##3x-0AA0	3.0				100 @ 240 V			
	320	3VA1332-4EF32-0AA0				3.84			55 @ 240 V
3VA1332-5EF32-0AA0		3.84				85 @ 240 V			
3VA1332-6EF32-0AA0		3.84	100 @ 240 V						

Converter			Protective device				Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no. <sup>1) 2) 3)</sup>	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA	Metric	Imperial
			400	3VA1332-7EF32-0AA0	3.84	100 @ 240 V		
				3VA2340-5##3x-0AA0	4.8	85 @ 240 V		
				3VA2340-6##3x-0AA0	4.8	100 @ 240 V		
				3VA2340-7##3x-0AA0	4.8	100 @ 240 V		
				3VA2340-8##3x-0AA0	4.8	100 @ 240 V		
				3VA2440-5##3x-0AA0	7.2	85 @ 240 V		
				3VA2440-6##3x-0AA0	7.2	100 @ 240 V		
				3VA2440-7##3x-0AA0	7.2	100 @ 240 V		
				3VA2440-8##3x-0AA0	7.2	100 @ 240 V		

<sup>1)</sup> x stands for type of electrical connection and can be replaced by: 2 (nut keeper kit) or 6 (box terminal)

<sup>2)</sup> # stands for type of release and can be replaced by: D (fixed thermal fixed magnetic trip unit), E (adjustable thermal fixed magnetic trip Unit) or F (adjustable thermal adjustable magnetic Trip unit)

<sup>3)</sup> ## stands for type of release and can be replaced by: HL ( line protection LI), HM (line protection LIG), HK (line protection ELISA LI), HN (Line and generator protection LSI), JP (Line and generator protection LSI, with display), JQ (Line and generator protection LSIG, with display), KP (Line and generator protection LSI, with display, with measurement function), KQ (Line and generator protection LSIG, with display, with measurement function)

### IEC circuit breakers for IP20, 3AC 380...415/440...500V

Converter			Protective device				Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no. <sup>1) 2) 3)</sup>	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA	Metric	Imperial
FSA	1.1 kW	6SL4113-OCA08-..FO	6	5SY7306-7	0.06	15 @ 400 V	0.192 m <sup>3</sup>	6.78 ft <sup>3</sup>
			16	3VA1096-2ED3x-0AA0	0.38	5 @ 500 V		
					0.38	16 @ 415 V		

Converter			Protective device				Min. enclosure volume				
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA	Metric	Imperial			
				3VA1096-3ED3x-0AA0	0.38	5 @ 500 V					
					0.38	25 @ 415 V					
				3VA1096-4ED3x-0AA0	0.38	5 @ 500 V					
					0.38	36 @ 415 V					
				3VA1196-3E#3x-0AA0	0.38	5 @ 500 V					
					0.38	25 @ 415 V					
				3VA1196-4E#3x-0AA0	0.38	5 @ 500 V					
					0.38	36 @ 415 V					
			3VA1196-5E#3x-0AA0	0.38	5 @ 500 V						
				0.38	55 @ 415 V						
			3VA1196-6E#3x-0AA0	0.38	5 @ 500 V						
				0.38	65 @ 415 V						
			5SY7316-7	0.16	15 @ 400 V						
				1.5 kW	6SL4113-0CA10-..F0	8			5SY7308-7	0.08	15 @ 400 V
						16			3VA1096-2ED3x-0AA0	0.38	5 @ 500 V
										0.38	16 @ 415 V
3VA1096-3ED3x-0AA0	0.38	5 @ 500 V									
	0.38	25 @ 415 V									
3VA1096-4ED3x-0AA0	0.38	5 @ 500 V									
	0.38	36 @ 415 V									
3VA1196-3E#3x-0AA0	0.38	5 @ 500 V									
	0.38	25 @ 415 V									
3VA1196-4E#3x-0AA0	0.38	5 @ 500 V									
	0.38	36 @ 415 V									
3VA1196-5E#3x-0AA0	0.38	5 @ 500 V									
	0.38	55 @ 415 V									

Converter			Protective device				Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA	Metric	Imperial
	2.2 kW	6SL4113-0CA11-..FO		3VA1196-6E#3x-0AA0	0.38	5 @ 500 V		
					0.38	65 @ 415 V		
				5SY7316-7	0.16	15 @ 400 V		
			10	5SY7310-7	0.1	15 @ 400 V		
			16	3VA1096-2ED3x-0AA0	0.38	5 @ 500 V		
					0.38	16 @ 415 V		
				3VA1096-3ED3x-0AA0	0.38	5 @ 500 V		
					0.38	25 @ 415 V		
				3VA1096-4ED3x-0AA0	0.38	5 @ 500 V		
					0.38	36 @ 415 V		
	3VA1196-3E#3x-0AA0	0.38		5 @ 500 V				
		0.38		25 @ 415 V				
	3VA1196-4E#3x-0AA0	0.38		5 @ 500 V				
		0.38		36 @ 415 V				
	3VA1196-5E#3x-0AA0	0.38	5 @ 500 V					
		0.38	55 @ 415 V					
	3VA1196-6E#3x-0AA0	0.38	5 @ 500 V					
		0.38	65 @ 415 V					
	5SY7316-7	0.16	15 @ 400 V					
	3 kW	6SL4113-0CA12-..FO	13	5SY7313-7	0.13	15 @ 400 V		
16				3VA1096-2ED3x-0AA0	0.38	5 @ 500 V		
			0.38		16 @ 415 V			
			3VA1096-3ED3x-0AA0	0.38	5 @ 500 V			
0.38				25 @ 415 V				
3VA1096-4ED3x-0AA0			0.38	5 @ 500 V				
			0.38	36 @ 415 V				

Converter			Protective device				Min. enclosure volume				
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA	Metric	Imperial			
				3VA1196-3E#3x-0AA0	0.38	5 @ 500 V					
					0.38	25 @ 415 V					
					3VA1196-4E#3x-0AA0	0.38			5 @ 500 V		
						0.38			36 @ 415 V		
					3VA1196-5E#3x-0AA0	0.38			5 @ 500 V		
						0.38			55 @ 415 V		
				3VA1196-6E#3x-0AA0	0.38	5 @ 500 V					
					0.38	65 @ 415 V					
				5SY7316-7	0.16	15 @ 400 V					
				4 kW	6SL4113-OCA13-..FO	16			3VA1096-2ED3x-0AA0	0.38	5 @ 500 V
										0.38	16 @ 415 V
									3VA1096-3ED3x-0AA0	0.38	5 @ 500 V
										0.38	25 @ 415 V
									3VA1096-4ED3x-0AA0	0.38	5 @ 500 V
										0.38	36 @ 415 V
									3VA1196-3E#3x-0AA0	0.38	5 @ 500 V
										0.38	25 @ 415 V
									3VA1196-4E#3x-0AA0	0.38	5 @ 500 V
0.38	36 @ 415 V										
3VA1196-5E#3x-0AA0	0.38	5 @ 500 V									
	0.38	55 @ 415 V									
3VA1196-6E#3x-0AA0	0.38	5 @ 500 V									
	0.38	65 @ 415 V									
5SY7316-7	0.16	15 @ 400 V									
FSB	5.5 kW	6SL4113-OCA15-..FO	20	3VA1020-2ED3x-0AA0	0.38	5 @ 500 V	0.24 m <sup>3</sup>	8.48 ft <sup>3</sup>			
					0.38	16 @ 415 V					

Converter			Protective device				Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA	Metric	Imperial
				3VA1020-3ED3x-0AA0	0.38	5 @ 500 V		
					0.38	25 @ 415 V		
				3VA1020-4ED3x-0AA0	0.38	5 @ 500 V		
					0.38	36 @ 415 V		
				3VA1120-3E#3x-0AA0	0.38	5 @ 500 V		
					0.38	25 @ 415 V		
				3VA1120-4E#3x-0AA0	0.38	5 @ 500 V		
					0.38	36 @ 415 V		
				3VA1120-5E#3x-0AA0	0.38	5 @ 500 V		
					0.38	55 @ 415 V		
				3VA1120-6E#3x-0AA0	0.38	5 @ 500 V		
					0.38	65 @ 415 V		
				5SY7320-7	0.2	15 @ 400 V		
				32	3VA1032-2ED3x-0AA0	0.38		
			0.38			16 @ 415 V		
			3VA1032-3ED3x-0AA0		0.38	5 @ 500 V		
					0.38	25 @ 415 V		
			3VA1032-4ED3x-0AA0		0.38	5 @ 500 V		
					0.38	36 @ 415 V		
			3VA1132-3E#3x-0AA0		0.38	5 @ 500 V		
					0.38	25 @ 415 V		
			3VA1132-4E#3x-0AA0		0.38	5 @ 500 V		
					0.38	36 @ 415 V		
			3VA1132-5E#3x-0AA0		0.38	5 @ 500 V		
0.38	55 @ 415 V							
3VA1132-6E#3x-0AA0	0.38	5 @ 500 V						

Converter			Protective device				Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA	Metric	Imperial
	7.5 kW	6SL4113-0CA16-..FO			0.38	65 @ 415 V		
				5SY7332-7	0.32	15 @ 400 V		
			25	5SY7325-7	0.25	15 @ 400 V		
			32	3VA1032-2ED3x-0AA0	0.38	5 @ 500 V		
					0.38	16 @ 415 V		
				3VA1032-3ED3x-0AA0	0.38	5 @ 500 V		
					0.38	25 @ 415 V		
				3VA1032-4ED3x-0AA0	0.38	5 @ 500 V		
					0.38	36 @ 415 V		
				3VA1132-3E#3x-0AA0	0.38	5 @ 500 V		
					0.38	25 @ 415 V		
				3VA1132-4E#3x-0AA0	0.38	5 @ 500 V		
					0.38	36 @ 415 V		
			3VA1132-5E#3x-0AA0	0.38	5 @ 500 V			
				0.38	55 @ 415 V			
3VA1132-6E#3x-0AA0	0.38	5 @ 500 V						
	0.38	65 @ 415 V						
5SY7332-7	0.32	15 @ 400 V						
FSC	11 kW	6SL4113-0CA17-..FO	32	3VA1032-2ED3x-0AA0	0.38	5 @ 415 V	0.12 m <sup>3</sup>	4.24 ft <sup>3</sup>
					0.38	5 @ 500 V		
				3VA1032-3ED3x-0AA0	0.38	5 @ 415 V		
					0.38	5 @ 500 V		
				3VA1032-4ED3x-0AA0	0.38	5 @ 415 V		
					0.38	5 @ 500 V		
				3VA1132-3E#3x-0AA0	0.38	5 @ 415 V		
					0.38	5 @ 500 V		

Converter			Protective device				Min. enclosure volume			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA	Metric	Imperial		
				3VA1132-4E#3x-0AA0	0.38	5 @ 415 V				
					0.38	5 @ 500 V				
				3VA1132-5E#3x-0AA0	0.38	5 @ 415 V				
					0.38	5 @ 500 V				
				3VA1132-6E#3x-0AA0	0.38	5 @ 415 V				
					0.38	5 @ 500 V				
				40	5SY7340-7	0.4			5 @ 400 V	
				50	3VA1050-2ED3x-0AA0	0.6			5 @ 415 V	
						0.6			5 @ 500 V	
					3VA1050-3ED3x-0AA0	0.6			5 @ 415 V	
						0.6			5 @ 500 V	
					3VA1050-4ED3x-0AA0	0.6			5 @ 415 V	
			0.6			5 @ 500 V				
			3VA1150-3E#3x-0AA0		0.6	5 @ 415 V				
					0.6	5 @ 500 V				
			3VA1150-4E#3x-0AA0		0.6	5 @ 415 V				
					0.6	5 @ 500 V				
			3VA1150-5E#3x-0AA0		0.6	5 @ 415 V				
					0.6	5 @ 500 V				
			3VA1150-6E#3x-0AA0	0.6	5 @ 415 V					
				0.6	5 @ 500 V					
				5SY7350-7	0.5	5 @ 400 V				
			15 kW	6SL4113-0CA18-..FO	50	3VA1050-2ED3x-0AA0			0.6	5 @ 415 V
									0.6	5 @ 500 V
3VA1050-3ED3x-0AA0	0.6	5 @ 415 V								
	0.6	5 @ 500 V								

Converter			Protective device				Min. enclosure volume							
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA	Metric	Imperial						
				3VA1050-4ED3x-0AA0	0.6	5 @ 415 V	0.16 m <sup>3</sup>	5.65 ft <sup>3</sup>						
					0.6	5 @ 500 V								
				3VA1150-3E#3x-0AA0	0.6	5 @ 415 V								
					0.6	5 @ 500 V								
				3VA1150-4E#3x-0AA0	0.6	5 @ 415 V								
					0.6	5 @ 500 V								
				3VA1150-5E#3x-0AA0	0.6	5 @ 415 V								
					0.6	5 @ 500 V								
				3VA1150-6E#3x-0AA0	0.6	5 @ 415 V								
					0.6	5 @ 500 V								
				5SY7350-7	0.5	5 @ 400 V								
				FSD1	18.5 kW	6SL4113-0CA20-..F0			63	3VA1063-2ED3x-0AA0	0.76	5 @ 500 V	0.16 m <sup>3</sup>	5.65 ft <sup>3</sup>
											0.76	16 @ 415 V		
										3VA1063-3ED3x-0AA0	0.76	5 @ 500 V		
0.76	25 @ 415 V													
3VA1063-4ED3x-0AA0	0.76	5 @ 500 V												
	0.76	36 @ 415 V												
3VA1163-3E#3x-0AA0	0.76	5 @ 500 V												
	0.76	25 @ 415 V												
3VA1163-4E#3x-0AA0	0.76	5 @ 500 V												
	0.76	36 @ 415 V												
3VA1163-5E#3x-0AA0	0.76	5 @ 500 V												
	0.76	55 @ 415 V												
3VA1163-6E#3x-0AA0	0.76	5 @ 500 V												
	0.76	70 @ 415 V												
3VA2063-5##3x-0AA0	0.91	5 @ 500 V												

Converter			Protective device				Min. enclosure volume			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA	Metric	Imperial		
					0.91	55 @ 415 V				
					0.91	5 @ 500 V				
				3VA2063-6##3x-0AA0	0.91	85 @ 415 V				
					0.91	5 @ 500 V				
					0.91	100 @ 415 V				
				3VA2063-7##3x-0AA0	0.91	5 @ 500 V				
					0.91	100 @ 415 V				
					0.91	5 @ 500 V				
				3VA2063-8##3x-0AA0	0.91	100 @ 415 V				
					1.13	5 @ 500 V				
					1.13	55 @ 415 V				
				3VA2163-5##3x-0AA0	1.13	5 @ 500 V				
				1.13	85 @ 415 V					
				1.13	5 @ 500 V					
			3VA2163-6##3x-0AA0	1.13	100 @ 415 V					
				1.13	5 @ 500 V					
				1.13	100 @ 415 V					
			3VA2163-7##3x-0AA0	1.13	5 @ 500 V					
				1.13	100 @ 415 V					
				1.13	5 @ 500 V					
			3VA2163-8##3x-0AA0	1.13	100 @ 415 V					
			80						0.96	5 @ 500 V
									0.96	16 @ 415 V
									0.96	5 @ 500 V
0.96	25 @ 415 V									
3VA1080-3ED3x-0AA0	0.96	5 @ 500 V								
	0.96	36 @ 415 V								
	0.96	5 @ 500 V								
3VA1080-4ED3x-0AA0	0.96	25 @ 415 V								
	0.96	5 @ 500 V								
	0.96	5 @ 500 V								
3VA1180-3E#3x-0AA0	0.96	25 @ 415 V								
3VA1180-4E#3x-0AA0	0.96	5 @ 500 V								

Converter			Protective device				Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no. 1) 2) 3)	I <sub>op.mf</sub> / kA	I <sub>cc</sub> / kA	Metric	Imperial
					0.96	36 @ 415 V		
					0.96	5 @ 500 V		
				3VA1180-5E#3x-0AA0	0.96	55 @ 415 V		
				3VA1180-6E#3x-0AA0	0.96	5 @ 500 V		
					0.96	70 @ 415 V		
				100	3VA2010-5##3x-0AA0	1.44		
			1.44			55 @ 415 V		
			3VA2010-6##3x-0AA0		1.44	5 @ 500 V		
					1.44	85 @ 415 V		
			3VA2010-7##3x-0AA0		1.44	5 @ 500 V		
					1.44	100 @ 415 V		
			3VA2010-8##3x-0AA0		1.44	5 @ 500 V		
					1.44	100 @ 415 V		
			3VA2110-5##3x-0AA0		1.8	5 @ 500 V		
					1.8	55 @ 415 V		
			3VA2110-6##3x-0AA0		1.8	5 @ 500 V		
					1.8	85 @ 415 V		
			3VA2110-7##3x-0AA0		1.8	5 @ 500 V		
					1.8	100 @ 415 V		
			3VA2110-8##3x-0AA0	1.8	5 @ 500 V			
1.8	100 @ 415 V							
22 kW	6SL4113-0CA21-..FO	80		3VA1080-2ED3x-0AA0	0.96	5 @ 500 V		
				0.96	16 @ 415 V			
				3VA1080-3ED3x-0AA0	0.96	5 @ 500 V		

Converter			Protective device				Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no. 1) 2) 3)	I <sub>op.mr</sub> / kA	I <sub>cc</sub> / kA	Metric	Imperial
			100		0.96	25 @ 415 V		
					0.96	5 @ 500 V		
				3VA1080-4ED3x-0AA0	0.96	36 @ 415 V		
				3VA1180-3E#3x-0AA0	0.96	5 @ 500 V		
					0.96	25 @ 415 V		
				3VA1180-4E#3x-0AA0	0.96	5 @ 500 V		
					0.96	36 @ 415 V		
				3VA1180-5E#3x-0AA0	0.96	5 @ 500 V		
					0.96	55 @ 415 V		
				3VA1180-6E#3x-0AA0	0.96	5 @ 500 V		
					0.96	70 @ 415 V		
				100	3VA2010-5##3x-0AA0	1.44		
			1.44			55 @ 415 V		
			3VA2010-6##3x-0AA0		1.44	5 @ 500 V		
					1.44	85 @ 415 V		
			3VA2010-7##3x-0AA0		1.44	5 @ 500 V		
					1.44	100 @ 415 V		
			3VA2010-8##3x-0AA0		1.44	5 @ 500 V		
					1.44	100 @ 415 V		
			3VA2110-5##3x-0AA0		1.8	5 @ 500 V		
					1.8	55 @ 415 V		
			3VA2110-6##3x-0AA0		1.8	5 @ 500 V		
					1.8	85 @ 415 V		
			3VA2110-7##3x-0AA0	1.8	5 @ 500 V			

Converter			Protective device				Min. enclosure volume		
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no. 1) 2) 3)	I <sub>cp,mf</sub> / kA	I <sub>cc</sub> / kA	Metric	Imperial	
FSD2	30 kW	6SL4113-0CA23-..FO	80	3VA2110-8##3x-0AA0	1.8	100 @ 415 V	0.36 m <sup>3</sup>	12.71 ft <sup>3</sup>	
					1.8	5 @ 500 V			
					1.8	100 @ 415 V			
					3VA1080-2ED3x-0AA0	0.96			5 @ 500 V
						0.96			16 @ 415 V
					3VA1080-3ED3x-0AA0	0.96			5 @ 500 V
				0.96		25 @ 415 V			
				3VA1080-4ED3x-0AA0	0.96	5 @ 500 V			
					0.96	36 @ 415 V			
				3VA1180-3E#3x-0AA0	0.96	5 @ 500 V			
					0.96	25 @ 415 V			
				3VA1180-4E#3x-0AA0	0.96	5 @ 500 V			
					0.96	36 @ 415 V			
				3VA1180-5E#3x-0AA0	0.96	5 @ 500 V			
0.96	55 @ 415 V								
3VA1180-6E#3x-0AA0	0.96	5 @ 500 V							
	0.96	70 @ 415 V							
100				3VA1010-2ED3x-0AA0	1.2	5 @ 500 V			
					1.2	16 @ 415 V			
				3VA1010-3ED3x-0AA0	1.2	5 @ 500 V			
					1.2	25 @ 415 V			
				3VA1010-4ED3x-0AA0	1.2	5 @ 500 V			
					1.2	36 @ 415 V			
				3VA1110-3E#3x-0AA0	1.2	5 @ 500 V			
					1.2	25 @ 415 V			

Converter			Protective device				Min. enclosure volume				
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no. 1) 2) 3)	I <sub>op.mr</sub> / kA	I <sub>cc</sub> / kA	Metric	Imperial			
				3VA1110-4E#3x-0AA0	1.2	5 @ 500 V					
					1.2	36 @ 415 V					
				3VA1110-5E#3x-0AA0	1.2	5 @ 500 V					
					1.2	55 @ 415 V					
				3VA1110-6E#3x-0AA0	1.2	5 @ 500 V					
					1.2	70 @ 415 V					
				3VA2010-5##3x-0AA0	1.44	5 @ 500 V					
					1.44	55 @ 415 V					
				3VA2010-6##3x-0AA0	1.44	5 @ 500 V					
					1.44	85 @ 415 V					
				3VA2010-7##3x-0AA0	1.44	5 @ 500 V					
					1.44	100 @ 415 V					
				3VA2010-8##3x-0AA0	1.44	5 @ 500 V					
					1.44	100 @ 415 V					
				3VA2110-5##3x-0AA0	1.8	5 @ 500 V					
					1.8	55 @ 415 V					
				3VA2110-6##3x-0AA0	1.8	5 @ 500 V					
					1.8	85 @ 415 V					
				3VA2110-7##3x-0AA0	1.8	5 @ 500 V					
					1.8	100 @ 415 V					
				3VA2110-8##3x-0AA0	1.8	5 @ 500 V					
					1.8	100 @ 415 V					
				37 kW	6SL4113-0CA24-..FO	100			3VA1010-2ED3x-0AA0	1.2	5 @ 500 V
										1.2	16 @ 415 V

Converter			Protective device				Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>op.mr</sub> / kA	I <sub>cc</sub> / kA	Metric	Imperial
				3VA1010-3ED3x-0AA0	1.2	5 @ 500 V		
					1.2	25 @ 415 V		
				3VA1010-4ED3x-0AA0	1.2	5 @ 500 V		
					1.2	36 @ 415 V		
				3VA1110-3E#3x-0AA0	1.2	5 @ 500 V		
					1.2	25 @ 415 V		
				3VA1110-4E#3x-0AA0	1.2	5 @ 500 V		
					1.2	36 @ 415 V		
				3VA1110-5E#3x-0AA0	1.2	5 @ 500 V		
					1.2	55 @ 415 V		
				3VA1110-6E#3x-0AA0	1.2	5 @ 500 V		
					1.2	70 @ 415 V		
				3VA2010-5##3x-0AA0	1.44	5 @ 500 V		
					1.44	55 @ 415 V		
				3VA2010-6##3x-0AA0	1.44	5 @ 500 V		
					1.44	85 @ 415 V		
				3VA2010-7##3x-0AA0	1.44	5 @ 500 V		
					1.44	100 @ 415 V		
				3VA2010-8##3x-0AA0	1.44	5 @ 500 V		
					1.44	100 @ 415 V		
				3VA2110-5##3x-0AA0	1.8	5 @ 500 V		
					1.8	55 @ 415 V		
				3VA2110-6##3x-0AA0	1.8	5 @ 500 V		
					1.8	85 @ 415 V		
3VA2110-7##3x-0AA0	1.8	5 @ 500 V						

Converter			Protective device				Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA	Metric	Imperial
FSE	45 kW	6SL4113-OCA26-..FO	125	3VA2110-8##3x-0AA0	1.8	100 @ 415 V	0.384 m <sup>3</sup>	13.56 ft <sup>3</sup>
					1.8	5 @ 500 V		
				3VA2110-8##3x-0AA0	1.8	100 @ 415 V		
					1.5	7 @ 500 V		
				3VA1112-3E#3x-0AA0	1.5	25 @ 415 V		
					1.5	7 @ 500 V		
				3VA1112-4E#3x-0AA0	1.5	36 @ 415 V		
					1.5	10 @ 500 V		
				3VA1112-5E#3x-0AA0	1.5	55 @ 415 V		
					1.5	10 @ 500 V		
	3VA1112-6E#3x-0AA0	1.5	70 @ 415 V					
		1.92	10 @ 500 V					
	55 kW	6SL4113-OCA27-..FO	125	3VA2116-5##3x-0AA0	1.92	55 @ 415 V		
					1.92	10 @ 500 V		
				3VA2116-6##3x-0AA0	1.92	85 @ 415 V		
					1.92	10 @ 500 V		
				3VA2116-7##3x-0AA0	1.92	100 @ 415 V		
					1.92	10 @ 500 V		
				3VA2116-8##3x-0AA0	1.92	100 @ 415 V		
					1.92	10 @ 500 V		
3VA1112-3E#3x-0AA0				1.5	7 @ 500 V			
				1.5	25 @ 415 V			
3VA1112-4E#3x-0AA0	1.5	36 @ 415 V						
	1.5	10 @ 500 V						

Converter			Protective device				Min. enclosure volume						
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA	Metric	Imperial					
			160	3VA1112-6E#3x-0AA0	1.5	55 @ 415 V	0.48 m <sup>3</sup>	16.95 ft <sup>3</sup>					
					1.5	10 @ 500 V							
				1.5	70 @ 415 V								
				3VA2116-5##3x-0AA0	1.92	10 @ 500 V							
					1.92	55 @ 415 V							
				3VA2116-6##3x-0AA0	1.92	10 @ 500 V							
			1.92		85 @ 415 V								
			3VA2116-7##3x-0AA0	1.92	10 @ 500 V								
				1.92	100 @ 415 V								
			3VA2116-8##3x-0AA0	1.92	10 @ 500 V								
				1.92	100 @ 415 V								
			FSF1	75 kW	6SL4113-OCA30-..FO	160			3VA1116-3E#3x-0AA0	1.92	7 @ 500 V	0.48 m <sup>3</sup>	16.95 ft <sup>3</sup>
										1.92	25 @ 415 V		
									3VA1116-4E#3x-0AA0	1.92	7 @ 500 V		
1.92	36 @ 415 V												
3VA1116-5E#3x-0AA0	1.92	10 @ 500 V											
	1.92	55 @ 415 V											
3VA1116-6E#3x-0AA0	1.92	10 @ 500 V											
	1.92	70 @ 415 V											
3VA1216-4EF3x-0AA0	1.92	10 @ 500 V											
	1.92	36 @ 415 V											
3VA1216-5EF3x-0AA0	1.92	15 @ 500 V											
	1.92	55 @ 415 V											
3VA1216-6EF3x-0AA0	1.92	15 @ 500 V											
	1.92	70 @ 415 V											

Converter			Protective device				Min. enclosure volume				
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no. 1) 2) 3)	I <sub>op.mf</sub> / kA	I <sub>cc</sub> / kA	Metric	Imperial			
				3VA2116-5##3x-0AA0	1.92	36 @ 500 V					
					1.92	55 @ 415 V					
				3VA2116-6##3x-0AA0	1.92	55 @ 500 V					
					1.92	85 @ 415 V					
				3VA2116-7##3x-0AA0	1.92	85 @ 500 V					
					1.92	100 @ 415 V					
				3VA2116-8##3x-0AA0	1.92	100 @ 415 V					
					1.92	100 @ 500 V					
				3VA2216-5##3x-0AA0	2.88	36 @ 500 V					
					2.88	55 @ 415 V					
				3VA2216-6##3x-0AA0	2.88	55 @ 500 V					
					2.88	85 @ 415 V					
				3VA2216-7##3x-0AA0	2.88	85 @ 500 V					
					2.88	100 @ 415 V					
				3VA2216-8##3x-0AA0	2.88	100 @ 415 V					
					2.88	100 @ 500 V					
				250					3VA1225-4EF3x-0AA0	3.0	10 @ 500 V
										3.0	36 @ 415 V
			3VA1225-5EF3x-0AA0						3.0	15 @ 500 V	
									3.0	55 @ 415 V	
			3VA1225-6EF3x-0AA0						3.0	15 @ 500 V	
									3.0	70 @ 415 V	
			3VA2225-5##3x-0AA0	3.0	36 @ 500 V						

Converter			Protective device				Min. enclosure volume		
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA	Metric	Imperial	
				3VA2225-6##3x-0AA0	3.0	55 @ 415 V			
					3.0	55 @ 500 V			
					3.0	85 @ 415 V			
					3VA2225-7##3x-0AA0	3.0			85 @ 500 V
						3.0			100 @ 415 V
					3VA2225-8##3x-0AA0	3.0			100 @ 415 V
				3.0		100 @ 500 V			
				400	3VA2340-5##3x-0AA0	4.8			36 @ 500 V
						4.8			55 @ 415 V
					3VA2340-6##3x-0AA0	4.8			55 @ 500 V
						4.8			85 @ 415 V
					3VA2340-7##3x-0AA0	4.8			85 @ 500 V
			4.8			100 @ 415 V			
			3VA2340-8##3x-0AA0	4.8	100 @ 415 V				
			90 kW	6SL4113-0CA31-..FO	200	3VA1220-4EF3x-0AA0	2.4	10 @ 500 V	
							2.4	36 @ 415 V	
						3VA1220-5EF3x-0AA0	2.4	15 @ 500 V	
							2.4	55 @ 415 V	
						3VA1220-6EF3x-0AA0	2.4	15 @ 500 V	
							2.4	70 @ 415 V	
					250	3VA1225-4EF3x-0AA0	3.0	10 @ 500 V	
							3.0	36 @ 415 V	
						3VA1225-5EF3x-0AA0	3.0	15 @ 500 V	

Converter			Protective device				Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA	Metric	Imperial
					3.0	55 @ 415 V		
				3VA1225-6EF3x-0AA0	3.0	15 @ 500 V		
						3.0		
				3VA2225-5##3x-0AA0	3.0	36 @ 500 V		
						3.0		
				3VA2225-6##3x-0AA0	3.0	55 @ 500 V		
						3.0		
				3VA2225-7##3x-0AA0	3.0	85 @ 500 V		
						3.0		
				3VA2225-8##3x-0AA0	3.0	100 @ 415 V		
						3.0		
				320	3VA1332-4EF32-0AA0	3.84		
						3.84		
			3VA1332-5EF32-0AA0		3.84	10 @ 500 V		
						3.84		
			3VA1332-6EF32-0AA0		3.84	10 @ 500 V		
						3.84		
			3VA1332-7EF32-0AA0	3.84	10 @ 500 V			
					3.84	100 @ 415 V		
			400	3VA2340-5##3x-0AA0	4.8	36 @ 500 V		
						4.8		
				3VA2340-6##3x-0AA0	4.8	55 @ 500 V		
						4.8		
				3VA2340-7##3x-0AA0	4.8	85 @ 500 V		
	4.8	85 @ 500 V						

Converter			Protective device				Min. enclosure volume						
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA	Metric	Imperial					
					4.8	100 @ 415 V							
					3VA2340-8##3x-0AA0	4.8			100 @ 415 V				
	110 kW	6SL4113-0CA33-..F0		250	3VA1225-4EF3x-0AA0	3.0			10 @ 500 V				
						3.0			36 @ 415 V				
					3VA1225-5EF3x-0AA0	3.0			15 @ 500 V				
						3.0			55 @ 415 V				
					3VA1225-6EF3x-0AA0	3.0			15 @ 500 V				
						3.0			70 @ 415 V				
					3VA2225-5##3x-0AA0	3.0			36 @ 500 V				
						3.0			55 @ 415 V				
					3VA2225-6##3x-0AA0	3.0			55 @ 500 V				
						3.0			85 @ 415 V				
					3VA2225-7##3x-0AA0	3.0			85 @ 500 V				
						3.0			100 @ 415 V				
					3VA2225-8##3x-0AA0	3.0			100 @ 415 V				
						3.0			100 @ 500 V				
					320						3VA1332-4EF32-0AA0	3.84	10 @ 500 V
												3.84	36 @ 415 V
											3VA1332-5EF32-0AA0	3.84	10 @ 500 V
												3.84	55 @ 415 V
3VA1332-6EF32-0AA0	3.84	10 @ 500 V											
	3.84	70 @ 415 V											
3VA1332-7EF32-0AA0	3.84	10 @ 500 V											

Converter			Protective device				Min. enclosure volume		
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA	Metric	Imperial	
			400			3.84	100 @ 415 V		
						4.8	36 @ 500 V		
					3VA2340-5##3x-0AA0	4.8	55 @ 415 V		
						3VA2340-6##3x-0AA0	4.8		
					3VA2340-7##3x-0AA0		4.8		
						3VA2340-8##3x-0AA0	4.8		
					3VA2440-5##32-0AA0		4.8		
						3VA2440-6##32-0AA0	7.2		
					3VA2440-7##32-0AA0		7.2		
						3VA2440-8##32-0AA0	7.2		
					3VA2440-5##32-0AA0		7.2		
						3VA2440-6##32-0AA0	7.2		
					3VA2440-7##32-0AA0		7.2		
						3VA2440-8##32-0AA0	7.2		
FSF2	132 kW	6SL4113-0CA35-..FO	320		3VA1332-4EF32-0AA0		3.84	25 @ 500 V	
						3.84	36 @ 415 V		
					3VA1332-5EF32-0AA0	3.84	36 @ 500 V		
						3.84	55 @ 415 V		
					3VA1332-6EF32-0AA0	3.84	55 @ 500 V		
						3.84	70 @ 415 V		
					3VA1332-7EF32-0AA0	3.84	70 @ 500 V		
						3.84	100 @ 415 V		

Converter			Protective device				Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA	Metric	Imperial
			400	3VA1340-4EF32-0AA0	4.8	25 @ 500 V		
					4.8	36 @ 415 V		
				3VA1340-5EF32-0AA0	4.8	36 @ 500 V		
					4.8	55 @ 415 V		
				3VA1340-6EF32-0AA0	4.8	55 @ 500 V		
					4.8	70 @ 415 V		
				3VA1340-7EF32-0AA0	4.8	70 @ 500 V		
					4.8	100 @ 415 V		
				3VA2340-5##3x-0AA0	4.8	36 @ 500 V		
					4.8	55 @ 415 V		
				3VA2340-6##3x-0AA0	4.8	55 @ 500 V		
					4.8	85 @ 415 V		
				3VA2340-7##3x-0AA0	4.8	85 @ 500 V		
					4.8	100 @ 415 V		
				3VA2340-8##3x-0AA0	4.8	100 @ 415 V		
					7.2	36 @ 500 V		
				3VA2440-5##32-0AA0	7.2	55 @ 415 V		
					7.2	55 @ 500 V		
				3VA2440-6##32-0AA0	7.2	85 @ 415 V		
					7.2	85 @ 500 V		
				3VA2440-7##32-0AA0	7.2	100 @ 415 V		
					7.2	100 @ 415 V		
				3VA2440-8##32-0AA0	7.2	100 @ 415 V		
				160 kW	6SL4113-0CA36-..F0	320		

Converter			Protective device				Min. enclosure volume		
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>op.mr</sub> / kA	I <sub>cc</sub> / kA	Metric	Imperial	
					3.84	36 @ 415 V			
					3.84	36 @ 500 V			
				3VA1332-5EF32-0AA0	3.84	55 @ 415 V			
					3.84	55 @ 500 V			
					3.84	70 @ 415 V			
				3VA1332-6EF32-0AA0	3.84	70 @ 500 V			
					3.84	100 @ 415 V			
					3.84	100 @ 415 V			
				3VA1332-7EF32-0AA0	4.8	25 @ 500 V			
				400		3VA1340-4EF32-0AA0			4.8
			4.8						36 @ 500 V
					3VA1340-5EF32-0AA0	4.8			55 @ 415 V
						4.8			55 @ 500 V
					3VA1340-6EF32-0AA0	4.8			70 @ 415 V
						4.8			70 @ 500 V
					3VA1340-7EF32-0AA0	4.8			100 @ 415 V
						4.8			100 @ 415 V
					3VA2340-5##3x-0AA0	4.8			36 @ 500 V
						4.8			55 @ 415 V
				3VA2340-6##3x-0AA0	4.8	55 @ 500 V			
4.8	85 @ 415 V								
	3VA2340-7##3x-0AA0	4.8	70 @ 500 V						
		4.8	100 @ 415 V						
	3VA2340-8##3x-0AA0	4.8	100 @ 415 V						
	3VA2440-5##32-0AA0	7.2	36 @ 500 V						
		7.2	55 @ 415 V						

Converter			Protective device				Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no. <sup>1) 2) 3)</sup>	I <sub>op.mf</sub> / kA	I <sub>cc</sub> / kA	Metric	Imperial
				3VA2440-6##32-0AA0	7.2	55 @ 500 V		
					7.2	85 @ 415 V		
				3VA2440-7##32-0AA0	7.2	85 @ 500 V		
					7.2	100 @ 415 V		
				3VA2440-8##32-0AA0	7.2	100 @ 415 V		

<sup>1)</sup> x stands for type of electrical connection and can be replaced by: 2 (nut keeper kit) or 6 (box terminal)

<sup>2)</sup> # stands for type of release and can be replaced by: D (fixed thermal fixed magnetic trip unit), E (adjustable thermal fixed magnetic trip Unit) or F (adjustable thermal adjustable magnetic Trip unit)

<sup>3)</sup> ## stands for type of release and can be replaced by: HL ( line protection LI), HM (line protection LIG), HK (line protection ELISA LI), HN (Line and generator protection LSI), JP (Line and generator protection LSI, with display), JQ (Line and generator protection LSIG, with display), KP (Line and generator protection LSI, with display, with measurement function), KQ (Line and generator protection LSIG, with display, with measurement function)

## 1.2.2 Protection class IP55

### 1.2.2.1 IEC standard fuses

IEC standard fuses for IP55, 3AC 200...240V with maintenance switch

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. <sup>1)</sup>	I <sub>cp,mf</sub> / kA	I <sub>cc</sub> / kA
FSB	1.1 kW	6SL4112-0..08-0.F0	10	3NA3803	0.25	100 @ 240 V
			16	3NA3805	0.4	100 @ 240 V
	1.5 kW	6SL4112-0..10-0.F0	16	3NA3805	0.4	100 @ 240 V
	2.2 kW	6SL4112-0..11-0.F0	16	3NA3805	0.4	100 @ 240 V
	3 kW	6SL4112-0..12-0.F0	20	3NA3807	0.5	100 @ 240 V
			32	3NA3812	0.8	5 @ 240 V
	4 kW	6SL4112-0..13-0.F0	25	3NA3810	0.62	100 @ 240 V
			32	3NA3812	0.8	5 @ 240 V
FSC	5.5 kW	6SL4112-0..15-0.F0	40	3NA3817	1.0	10 @ 240 V
			50	3NA3820	1.25	5 @ 240 V
	7.5 kW	6SL4112-0..16-0.F0	40	3NA3817	1.0	10 @ 240 V
			50	3NA3820	1.25	5 @ 240 V
FSD2	11 kW	6SL4112-0..17-0.F0	63	3NA3822	1.57	100 @ 240 V
			80	3NA3824	2.0	50 @ 240 V
			125	3NA3832	3.12	5 @ 240 V
	15 kW	6SL4112-0..18-0.F0	63	3NA3822	1.57	100 @ 240 V
			80	3NA3824	2.0	50 @ 240 V
			100	3NA3830	2.5	50 @ 240 V
			125	3NA3832	3.12	5 @ 240 V
	18.5 kW	6SL4112-0..20-0.F0	100	3NA3830	2.5	50 @ 240 V
			125	3NA3832	3.12	5 @ 240 V
	FSE	22 kW	6SL4112-0..21-0.F0	100	3NA3830	2.5
125				3NA3832	3.12	50 @ 240 V

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. <sup>1)</sup>	I <sub>cp,mf</sub> / kA	I <sub>cc</sub> / kA
	30 kW	6SL4112-0..23-0.F0	160	3NA3836	4.0	50 @ 240 V
			125	3NA3832	3.12	100 @ 240 V
			160	3NA3836	4.0	50 @ 240 V
FSF1	37 kW	6SL4112-0..24-0.F0	160	3NA3836	4.0	65 @ 240 V
			200	3NA3140	5.0	55 @ 240 V
			315	3NA3252	9.45	10 @ 240 V
	45 kW	6SL4112-0..26-0.F0	200	3NA3140	5.0	55 @ 240 V
			315	3NA3252	9.45	10 @ 240 V
	55 kW	6SL4112-0..27-0.F0	250	3NA3144	7.5	20 @ 240 V
315			3NA3252	9.45	10 @ 240 V	

<sup>1)</sup> Siemens 3NA low-voltage fuses are recommended

#### IEC standard fuses for IP55, 3AC 200...240V without maintenance switch

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. <sup>1)</sup>	I <sub>cp,mf</sub> / kA	I <sub>cc</sub> / kA
FSB	1.1 kW	6SL4112-0J.08-0.F0	10	3NA3803	0.25	100 @ 240 V
			16	3NA3805	0.4	100 @ 240 V
	1.5 kW	6SL4112-0J.10-0.F0	16	3NA3805	0.4	100 @ 240 V
	2.2 kW	6SL4112-0J.11-0.F0	16	3NA3805	0.4	100 @ 240 V
	3 kW	6SL4112-0J.12-0.F0	20	3NA3807	0.5	100 @ 240 V
			32	3NA3812	0.8	100 @ 240 V
	4 kW	6SL4112-0J.13-0.F0	25	3NA3810	0.62	100 @ 240 V
			32	3NA3812	0.8	100 @ 240 V
FSC	5.5 kW	6SL4112-0J.15-0.F0	40	3NA3817	1.0	100 @ 240 V
			50	3NA3820	1.25	100 @ 240 V
	7.5 kW	6SL4112-0J.16-0.F0	50	3NA3820	1.25	100 @ 240 V

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. <sup>1)</sup>	I <sub>cp,mf</sub> / kA	I <sub>cc</sub> / kA
FSD2	11 kW	6SL4112-0J.17-0.F0	80	3NA3824	2.0	100 @ 240 V
			125	3NA3832	3.12	100 @ 240 V
	15 kW	6SL4112-0J.18-0.F0	80	3NA3824	2.0	100 @ 240 V
			100	3NA3830	2.5	100 @ 240 V
			125	3NA3832	3.12	100 @ 240 V
	18.5 kW	6SL4112-0J.20-0.F0	100	3NA3830	2.5	100 @ 240 V
125			3NA3832	3.12	100 @ 240 V	
FSE	22 kW	6SL4112-0J.21-0.F0	125	3NA3832	3.12	100 @ 240 V
			160	3NA3836	4.0	100 @ 240 V
	30 kW	6SL4112-0J.23-0.F0	160	3NA3836	4.0	100 @ 240 V
FSF1	37 kW	6SL4112-0J.24-0.F0	160	3NA3836	4.0	100 @ 240 V
			315	3NA3252	9.45	100 @ 240 V
	45 kW	6SL4112-0J.26-0.F0	200	3NA3140	5.0	100 @ 240 V
			315	3NA3252	9.45	100 @ 240 V
	55 kW	6SL4112-0J.27-0.F0	250	3NA3144	7.5	100 @ 240 V
			315	3NA3252	9.45	100 @ 240 V

<sup>1)</sup> Siemens 3NA low-voltage fuses are recommended

### IEC standard fuses for IP55, 3AC 380...415/440...500V with maintenance switch

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. <sup>1)</sup>	I <sub>cp,mf</sub> / kA	I <sub>cc</sub> / kA
FSB	1.1 kW	6SL4113-0..08-..F0	6	3NA3801	0.15	100 @ 500 V
			16	3NA3805	0.4	100 @ 500 V
	1.5 kW	6SL4113-0..10-..F0	10	3NA3803	0.25	100 @ 500 V
			16	3NA3805	0.4	100 @ 500 V
	2.2 kW	6SL4113-0..11-..F0	10	3NA3803	0.25	100 @ 500 V

Converter			Protective device					
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. <sup>1)</sup>	I <sub>cp,mf</sub> / kA	I <sub>cc</sub> / kA		
			16	3NA3805	0.4	100 @ 500 V		
			3 kW	6SL4113-0..12-..F0	16	3NA3805	0.4	100 @ 500 V
			4 kW	6SL4113-0..13-..F0	16	3NA3805	0.4	100 @ 500 V
	5.5 kW	6SL4113-0..15-..F0	20	3NA3807	0.5	100 @ 500 V		
			32	3NA3812	0.8	5 @ 500 V		
					0.8	10 @ 415 V		
	7.5 kW	6SL4113-0..16-..F0	25	3NA3810	0.62	100 @ 500 V		
			32	3NA3812	0.8	5 @ 500 V		
	FSC	11 kW	6SL4113-0..17-..F0	40	3NA3817	1.0	5 @ 500 V	
						1.0	10 @ 415 V	
50				3NA3820	1.25	5 @ 500 V		
15 kW		6SL4113-0..18-..F0	40	3NA3817	1.0	10 @ 415 V		
			50	3NA3820	1.25	5 @ 500 V		
FSD1	18.5 kW	6SL4113-0..20-..F0	50	3NA3820	1.25	100 @ 500 V		
			63	3NA3822	1.57	50 @ 500 V		
			80	3NA3824	2.0	5 @ 500 V		
	22 kW	6SL4113-0..21-..F0	50	3NA3820	1.25	100 @ 500 V		
			63	3NA3822	1.57	50 @ 500 V		
			80	3NA3824	2.0	5 @ 500 V		
FSD2	30 kW	6SL4113-0..23-..F0	63	3NA3822	1.57	100 @ 500 V		
			80	3NA3824	2.0	50 @ 500 V		
			100	3NA3830	2.5	50 @ 500 V		
			125	3NA3832	3.12	5 @ 500 V		
	37 kW	6SL4113-0..24-..F0	100	3NA3830	2.5	50 @ 500 V		
			125	3NA3832	3.12	5 @ 500 V		

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. <sup>1)</sup>	I <sub>cp,mf</sub> / kA	I <sub>cc</sub> / kA
FSE	45 kW	6SL4113-0..26-..F0	100	3NA3830	2.5	100 @ 500 V
			125	3NA3832	3.12	50 @ 500 V
			160	3NA3836	4.0	50 @ 500 V
	55 kW	6SL4113-0..27-..F0	125	3NA3832	3.12	100 @ 500 V
			160	3NA3836	4.0	50 @ 500 V
FSF1	75 kW	6SL4113-0..30-..F0	160	3NA3836	4.0	65 @ 500 V
			200	3NA3140	5.0	55 @ 500 V
			315	3NA3252	9.45	10 @ 500 V
	90 kW	6SL4113-0..31-..F0	200	3NA3140	5.0	55 @ 500 V
			315	3NA3252	9.45	10 @ 500 V
	110 kW	6SL4113-0..33-..F0	250	3NA3144	7.5	20 @ 500 V
315			3NA3252	9.45	10 @ 500 V	

<sup>1)</sup> Siemens 3NA low-voltage fuses are recommended

### IEC standard fuses for IP55, 3AC 380...415/440...500V without maintenance switch

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. <sup>1)</sup>	I <sub>cp,mf</sub> / kA	I <sub>cc</sub> / kA
FSB	1.1 kW	6SL4113-0J.08-..F0	6	3NA3801	0.15	100 @ 500 V
			16	3NA3805	0.4	100 @ 500 V
	1.5 kW	6SL4113-0J.10-..F0	10	3NA3803	0.25	100 @ 500 V
			16	3NA3805	0.4	100 @ 500 V
	2.2 kW	6SL4113-0J.11-..F0	10	3NA3803	0.25	100 @ 500 V
			16	3NA3805	0.4	100 @ 500 V
	3 kW	6SL4113-0J.12-..F0	16	3NA3805	0.4	100 @ 500 V
	4 kW	6SL4113-0J.13-..F0	16	3NA3805	0.4	100 @ 500 V
5.5 kW	6SL4113-0J.15-..F0	20	3NA3807	0.5	100 @ 500 V	

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. <sup>1)</sup>	I <sub>cp,mf</sub> / kA	I <sub>cc</sub> / kA
	7.5 kW	6SL4113-0J.16-..F0	32	3NA3812	0.8	100 @ 500 V
			25	3NA3810	0.62	100 @ 500 V
			32	3NA3812	0.8	100 @ 500 V
FSC	11 kW	6SL4113-0J.17-..F0	40	3NA3817	1.0	100 @ 500 V
			50	3NA3820	1.25	100 @ 500 V
	15 kW	6SL4113-0J.18-..F0	50	3NA3820	1.25	100 @ 500 V
FSD1	18.5 kW	6SL4113-0J.20-..F0	63	3NA3822	1.57	100 @ 500 V
			80	3NA3824	2.0	100 @ 500 V
	22 kW	6SL4113-0J.21-..F0	80	3NA3824	2.0	100 @ 500 V
FSD2	30 kW	6SL4113-0J.23-..F0	80	3NA3824	2.0	100 @ 500 V
			100	3NA3830	2.5	100 @ 500 V
			125	3NA3832	3.12	100 @ 500 V
	37 kW	6SL4113-0J.24-..F0	100	3NA3830	2.5	100 @ 500 V
			125	3NA3832	3.12	100 @ 500 V
FSE	45 kW	6SL4113-0J.26-..F0	125	3NA3832	3.12	100 @ 500 V
			160	3NA3836	4.0	100 @ 500 V
	55 kW	6SL4113-0J.27-..F0	160	3NA3836	4.0	100 @ 500 V
FSF1	75 kW	6SL4113-0J.30-..F0	160	3NA3836	4.0	100 @ 500 V
			315	3NA3252	9.45	100 @ 500 V
	90 kW	6SL4113-0J.31-..F0	200	3NA3140	5.0	100 @ 500 V
			315	3NA3252	9.45	100 @ 500 V
	110 kW	6SL4113-0J.33-..F0	250	3NA3144	7.5	100 @ 500 V
			315	3NA3252	9.45	100 @ 500 V

<sup>1)</sup> Siemens 3NA low-voltage fuses are recommended

## 1.2.2.2 IEC semiconductor fuses

IEC semiconductor fuses for IP55, 3AC 200...240V with maintenance switch

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no.	I <sub>cp,mf</sub> / kA	I <sub>cc</sub> / kA @ 240 V
FSB	1.1 kW	6SL4112-0..08-0.F0	16	3NE1813-0	0.24	100
	1.5 kW	6SL4112-0..10-0.F0	16	3NE1813-0	0.24	100
	2.2 kW	6SL4112-0..11-0.F0	16	3NE1813-0	0.24	100
	3 kW	6SL4112-0..12-0.F0	20	3NE1814-0	0.3	100
			35	3NE1803-0	0.53	100
	4 kW	6SL4112-0..13-0.F0	25	3NE1815-0	0.38	100
35			3NE1803-0	0.53	100	
FSC	5.5 kW	6SL4112-0..15-0.F0	35	3NE1803-0	0.53	100
			40	3NE1802-0	0.6	10
			50	3NE1817-0	0.75	5
	7.5 kW	6SL4112-0..16-0.F0	35	3NE1803-0	0.53	100
			40	3NE1802-0	0.6	10
			50	3NE1817-0	0.75	5
FSD2	11 kW	6SL4112-0..17-0.F0	63	3NE1818-0	0.94	100
			80	3NE1820-0	1.2	100
			100	3NE1021-0	1.5	100
	15 kW	6SL4112-0..18-0.F0	100	3NE1021-0	1.5	100
			125	3NE1022-0	1.88	5
	18.5 kW	6SL4112-0..20-0.F0	100	3NE1021-0	1.5	100
125			3NE1022-0	1.88	5	
FSE	22 kW	6SL4112-0..21-0.F0	125	3NE1022-0	1.88	100
			160	3NE1224-0	2.4	100
	30 kW	6SL4112-0..23-0.F0	160	3NE1224-0	2.4	100

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no.	I <sub>cp,mf</sub> / kA	I <sub>cc</sub> / kA @ 240 V
FSF1	37 kW	6SL4112-0..24-0.F0	160	3NE1224-0	2.4	100
			315	3NE1230-0	6.3	90
	45 kW	6SL4112-0..26-0.F0	200	3NE1225-0	3.0	100
			315	3NE1230-0	6.3	90
	55 kW	6SL4112-0..27-0.F0	250	3NE1227-0	5.0	100
			315	3NE1230-0	6.3	90

*IEC semiconductor fuses for IP55, 3AC 200...240V without maintenance switch*

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no.	I <sub>cp,mf</sub> / kA	I <sub>cc</sub> / kA @ 240 V
FSB	1.1 kW	6SL4112-0J.08-0.F0	16	3NE1813-0	0.24	100
	1.5 kW	6SL4112-0J.10-0.F0	16	3NE1813-0	0.24	100
	2.2 kW	6SL4112-0J.11-0.F0	16	3NE1813-0	0.24	100
	3 kW	6SL4112-0J.12-0.F0	20	3NE1814-0	0.3	100
			35	3NE1803-0	0.53	100
	4 kW	6SL4112-0J.13-0.F0	25	3NE1815-0	0.38	100
35			3NE1803-0	0.53	100	
FSC	5.5 kW	6SL4112-0J.15-0.F0	40	3NE1802-0	0.6	100
			50	3NE1817-0	0.75	100
	7.5 kW	6SL4112-0J.16-0.F0	50	3NE1817-0	0.75	100
FSD2	11 kW	6SL4112-0J.17-0.F0	80	3NE1820-0	1.2	100
			125	3NE1022-0	1.88	100
	15 kW	6SL4112-0J.18-0.F0	100	3NE1021-0	1.5	100
			125	3NE1022-0	1.88	100
	18.5 kW	6SL4112-0J.20-0.F0	100	3NE1021-0	1.5	100
			125	3NE1022-0	1.88	100

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no.	I <sub>cp,mf</sub> / kA	I <sub>cc</sub> / kA @ 240 V
FSE	22 kW	6SL4112-0J.21-0.F0	125	3NE1022-0	1.88	100
			160	3NE1224-0	2.4	100
	30 kW	6SL4112-0J.23-0.F0	160	3NE1224-0	2.4	100
FSF1	37 kW	6SL4112-0J.24-0.F0	160	3NE1224-0	2.4	100
			315	3NE1230-0	6.3	100
	45 kW	6SL4112-0J.26-0.F0	200	3NE1225-0	3.0	100
			315	3NE1230-0	6.3	100
	55 kW	6SL4112-0J.27-0.F0	250	3NE1227-0	5.0	100
			315	3NE1230-0	6.3	100

*IEC semiconductor fuses for IP55, 3AC 380...415/440...500V with maintenance switch*

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no.	I <sub>cp,mf</sub> / kA	I <sub>cc</sub> / kA @ 500 V
FSB	1.1 kW	6SL4113-0..08-..F0	16	3NE1813-0	0.24	100
	1.5 kW	6SL4113-0..10-..F0	16	3NE1813-0	0.24	100
	2.2 kW	6SL4113-0..11-..F0	16	3NE1813-0	0.24	100
	3 kW	6SL4113-0..12-..F0	16	3NE1813-0	0.24	100
	4 kW	6SL4113-0..13-..F0	16	3NE1813-0	0.24	100
	5.5 kW	6SL4113-0..15-..F0	20	3NE1814-0	0.3	100
			35	3NE1803-0	0.53	100
	7.5 kW	6SL4113-0..16-..F0	25	3NE1815-0	0.38	
35			3NE1803-0	0.53	100	
FSC	11 kW	6SL4113-0..17-..F0	35	3NE1803-0	0.53	100
			40	3NE1802-0	0.6	5
					0.6	10
			50	3NE1817-0	0.75	5

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no.	I <sub>cp,mir</sub> / kA	I <sub>cc</sub> / kA @ 500 V
	15 kW	6SL4113-0..18-..F0	35	3NE1803-0	0.53	100
			40	3NE1802-0	0.6	10
			50	3NE1817-0	0.75	5
FSD1	18.5 kW	6SL4113-0..20-..F0	63	3NE1818-0	0.94	100
			80	3NE1820-0	1.2	5
	22 kW	6SL4113-0..21-..F0	63	3NE1818-0	0.94	100
			80	3NE1820-0	1.2	5
FSD2	30 kW	6SL4113-0..23-..F0	80	3NE1820-0	1.2	100
			100	3NE1021-0	1.5	80
			125	3NE1022-0	1.88	5
	37 kW	6SL4113-0..24-..F0	80	3NE1820-0	1.2	100
			100	3NE1021-0	1.5	80
			125	3NE1022-0	1.88	5
FSE	45 kW	6SL4113-0..26-..F0	125	3NE1022-0	1.88	100
			160	3NE1224-0	2.4	100
	55 kW	6SL4113-0..27-..F0	160	3NE1224-0	2.4	100
FSF1	75 kW	6SL4113-0..30-..F0	160	3NE1224-0	2.4	100
			315	3NE1230-0	6.3	90
	90 kW	6SL4113-0..31-..F0	200	3NE1225-0	3.0	100
			315	3NE1230-0	6.3	90
	110 kW	6SL4113-0..33-..F0	250	3NE1227-0	5.0	100
			315	3NE1230-0	6.3	90

## IEC semiconductor fuses for IP55, 3AC 380...415/440...500V without maintenance switch

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no.	I <sub>cp,mf</sub> / kA	I <sub>cc</sub> / kA @ 500 V
FSB	1.1 kW	6SL4113-OJ.08-..F0	16	3NE1813-0	0.24	100
	1.5 kW	6SL4113-OJ.10-..F0	16	3NE1813-0	0.24	100
	2.2 kW	6SL4113-OJ.11-..F0	16	3NE1813-0	0.24	100
	3 kW	6SL4113-OJ.12-..F0	16	3NE1813-0	0.24	100
	4 kW	6SL4113-OJ.13-..F0	16	3NE1813-0	0.24	100
	5.5 kW	6SL4113-OJ.15-..F0	20	3NE1814-0	0.3	100
			35	3NE1803-0	0.53	100
	7.5 kW	6SL4113-OJ.16-..F0	25	3NE1815-0	0.38	100
35			3NE1803-0	0.53	100	
FSC	11 kW	6SL4113-OJ.17-..F0	40	3NE1802-0	0.6	100
			50	3NE1817-0	0.75	100
	15 kW	6SL4113-OJ.18-..F0	50	3NE1817-0	0.75	100
FSD1	18.5 kW	6SL4113-OJ.20-..F0	63	3NE1818-0	0.94	100
			80	3NE1820-0	1.2	100
	22 kW	6SL4113-OJ.21-..F0	80	3NE1820-0	1.2	100
FSD2	30 kW	6SL4113-OJ.23-..F0	100	3NE1021-0	1.5	100
			125	3NE1022-0	1.88	100
	37 kW	6SL4113-OJ.24-..F0	100	3NE1021-0	1.5	100
			125	3NE1022-0	1.88	100
FSE	45 kW	6SL4113-OJ.26-..F0	125	3NE1022-0	1.88	100
			160	3NE1224-0	2.4	100
	55 kW	6SL4113-OJ.27-..F0	160	3NE1224-0	2.4	100
FSF1	75 kW	6SL4113-OJ.30-..F0	160	3NE1224-0	2.4	100
			315	3NE1230-0	6.3	100
	90 kW	6SL4113-OJ.31-..F0	200	3NE1225-0	3.0	100

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no.	I <sub>cp,mir</sub> / kA	I <sub>cc</sub> / kA @ 500 V
			315	3NE1230-0	6.3	100
	110 kW	6SL4113-0J.33-..F0	250	3NE1227-0	5.0	100
			315	3NE1230-0	6.3	100

## 1.2.2.3 IEC motor starter protectors

IEC motor starter protectors for IP55, 3AC 200...240V with maintenance switch

Converter			Protective device					
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. <sup>1)</sup>	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA @ 240 V <sup>2)</sup>		
FSB	1.1 kW	6SL4112-0..08-0.F0	10	3RV2011-1JA..	0.16	5		
				3RV2021-1JA..	0.16	5		
			14	3RV2031-4SA..	0.25	5		
				3RV2032-4SA..	0.25	5		
			16	3RV2011-4AA..	0.25	5		
				3RV2021-4AA..	0.25	5		
			17	3RV2031-4TA..	0.31	5		
				3RV2032-4TA..	0.31	5		
			1.5 kW	6SL4112-0..10-0.F0	12	3RV2011-1KA..	0.2	5
						3RV2021-1KA..	0.2	5
					14	3RV2031-4SA..	0.25	5
						3RV2032-4SA..	0.25	5
	16	3RV2011-4AA..			0.25	5		
		3RV2021-4AA..			0.25	5		
	17	3RV2031-4TA..			0.31	5		
		3RV2032-4TA..			0.31	5		
	2.2 kW	6SL4112-0..11-0.F0			16	3RV2011-4AA..	0.25	5
						3RV2021-4AA..	0.25	5
					17	3RV2031-4TA..	0.31	5
						3RV2032-4TA..	0.31	5
	3 kW	6SL4112-0..12-0.F0	20	3RV2021-4BA..	0.31	5		
				3RV2031-4BA..	0.31	5		
				3RV2032-4BA..	0.31	5		
			32	3RV2021-4EA..	0.48	5		

Converter			Protective device				
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. <sup>1)</sup>	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA @ 240 V <sup>2)</sup>	
	4 kW	6SL4112-0..13-0.F0		3RV2031-4EA..	0.5	5	
				3RV2032-4EA..	0.5	5	
			25	3RV2021-4DA..	0.39	5	
				3RV2031-4DA..	0.39	5	
				3RV2032-4DA..	0.39	5	
			32	3RV2021-4EA..	0.48	5	
	3RV2031-4EA..	0.5		5			
	3RV2032-4EA..	0.5		5			
	FSC	5.5 kW	6SL4112-0..15-0.F0	40	3RV2031-4UA..	0.7	5
					3RV2032-4UA..	0.7	5
52				3RV2031-4WA..	0.89	5	
				3RV2032-4WA..	0.89	5	
7.5 kW		6SL4112-0..16-0.F0	52	3RV2031-4WA..	0.89	5	
				3RV2032-4WA..	0.89	5	
FSD2	11 kW	6SL4112-0..17-0.F0	73	3RV2031-4KA..	1.14	5	
				3RV2032-4KA..	1.14	5	
			75	3RV2041-4KA..	1.17	5	
				3RV2042-4KA..	1.17	5	
			100	3RV2041-4MA..	1.56	5	
				3RV2042-4MA..	1.56	5	
	15 kW	6SL4112-0..18-0.F0	93	3RV2041-4YA..	1.56	5	
				3RV2042-4YA..	1.56	5	
			100	3RV2041-4MA..	1.56	5	
				3RV2042-4MA..	1.56	5	
	18.5 kW	6SL4112-0..20-0.F0	100	3RV2041-4MA..	1.56	5	
				3RV2042-4MA..	1.56	5	

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. <sup>1)</sup>	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA @ 240 V <sup>2)</sup>
FSE	22 kW	6SL4112-0..21-0.F0		Use a circuit breaker instead.		
	30 kW	6SL4112-0..23-0.F0		Use a circuit breaker instead.		

<sup>1)</sup> .. stands for type of electrical connection and can be replaced by: 10 (screw terminal); 20 (spring type terminal)

<sup>2)</sup> Icc values are only valid for supply grids with grounded star point (solidly grounded wye TN or TT systems)

### IEC motor starter protectors for IP55, 3AC 200...240V without maintenance switch

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. <sup>1)</sup>	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA @ 240 V <sup>2)</sup>
FSB	1.1 kW	6SL4112-0J.08-0.F0	10	3RV2011-1JA..	0.16	65
				3RV2021-1JA..	0.16	65
			14	3RV2031-4SA..	0.25	65
				3RV2032-4SA..	0.25	65
			16	3RV2011-4AA..	0.25	65
				3RV2021-4AA..	0.25	65
	17	3RV2031-4TA..	0.31	65		
		3RV2032-4TA..	0.31	65		
	1.5 kW	6SL4112-0J.10-0.F0	12	3RV2011-1KA..	0.2	65
				3RV2021-1KA..	0.2	65
			14	3RV2031-4SA..	0.25	65
				3RV2032-4SA..	0.25	65
			16	3RV2011-4AA..	0.25	65
				3RV2021-4AA..	0.25	65
	17	3RV2031-4TA..	0.31	65		
		3RV2032-4TA..	0.31	65		
	2.2 kW	6SL4112-0J.11-0.F0	16	3RV2011-4AA..	0.25	65

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1)	I <sub>cp,mir</sub> / kA	I <sub>cc</sub> / kA @ 240 V 2)
	3 kW	6SL4112-OJ.12-0.F0	17	3RV2021-4AA..	0.25	65
				3RV2031-4TA..	0.31	65
				3RV2032-4TA..	0.31	65
			20	3RV2021-4BA..	0.31	65
				3RV2031-4BA..	0.31	65
				3RV2032-4BA..	0.31	65
	32	3RV2021-4EA..	0.48	65		
		3RV2031-4EA..	0.5	65		
		3RV2032-4EA..	0.5	65		
	4 kW	6SL4112-OJ.13-0.F0	25	3RV2021-4DA..	0.39	65
				3RV2031-4DA..	0.39	65
				3RV2032-4DA..	0.39	65
			32	3RV2021-4EA..	0.48	65
				3RV2031-4EA..	0.5	65
				3RV2032-4EA..	0.5	65
FSC	5.5 kW	6SL4112-OJ.15-0.F0	40	3RV2031-4UA..	0.7	65
				3RV2032-4UA..	0.7	65
			52	3RV2031-4WA..	0.89	65
				3RV2032-4WA..	0.89	65
	7.5 kW	6SL4112-OJ.16-0.F0	52	3RV2031-4WA..	0.89	65
				3RV2032-4WA..	0.89	65
FSD2	11 kW	6SL4112-OJ.17-0.F0	73	3RV2031-4KA..	1.14	100
				3RV2032-4KA..	1.14	100
			75	3RV2041-4KA..	1.17	100
				3RV2042-4KA..	1.17	100
			100	3RV2041-4MA..	1.56	100

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. <sup>1)</sup>	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA @ 240 V <sup>2)</sup>
	15 kW	6SL4112-0J.18-0.F0	93	3RV2042-4MA..	1.56	100
				3RV2041-4YA..	1.56	100
				3RV2042-4YA..	1.56	100
			100	3RV2041-4MA..	1.56	100
				3RV2042-4MA..	1.56	100
	18.5 kW	6SL4112-0J.20-0.F0	100	3RV2041-4MA..	1.56	100
3RV2042-4MA..				1.56	100	
FSE	22 kW	6SL4112-0J.21-0.F0		Use a circuit breaker instead.		
	30 kW	6SL4112-0J.23-0.F0		Use a circuit breaker instead.		

<sup>1)</sup> .. stands for type of electrical connection and can be replaced by: 10 (screw terminal); 20 (spring type terminal)

<sup>2)</sup> Icc values are only valid for supply grids with grounded star point (solidly grounded wye TN or TT systems)

### IEC motor starter protectors for IP55, 3AC 380...415/440...500V with maintenance switch

Converter			Protective device					
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. <sup>1)</sup>	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA @ 415 V <sup>2)</sup>		
FSB	1.1 kW	6SL4113-0..08-..F0	6	3RV2011-1GA..	0.1	5		
				3RV2021-1GA..	0.1	5		
			14	3RV2031-4SA..	0.25	5		
				3RV2032-4SA..	0.25	5		
			16	3RV2011-4AA..	0.25	5		
				3RV2021-4AA..	0.25	5		
			17	3RV2031-4TA..	0.31	5		
				3RV2032-4TA..	0.31	5		
			1.5 kW	6SL4113-0..10-..F0	8	3RV2011-1HA..	0.12	5
						3RV2021-1HA..	0.12	5

Converter			Protective device					
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. <sup>1)</sup>	I <sub>ep,mr</sub> / kA	I <sub>cc</sub> / kA @ 415 V <sup>2)</sup>		
			14	3RV2031-4SA..	0.25	5		
				3RV2032-4SA..	0.25	5		
			16	3RV2011-4AA..	0.25	5		
				3RV2021-4AA..	0.25	5		
			17	3RV2031-4TA..	0.31	5		
				3RV2032-4TA..	0.31	5		
			2.2 kW	6SL4113-0..11-..F0	10	3RV2011-1JA..	0.16	5
						3RV2021-1JA..	0.16	5
					14	3RV2031-4SA..	0.25	5
	3RV2032-4SA..	0.25				5		
	16	3RV2011-4AA..			0.25	5		
		3RV2021-4AA..			0.25	5		
	17	3RV2031-4TA..			0.31	5		
		3RV2032-4TA..			0.31	5		
	3 kW	6SL4113-0..12-..F0	12	3RV2011-1KA..	0.2	5		
				3RV2021-1KA..	0.2	5		
			14	3RV2031-4SA..	0.25	5		
				3RV2032-4SA..	0.25	5		
			16	3RV2011-4AA..	0.25	5		
				3RV2021-4AA..	0.25	5		
			17	3RV2031-4TA..	0.31	5		
				3RV2032-4TA..	0.31	5		
	4 kW	6SL4113-0..13-..F0	16	3RV2011-4AA..	0.25	5		
				3RV2021-4AA..	0.25	5		
17			3RV2031-4TA..	0.31	5			
			3RV2032-4TA..	0.31	5			

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. <sup>1)</sup>	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA @ 415 V <sup>2)</sup>
	5.5 kW	6SL4113-0..15-..F0	20	3RV2021-4BA..	0.31	5
				3RV2031-4BA..	0.31	5
				3RV2032-4BA..	0.31	5
			32	3RV2021-4EA..	0.48	5
				3RV2031-4EA..	0.5	5
				3RV2032-4EA..	0.5	5
	7.5 kW	6SL4113-0..16-..F0	25	3RV2021-4DA..	0.39	5
				3RV2031-4DA..	0.39	5
				3RV2032-4DA..	0.39	5
			32	3RV2021-4EA..	0.48	5
				3RV2031-4EA..	0.5	5
				3RV2032-4EA..	0.5	5
FSC	11 kW	6SL4113-0..17-..F0	40	3RV2031-4UA..	0.7	5
				3RV2032-4UA..	0.7	5
			52	3RV2031-4WA..	0.89	5
				3RV2032-4WA..	0.89	5
	15 kW	6SL4113-0..18-..F0	52	3RV2031-4WA..	0.89	5
				3RV2032-4WA..	0.89	5
FSD1	18.5 kW	6SL4113-0..20-..F0	59	3RV2031-4XA..	1.01	5
				3RV2032-4XA..	1.01	5
			63	3RV2041-4JA..	0.98	5
				3RV2042-4JA..	0.98	5
			73	3RV2031-4KA..	1.14	5
				3RV2032-4KA..	1.14	5
			75	3RV2041-4KA..	1.17	5
				3RV2042-4KA..	1.17	5

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. <sup>1)</sup>	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA @ 415 V <sup>2)</sup>
	22 kW	6SL4113-0..21-..F0	73	3RV2031-4KA..	1.14	5
				3RV2032-4KA..	1.14	5
			75	3RV2041-4KA..	1.17	5
				3RV2042-4KA..	1.17	5
FSD2	30 kW	6SL4113-0..23-..F0	93	3RV2041-4YA..	1.56	5
				3RV2042-4YA..	1.56	5
			100	3RV2041-4MA..	1.56	5
				3RV2042-4MA..	1.56	5
	37 kW	6SL4113-0..24-..F0	100	3RV2041-4MA..	1.56	5
				3RV2042-4MA..	1.56	5
FSE	45 kW	6SL4113-0..26-..F0		Use a circuit breaker instead.		
	55 kW	6SL4113-0..27-..F0		Use a circuit breaker instead.		
FSF1	75 kW	6SL4113-0..30-..F0		Use a circuit breaker instead.		
	90 kW	6SL4113-0..31-..F0		Use a circuit breaker instead.		
	110 kW	6SL4113-0..33-..F0		Use a circuit breaker instead.		

<sup>1)</sup> .. stands for type of electrical connection and can be replaced by: 10 (screw terminal); 20 (spring type terminal)

<sup>2)</sup> I<sub>cc</sub> values are only valid for supply grids with grounded star point (solidly grounded wye TN or TT systems)

### IEC motor starter protectors for IP55, 3AC 380...415/440...500V without maintenance switch

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. <sup>1)</sup>	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA @ 415 V <sup>2)</sup>
FSB	1.1 kW	6SL4113-0J.08-..F0	6	3RV2011-1GA..	0.1	65
				3RV2021-1GA..	0.1	65

Converter			Protective device					
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. <sup>1)</sup>	I <sub>cp,mir</sub> / kA	I <sub>cc</sub> / kA @ 415 V <sup>2)</sup>		
			14	3RV2031-4SA..	0.25	65		
				3RV2032-4SA..	0.25	65		
			16	3RV2011-4AA..	0.25	55		
				3RV2021-4AA..	0.25	55		
			17	3RV2031-4TA..	0.31	65		
				3RV2032-4TA..	0.31	65		
			1.5 kW	6SL4113-OJ.10-..F0	8	3RV2011-1HA..	0.12	65
						3RV2021-1HA..	0.12	65
					14	3RV2031-4SA..	0.25	65
	3RV2032-4SA..	0.25				65		
	16	3RV2011-4AA..			0.25	55		
		3RV2021-4AA..			0.25	55		
	17	3RV2031-4TA..			0.31	65		
		3RV2032-4TA..			0.31	65		
	2.2 kW	6SL4113-OJ.11-..F0			10	3RV2011-1JA..	0.16	65
			3RV2021-1JA..	0.16		65		
			14	3RV2031-4SA..	0.25	65		
				3RV2032-4SA..	0.25	65		
			16	3RV2011-4AA..	0.25	55		
				3RV2021-4AA..	0.25	55		
			17	3RV2031-4TA..	0.31	65		
				3RV2032-4TA..	0.31	65		
			3 kW	6SL4113-OJ.12-..F0	12	3RV2011-1KA..	0.2	65
	3RV2021-1KA..	0.2				65		
14	3RV2031-4SA..	0.25			65			
	3RV2032-4SA..	0.25			65			

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. <sup>1)</sup>	I <sub>cp,mir</sub> / kA	I <sub>cc</sub> / kA @ 415 V <sup>2)</sup>
			16	3RV2011-4AA..	0.25	55
				3RV2021-4AA..	0.25	55
			17	3RV2031-4TA..	0.31	65
				3RV2032-4TA..	0.31	65
	4 kW	6SL4113-0J.13-..F0	16	3RV2011-4AA..	0.25	55
				3RV2021-4AA..	0.25	55
			17	3RV2031-4TA..	0.31	65
				3RV2032-4TA..	0.31	65
	5.5 kW	6SL4113-0J.15-..F0	20	3RV2021-4BA..	0.31	55
				3RV2031-4BA..	0.31	65
				3RV2032-4BA..	0.31	65
			32	3RV2021-4EA..	0.48	55
3RV2031-4EA..				0.5	65	
3RV2032-4EA..				0.5	65	
7.5 kW	6SL4113-0J.16-..F0	25	3RV2021-4DA..	0.39	55	
			3RV2031-4DA..	0.39	65	
			3RV2032-4DA..	0.39	65	
		32	3RV2021-4EA..	0.48	55	
			3RV2031-4EA..	0.5	65	
			3RV2032-4EA..	0.5	65	
FSC	11 kW	6SL4113-0J.17-..F0	40	3RV2031-4UA..	0.7	65
				3RV2032-4UA..	0.7	65
			52	3RV2031-4WA..	0.89	65
				3RV2032-4WA..	0.89	65
	15 kW	6SL4113-0J.18-..F0	52	3RV2031-4WA..	0.89	65
				3RV2032-4WA..	0.89	65

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. <sup>1)</sup>	I <sub>cp,mir</sub> / kA	I <sub>cc</sub> / kA @ 415 V <sup>2)</sup>
FSD1	18.5 kW	6SL4113-0J.20-..F0	59	3RV2031-4XA..	1.01	65
				3RV2032-4XA..	1.01	100
			63	3RV2041-4JA..	0.98	65
				3RV2042-4JA..	0.98	100
			73	3RV2031-4KA..	1.14	65
				3RV2032-4KA..	1.14	100
	75	3RV2041-4KA..	1.17	65		
		3RV2042-4KA..	1.17	100		
	22 kW	6SL4113-0J.21-..F0	73	3RV2031-4KA..	1.14	65
				3RV2032-4KA..	1.14	100
			75	3RV2041-4KA..	1.17	65
				3RV2042-4KA..	1.17	100
FSD2	30 kW	6SL4113-0J.23-..F0	93	3RV2041-4YA..	1.56	65
				3RV2042-4YA..	1.56	100
			100	3RV2041-4MA..	1.56	65
				3RV2042-4MA..	1.56	100
	37 kW	6SL4113-0J.24-..F0	100	3RV2041-4MA..	1.56	65
				3RV2042-4MA..	1.56	100
FSE	45 kW	6SL4113-0J.26-..F0		Use a circuit breaker instead.		
	55 kW	6SL4113-0J.27-..F0		Use a circuit breaker instead.		
FSF1	75 kW	6SL4113-0J.30-..F0		Use a circuit breaker instead.		
	90 kW	6SL4113-0J.31-..F0		Use a circuit breaker instead.		
	110 kW	6SL4113-0J.33-..F0		Use a circuit breaker instead.		

- 1) .. stands for type of electrical connection and can be replaced by: 10 (screw terminal); 20 (spring type terminal)
- 2) Icc values are only valid for supply grids with grounded star point (solidly grounded wye TN or TT systems)

## 1.2.2.4 IEC circuit breakers

IEC circuit breakers for IP55, 3AC 200...240V with maintenance switch

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. <sup>1) 2) 3)</sup>	I <sub>cp.mfr</sub> / kA	I <sub>cc</sub> / kA
FSB	1.1 kW	6SL4112-0..08-0.F0	10	5SY7310-7	0.1	5 @ 240 V
			16	3VA1096-2ED3x-0AA0	0.38	5 @ 240 V
				3VA1096-3ED3x-0AA0	0.38	5 @ 240 V
				3VA1096-4ED3x-0AA0	0.38	5 @ 240 V
				3VA1196-3E#3x-0AA0	0.38	5 @ 240 V
				3VA1196-4E#3x-0AA0	0.38	5 @ 240 V
				3VA1196-5E#3x-0AA0	0.38	5 @ 240 V
				3VA1196-6E#3x-0AA0	0.38	5 @ 240 V
				5SY7316-7	0.16	5 @ 240 V
	1.5 kW	6SL4112-0..10-0.F0	13	5SY7313-7	0.13	5 @ 240 V
			16	3VA1096-2ED3x-0AA0	0.38	5 @ 240 V
				3VA1096-3ED3x-0AA0	0.38	5 @ 240 V
				3VA1096-4ED3x-0AA0	0.38	5 @ 240 V
				3VA1196-3E#3x-0AA0	0.38	5 @ 240 V
				3VA1196-4E#3x-0AA0	0.38	5 @ 240 V
				3VA1196-5E#3x-0AA0	0.38	5 @ 240 V
				3VA1196-6E#3x-0AA0	0.38	5 @ 240 V
				5SY7316-7	0.16	5 @ 240 V
	2.2 kW	6SL4112-0..11-0.F0	16	3VA1096-2ED3x-0AA0	0.38	5 @ 240 V
				3VA1096-3ED3x-0AA0	0.38	5 @ 240 V
				3VA1096-4ED3x-0AA0	0.38	5 @ 240 V
3VA1196-3E#3x-0AA0				0.38	5 @ 240 V	
3VA1196-4E#3x-0AA0				0.38	5 @ 240 V	
3VA1196-5E#3x-0AA0				0.38	5 @ 240 V	

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA
	3 kW	6SL4112-0..12-0.F0		3VA1196-6E#3x-0AA0	0.38	5 @ 240 V
				5SY7316-7	0.16	5 @ 240 V
			20	3VA1020-2ED3x-0AA0	0.38	5 @ 240 V
				3VA1020-3ED3x-0AA0	0.38	5 @ 240 V
				3VA1020-4ED3x-0AA0	0.38	5 @ 240 V
				3VA1120-3E#3x-0AA0	0.38	5 @ 240 V
				3VA1120-4E#3x-0AA0	0.38	5 @ 240 V
				3VA1120-5E#3x-0AA0	0.38	5 @ 240 V
				3VA1120-6E#3x-0AA0	0.38	5 @ 240 V
				5SY7320-7	0.2	5 @ 240 V
	32	3VA1032-2ED3x-0AA0	0.38	5 @ 240 V		
		3VA1032-3ED3x-0AA0	0.38	5 @ 240 V		
		3VA1032-4ED3x-0AA0	0.38	5 @ 240 V		
		3VA1132-3E#3x-0AA0	0.38	5 @ 240 V		
		3VA1132-4E#3x-0AA0	0.38	5 @ 240 V		
		3VA1132-5E#3x-0AA0	0.38	5 @ 240 V		
		3VA1132-6E#3x-0AA0	0.38	5 @ 240 V		
		5SY7332-7	0.32	5 @ 240 V		
	4 kW	6SL4112-0..13-0.F0	25	5SY7325-7	0.25	5 @ 240 V
			32	3VA1032-2ED3x-0AA0	0.38	5 @ 240 V
3VA1032-3ED3x-0AA0				0.38	5 @ 240 V	
3VA1032-4ED3x-0AA0				0.38	5 @ 240 V	
3VA1132-3E#3x-0AA0				0.38	5 @ 240 V	
3VA1132-4E#3x-0AA0				0.38	5 @ 240 V	
3VA1132-5E#3x-0AA0				0.38	5 @ 240 V	
3VA1132-6E#3x-0AA0				0.38	5 @ 240 V	



Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA
				3VA1010-3ED3x-0AA0	1.2	5 @ 240 V
				3VA1010-4ED3x-0AA0	1.2	5 @ 240 V
				3VA1110-3E#3x-0AA0	1.2	5 @ 240 V
				3VA1110-4E#3x-0AA0	1.2	5 @ 240 V
				3VA1110-5E#3x-0AA0	1.2	5 @ 240 V
				3VA1110-6E#3x-0AA0	1.2	5 @ 240 V
				3VA2010-5##3x-0AA0	1.44	5 @ 240 V
				3VA2010-6##3x-0AA0	1.44	5 @ 240 V
				3VA2010-7##3x-0AA0	1.44	5 @ 240 V
				3VA2010-8##3x-0AA0	1.44	5 @ 240 V
				3VA2110-5##3x-0AA0	1.8	5 @ 240 V
				3VA2110-6##3x-0AA0	1.8	5 @ 240 V
				3VA2110-7##3x-0AA0	1.8	5 @ 240 V
				3VA2110-8##3x-0AA0	1.8	5 @ 240 V
	18.5 kW	6SL4112-0..20-0.F0	100	3VA1010-2ED3x-0AA0	1.2	5 @ 240 V
				3VA1010-3ED3x-0AA0	1.2	5 @ 240 V
				3VA1010-4ED3x-0AA0	1.2	5 @ 240 V
				3VA1110-3E#3x-0AA0	1.2	5 @ 240 V
				3VA1110-4E#3x-0AA0	1.2	5 @ 240 V
				3VA1110-5E#3x-0AA0	1.2	5 @ 240 V
				3VA1110-6E#3x-0AA0	1.2	5 @ 240 V
				3VA2010-5##3x-0AA0	1.44	5 @ 240 V
				3VA2010-6##3x-0AA0	1.44	5 @ 240 V
3VA2010-7##3x-0AA0	1.44	5 @ 240 V				
3VA2010-8##3x-0AA0	1.44	5 @ 240 V				
3VA2110-5##3x-0AA0	1.8	5 @ 240 V				

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA
FSE				3VA2110-6##3x-0AA0	1.8	5 @ 240 V
				3VA2110-7##3x-0AA0	1.8	5 @ 240 V
				3VA2110-8##3x-0AA0	1.8	5 @ 240 V
	22 kW	6SL4112-0..21-0.F0	125	3VA1112-3E#3x-0AA0	1.5	10 @ 240 V
				3VA1112-4E#3x-0AA0	1.5	10 @ 240 V
				3VA1112-5E#3x-0AA0	1.5	10 @ 240 V
				3VA1112-6E#3x-0AA0	1.5	10 @ 240 V
			160	3VA2116-5##3x-0AA0	1.92	10 @ 240 V
				3VA2116-6##3x-0AA0	1.92	10 @ 240 V
				3VA2116-7##3x-0AA0	1.92	10 @ 240 V
				3VA2116-8##3x-0AA0	1.92	10 @ 240 V
	30 kW	6SL4112-0..23-0.F0	125	3VA1112-3E#3x-0AA0	1.5	10 @ 240 V
				3VA1112-4E#3x-0AA0	1.5	10 @ 240 V
				3VA1112-5E#3x-0AA0	1.5	10 @ 240 V
				3VA1112-6E#3x-0AA0	1.5	10 @ 240 V
160			3VA2116-5##3x-0AA0	1.92	10 @ 240 V	
			3VA2116-6##3x-0AA0	1.92	10 @ 240 V	
			3VA2116-7##3x-0AA0	1.92	10 @ 240 V	

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA
				3VA2116-8##3x-0AA0	1.92	10 @ 240 V
FSF1	37 kW	6SL4112-0..24-0.F0	160	3VA1116-3E#3x-0AA0	1.92	10 @ 240 V
				3VA1116-4E#3x-0AA0	1.92	10 @ 240 V
				3VA1116-5E#3x-0AA0	1.92	10 @ 240 V
				3VA1116-6E#3x-0AA0	1.92	10 @ 240 V
				3VA1216-4EF3x-0AA0	1.92	10 @ 240 V
				3VA1216-5EF3x-0AA0	1.92	10 @ 240 V
				3VA1216-6EF3x-0AA0	1.92	10 @ 240 V
				3VA2116-5##3x-0AA0	1.92	10 @ 240 V
				3VA2116-6##3x-0AA0	1.92	10 @ 240 V
				3VA2116-7##3x-0AA0	1.92	10 @ 240 V
				3VA2116-8##3x-0AA0	1.92	10 @ 240 V
				3VA2216-5##3x-0AA0	2.88	10 @ 240 V
				3VA2216-6##3x-0AA0	2.88	10 @ 240 V
				3VA2216-7##3x-0AA0	2.88	10 @ 240 V
			3VA2216-8##3x-0AA0	2.88	10 @ 240 V	
			250	3VA1225-4EF3x-0AA0	3.0	10 @ 240 V

Converter			Protective device						
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA			
		6SL4112-0..26-0.F0		3VA1225-5EF3x-0AA0	3.0	10 @ 240 V			
				3VA1225-6EF3x-0AA0	3.0	10 @ 240 V			
				3VA2225-5##3x-0AA0	3.0	10 @ 240 V			
				3VA2225-6##3x-0AA0	3.0	10 @ 240 V			
				3VA2225-7##3x-0AA0	3.0	10 @ 240 V			
				3VA2225-8##3x-0AA0	3.0	10 @ 240 V			
			400	3VA2340-5##3x-0AA0	4.8	10 @ 240 V			
				3VA2340-6##3x-0AA0	4.8	10 @ 240 V			
				3VA2340-7##3x-0AA0	4.8	10 @ 240 V			
				3VA2340-8##3x-0AA0	4.8	10 @ 240 V			
			45 kW		6SL4112-0..26-0.F0	200	3VA1220-4EF3x-0AA0	2.4	10 @ 240 V
							3VA1220-5EF3x-0AA0	2.4	10 @ 240 V
							3VA1220-6EF3x-0AA0	2.4	10 @ 240 V
						250	3VA1225-4EF3x-0AA0	3.0	10 @ 240 V
							3VA1225-5EF3x-0AA0	3.0	10 @ 240 V
							3VA1225-6EF3x-0AA0	3.0	10 @ 240 V
3VA2225-5##3x-0AA0	3.0	10 @ 240 V							

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA
				3VA2225-6##3x-0AA0	3.0	10 @ 240 V
				3VA2225-7##3x-0AA0	3.0	10 @ 240 V
				3VA2225-8##3x-0AA0	3.0	10 @ 240 V
			320	3VA1332-4EF32-0AA0	3.84	10 @ 240 V
				3VA1332-5EF32-0AA0	3.84	10 @ 240 V
				3VA1332-6EF32-0AA0	3.84	10 @ 240 V
				3VA1332-7EF32-0AA0	3.84	10 @ 240 V
			400	3VA2340-5##3x-0AA0	4.8	10 @ 240 V
				3VA2340-6##3x-0AA0	4.8	10 @ 240 V
				3VA2340-7##3x-0AA0	4.8	10 @ 240 V
				3VA2340-8##3x-0AA0	4.8	10 @ 240 V
			55 kW	6SL4112-0..27-0.F0	250	3VA1225-4EF3x-0AA0
	3VA1225-5EF3x-0AA0	3.0				10 @ 240 V
	3VA1225-6EF3x-0AA0	3.0				10 @ 240 V
	3VA2225-5##3x-0AA0	3.0				10 @ 240 V
	3VA2225-6##3x-0AA0	3.0				10 @ 240 V
3VA2225-7##3x-0AA0	3.0	10 @ 240 V				

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. <sup>1)</sup> <sup>2)</sup> <sup>3)</sup>	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA
			320	3VA2225-8##3x-0AA0	3.0	10 @ 240 V
				3VA1332-4EF32-0AA0	3.84	10 @ 240 V
				3VA1332-5EF32-0AA0	3.84	10 @ 240 V
				3VA1332-6EF32-0AA0	3.84	10 @ 240 V
				3VA1332-7EF32-0AA0	3.84	10 @ 240 V
			400	3VA2340-5##3x-0AA0	4.8	10 @ 240 V
				3VA2340-6##3x-0AA0	4.8	10 @ 240 V
				3VA2340-7##3x-0AA0	4.8	10 @ 240 V
				3VA2340-8##3x-0AA0	4.8	10 @ 240 V
				3VA2440-5##3x-0AA0	7.2	10 @ 240 V
				3VA2440-6##3x-0AA0	7.2	10 @ 240 V
				3VA2440-7##3x-0AA0	7.2	10 @ 240 V
				3VA2440-8##3x-0AA0	7.2	10 @ 240 V

<sup>1)</sup> x stands for type of electrical connection and can be replaced by: 2 (nut keeper kit) or 6 (box terminal)

<sup>2)</sup> # stands for type of release and can be replaced by: D (fixed thermal fixed magnetic trip unit), E (adjustable thermal fixed magnetic trip Unit) or F (adjustable thermal adjustable magnetic Trip unit)

<sup>3)</sup> ## stands for type of release and can be replaced by: HL ( line protection LI), HM (line protection LIG), HK (line protection ELISA LI), HN (Line and generator protection LSI), JP (Line and generator protection LSI, with display), JQ (Line and generator protection LSI, with display), KP (Line and generator protection LSI, with display, with measurement function), KQ (Line and generator protection LSI, with display, with measurement function)

## IEC circuit breakers for IP55, 3AC 200...240V without maintenance switch

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. <sup>1) 2) 3)</sup>	I <sub>cp,mfr</sub> / kA	I <sub>cc</sub> / kA
FSB	1.1 kW	6SL4112-0J.08-0.F0	10	5SY7310-7	0.1	15 @ 240 V
			16	3VA1096-2ED3x-0AA0	0.38	25 @ 240 V
				3VA1096-3ED3x-0AA0	0.38	36 @ 240 V
				3VA1096-4ED3x-0AA0	0.38	55 @ 240 V
				3VA1196-3E#3x-0AA0	0.38	36 @ 240 V
				3VA1196-4E#3x-0AA0	0.38	55 @ 240 V
				3VA1196-5E#3x-0AA0	0.38	65 @ 240 V
				3VA1196-6E#3x-0AA0	0.38	65 @ 240 V
				5SY7316-7	0.16	15 @ 240 V
	1.5 kW	6SL4112-0J.10-0.F0	13	5SY7313-7	0.13	15 @ 240 V
			16	3VA1096-2ED3x-0AA0	0.38	25 @ 240 V
				3VA1096-3ED3x-0AA0	0.38	36 @ 240 V
				3VA1096-4ED3x-0AA0	0.38	55 @ 240 V
				3VA1196-3E#3x-0AA0	0.38	36 @ 240 V
				3VA1196-4E#3x-0AA0	0.38	55 @ 240 V
				3VA1196-5E#3x-0AA0	0.38	65 @ 240 V
				3VA1196-6E#3x-0AA0	0.38	65 @ 240 V
				5SY7316-7	0.16	15 @ 240 V
	2.2 kW	6SL4112-0J.11-0.F0	16	3VA1096-2ED3x-0AA0	0.38	25 @ 240 V
				3VA1096-3ED3x-0AA0	0.38	36 @ 240 V
				3VA1096-4ED3x-0AA0	0.38	55 @ 240 V
3VA1196-3E#3x-0AA0				0.38	36 @ 240 V	
3VA1196-4E#3x-0AA0				0.38	55 @ 240 V	
3VA1196-5E#3x-0AA0				0.38	65 @ 240 V	
3VA1196-6E#3x-0AA0				0.38	65 @ 240 V	

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA
	3 kW	6SL4112-0J.12-0.F0	20	5SY7316-7	0.16	15 @ 240 V
				3VA1020-2ED3x-0AA0	0.38	25 @ 240 V
				3VA1020-3ED3x-0AA0	0.38	36 @ 240 V
				3VA1020-4ED3x-0AA0	0.38	55 @ 240 V
				3VA1120-3E#3x-0AA0	0.38	36 @ 240 V
				3VA1120-4E#3x-0AA0	0.38	55 @ 240 V
				3VA1120-5E#3x-0AA0	0.38	65 @ 240 V
				3VA1120-6E#3x-0AA0	0.38	65 @ 240 V
			5SY7320-7	0.2	15 @ 240 V	
			32	3VA1032-2ED3x-0AA0	0.38	25 @ 240 V
	3VA1032-3ED3x-0AA0	0.38		36 @ 240 V		
	3VA1032-4ED3x-0AA0	0.38		55 @ 240 V		
	3VA1132-3E#3x-0AA0	0.38		36 @ 240 V		
	3VA1132-4E#3x-0AA0	0.38		55 @ 240 V		
	3VA1132-5E#3x-0AA0	0.38		65 @ 240 V		
	3VA1132-6E#3x-0AA0	0.38		65 @ 240 V		
	5SY7332-7	0.32		15 @ 240 V		
	4 kW	6SL4112-0J.13-0.F0	25	5SY7325-7	0.25	15 @ 240 V
			32	3VA1032-2ED3x-0AA0	0.38	25 @ 240 V
				3VA1032-3ED3x-0AA0	0.38	36 @ 240 V
3VA1032-4ED3x-0AA0				0.38	55 @ 240 V	
3VA1132-3E#3x-0AA0				0.38	36 @ 240 V	
3VA1132-4E#3x-0AA0				0.38	55 @ 240 V	
3VA1132-5E#3x-0AA0				0.38	65 @ 240 V	
3VA1132-6E#3x-0AA0				0.38	65 @ 240 V	
5SY7332-7	0.32	15 @ 240 V				

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA
FSC	5.5 kW	6SL4112-0J.15-0.F0		Use MSP or fuse instead.		
	7.5 kW	6SL4112-0J.16-0.F0		Use MSP or fuse instead.		
FSD2	11 kW	6SL4112-0J.17-0.F0	80	3VA1080-2ED3x-0AA0	0.96	25 @ 240 V
				3VA1080-3ED3x-0AA0	0.96	36 @ 240 V
				3VA1080-4ED3x-0AA0	0.96	55 @ 240 V
				3VA1180-3E#3x-0AA0	0.96	36 @ 240 V
				3VA1180-4E#3x-0AA0	0.96	55 @ 240 V
				3VA1180-5E#3x-0AA0	0.96	85 @ 240 V
				3VA1180-6E#3x-0AA0	0.96	100 @ 240 V
			100	3VA1010-2ED3x-0AA0	1.2	25 @ 240 V
				3VA1010-3ED3x-0AA0	1.2	36 @ 240 V
				3VA1010-4ED3x-0AA0	1.2	55 @ 240 V
				3VA1110-3E#3x-0AA0	1.2	36 @ 240 V
				3VA1110-4E#3x-0AA0	1.2	55 @ 240 V
				3VA1110-5E#3x-0AA0	1.2	85 @ 240 V
				3VA1110-6E#3x-0AA0	1.2	100 @ 240 V
	15 kW	6SL4112-0J.18-0.F0	100	3VA2010-5##3x-0AA0	1.44	85 @ 240 V
				3VA2010-6##3x-0AA0	1.44	100 @ 240 V
				3VA2010-7##3x-0AA0	1.44	100 @ 240 V
				3VA2010-8##3x-0AA0	1.44	100 @ 240 V
				3VA2110-5##3x-0AA0	1.8	85 @ 240 V
				3VA2110-6##3x-0AA0	1.8	100 @ 240 V
				3VA1010-2ED3x-0AA0	1.2	25 @ 240 V
				3VA1010-3ED3x-0AA0	1.2	36 @ 240 V

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA
				3VA1010-4ED3x-0AA0	1.2	55 @ 240 V
				3VA1110-3E#3x-0AA0	1.2	36 @ 240 V
				3VA1110-4E#3x-0AA0	1.2	55 @ 240 V
				3VA1110-5E#3x-0AA0	1.2	85 @ 240 V
				3VA1110-6E#3x-0AA0	1.2	100 @ 240 V
				3VA2010-5##3x-0AA0	1.44	85 @ 240 V
				3VA2010-6##3x-0AA0	1.44	100 @ 240 V
				3VA2010-7##3x-0AA0	1.44	100 @ 240 V
				3VA2010-8##3x-0AA0	1.44	100 @ 240 V
				3VA2110-5##3x-0AA0	1.8	85 @ 240 V
				3VA2110-6##3x-0AA0	1.8	100 @ 240 V
				3VA2110-7##3x-0AA0	1.8	100 @ 240 V
	3VA2110-8##3x-0AA0	1.8	100 @ 240 V			
	18.5 kW	6SL4112-0J.20-0.F0	100	3VA1010-2ED3x-0AA0	1.2	25 @ 240 V
				3VA1010-3ED3x-0AA0	1.2	36 @ 240 V
				3VA1010-4ED3x-0AA0	1.2	55 @ 240 V
				3VA1110-3E#3x-0AA0	1.2	36 @ 240 V
				3VA1110-4E#3x-0AA0	1.2	55 @ 240 V
				3VA1110-5E#3x-0AA0	1.2	85 @ 240 V
				3VA1110-6E#3x-0AA0	1.2	100 @ 240 V
				3VA2010-5##3x-0AA0	1.44	85 @ 240 V
				3VA2010-6##3x-0AA0	1.44	100 @ 240 V
				3VA2010-7##3x-0AA0	1.44	100 @ 240 V
				3VA2010-8##3x-0AA0	1.44	100 @ 240 V
3VA2110-5##3x-0AA0				1.8	85 @ 240 V	
3VA2110-6##3x-0AA0	1.8	100 @ 240 V				

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA
FSE				3VA2110-7##3x-0AA0	1.8	100 @ 240 V
				3VA2110-8##3x-0AA0	1.8	100 @ 240 V
	22 kW	6SL4112-0J.21-0.F0	125	3VA1112-3E#3x-0AA0	1.5	36 @ 240 V
				3VA1112-4E#3x-0AA0	1.5	55 @ 240 V
				3VA1112-5E#3x-0AA0	1.5	85 @ 240 V
				3VA1112-6E#3x-0AA0	1.5	100 @ 240 V
			160	3VA2116-5##3x-0AA0	1.92	85 @ 240 V
				3VA2116-6##3x-0AA0	1.92	100 @ 240 V
				3VA2116-7##3x-0AA0	1.92	100 @ 240 V
				3VA2116-8##3x-0AA0	1.92	100 @ 240 V
	30 kW	6SL4112-0J.23-0.F0	125	3VA1112-3E#3x-0AA0	1.5	36 @ 240 V
				3VA1112-4E#3x-0AA0	1.5	55 @ 240 V
				3VA1112-5E#3x-0AA0	1.5	85 @ 240 V
				3VA1112-6E#3x-0AA0	1.5	100 @ 240 V
160			3VA2116-5##3x-0AA0	1.92	85 @ 240 V	
			3VA2116-6##3x-0AA0	1.92	100 @ 240 V	
			3VA2116-7##3x-0AA0	1.92	100 @ 240 V	
			3VA2116-8##3x-0AA0	1.92	100 @ 240 V	
FSF1	37 kW	6SL4112-0J.24-0.F0	160	3VA1116-3E#3x-0AA0	1.92	36 @ 240 V
				3VA1116-4E#3x-0AA0	1.92	55 @ 240 V
				3VA1116-5E#3x-0AA0	1.92	85 @ 240 V
				3VA1116-6E#3x-0AA0	1.92	100 @ 240 V
				3VA1216-4EF3x-0AA0	1.92	55 @ 240 V
				3VA1216-5EF3x-0AA0	1.92	85 @ 240 V
				3VA1216-6EF3x-0AA0	1.92	100 @ 240 V
				3VA2116-5##3x-0AA0	1.92	85 @ 240 V

Converter			Protective device					
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA		
		6SL4112-0J.26-0.F0		3VA2116-6##3x-0AA0	1.92	100 @ 240 V		
				3VA2116-7##3x-0AA0	1.92	100 @ 240 V		
				3VA2116-8##3x-0AA0	1.92	100 @ 240 V		
				3VA2216-5##3x-0AA0	2.88	85 @ 240 V		
				3VA2216-6##3x-0AA0	2.88	100 @ 240 V		
				3VA2216-7##3x-0AA0	2.88	100 @ 240 V		
				3VA2216-8##3x-0AA0	2.88	100 @ 240 V		
				250	3VA1225-4EF3x-0AA0	3.0	55 @ 240 V	
					3VA1225-5EF3x-0AA0	3.0	85 @ 240 V	
					3VA1225-6EF3x-0AA0	3.0	100 @ 240 V	
					3VA2225-5##3x-0AA0	3.0	85 @ 240 V	
					3VA2225-6##3x-0AA0	3.0	100 @ 240 V	
			3VA2225-7##3x-0AA0		3.0	100 @ 240 V		
			400	3VA2340-5##3x-0AA0	4.8	85 @ 240 V		
				3VA2340-6##3x-0AA0	4.8	100 @ 240 V		
				3VA2340-7##3x-0AA0	4.8	100 @ 240 V		
				3VA2340-8##3x-0AA0	4.8	100 @ 240 V		
			45 kW	6SL4112-0J.26-0.F0	200	3VA1220-4EF3x-0AA0	2.4	55 @ 240 V
						3VA1220-5EF3x-0AA0	2.4	85 @ 240 V
						3VA1220-6EF3x-0AA0	2.4	100 @ 240 V
					250	3VA1225-4EF3x-0AA0	3.0	55 @ 240 V
						3VA1225-5EF3x-0AA0	3.0	85 @ 240 V
						3VA1225-6EF3x-0AA0	3.0	100 @ 240 V
						3VA2225-5##3x-0AA0	3.0	85 @ 240 V
3VA2225-6##3x-0AA0	3.0	100 @ 240 V						

Converter			Protective device					
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA		
	55 kW	6SL4112-0J.27-0.F0		3VA2225-7##3x-0AA0	3.0	100 @ 240 V		
				3VA2225-8##3x-0AA0	3.0	100 @ 240 V		
			320	3VA1332-4EF32-0AA0	3.84	55 @ 240 V		
				3VA1332-5EF32-0AA0	3.84	85 @ 240 V		
				3VA1332-6EF32-0AA0	3.84	100 @ 240 V		
				3VA1332-7EF32-0AA0	3.84	100 @ 240 V		
			400	3VA2340-5##3x-0AA0	4.8	85 @ 240 V		
				3VA2340-6##3x-0AA0	4.8	100 @ 240 V		
				3VA2340-7##3x-0AA0	4.8	100 @ 240 V		
				3VA2340-8##3x-0AA0	4.8	100 @ 240 V		
			55 kW	6SL4112-0J.27-0.F0	250	3VA1225-4EF3x-0AA0	3.0	55 @ 240 V
						3VA1225-5EF3x-0AA0	3.0	85 @ 240 V
						3VA1225-6EF3x-0AA0	3.0	100 @ 240 V
						3VA2225-5##3x-0AA0	3.0	85 @ 240 V
						3VA2225-6##3x-0AA0	3.0	100 @ 240 V
						3VA2225-7##3x-0AA0	3.0	100 @ 240 V
	3VA2225-8##3x-0AA0	3.0				100 @ 240 V		
	320	3VA1332-4EF32-0AA0			3.84	55 @ 240 V		
		3VA1332-5EF32-0AA0			3.84	85 @ 240 V		
		3VA1332-6EF32-0AA0			3.84	100 @ 240 V		
3VA1332-7EF32-0AA0		3.84			100 @ 240 V			
400	3VA2340-5##3x-0AA0	4.8			85 @ 240 V			
	3VA2340-6##3x-0AA0	4.8			100 @ 240 V			
	3VA2340-7##3x-0AA0	4.8			100 @ 240 V			
	3VA2340-8##3x-0AA0	4.8	100 @ 240 V					
	3VA2440-5##3x-0AA0	7.2	85 @ 240 V					

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. <sup>1) 2) 3)</sup>	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA
				3VA2440-6##3x-0AA0	7.2	100 @ 240 V
				3VA2440-7##3x-0AA0	7.2	100 @ 240 V
				3VA2440-8##3x-0AA0	7.2	100 @ 240 V

<sup>1)</sup> x stands for type of electrical connection and can be replaced by: 2 (nut keeper kit) or 6 (box terminal)

<sup>2)</sup> # stands for type of release and can be replaced by: D (fixed thermal fixed magnetic trip unit), E (adjustable thermal fixed magnetic trip Unit) or F (adjustable thermal adjustable magnetic Trip unit)

<sup>3)</sup> ## stands for type of release and can be replaced by: HL ( line protection LI), HM (line protection LIG), HK (line protection ELISA LI), HN (Line and generator protection LSI), JP (Line and generator protection LSI, with display), JQ (Line and generator protection LSI, with display), KP (Line and generator protection LSI, with display, with measurement function), KQ (Line and generator protection LSI, with display, with measurement function)

### IEC circuit breakers for IP55, 3AC 380...415/440...500V with maintenance switch

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. <sup>1) 2) 3)</sup>	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA
FSB	1.1 kW	6SL4113-0..08-..F0	6	5SY7306-7	0.06	5 @ 400 V
				3VA1096-2ED3x-0AA0	0.38	5 @ 415 V
			3VA1096-3ED3x-0AA0		0.38	5 @ 500 V
				3VA1096-4ED3x-0AA0	0.38	5 @ 415 V
			3VA1096-4ED3x-0AA0		0.38	5 @ 500 V
				3VA1196-3E#3x-0AA0	0.38	5 @ 415 V
			3VA1196-3E#3x-0AA0		0.38	5 @ 500 V
				3VA1196-4E#3x-0AA0	0.38	5 @ 415 V
			3VA1196-4E#3x-0AA0		0.38	5 @ 500 V
				3VA1196-5E#3x-0AA0	0.38	5 @ 415 V
			3VA1196-5E#3x-0AA0		0.38	5 @ 500 V
				3VA1196-6E#3x-0AA0	0.38	5 @ 415 V
			3VA1196-6E#3x-0AA0		0.38	5 @ 500 V

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA
	1.5 kW	6SL4113-0..10-..F0	8	5SY7316-7	0.16	5 @ 400 V
				5SY7308-7	0.08	5 @ 400 V
			16	3VA1096-2ED3x-0AA0	0.38	5 @ 415 V
					0.38	5 @ 500 V
				3VA1096-3ED3x-0AA0	0.38	5 @ 415 V
					0.38	5 @ 500 V
				3VA1096-4ED3x-0AA0	0.38	5 @ 415 V
					0.38	5 @ 500 V
				3VA1196-3E#3x-0AA0	0.38	5 @ 415 V
					0.38	5 @ 500 V
	3VA1196-4E#3x-0AA0	0.38	5 @ 415 V			
		0.38	5 @ 500 V			
	3VA1196-5E#3x-0AA0	0.38	5 @ 415 V			
		0.38	5 @ 500 V			
	3VA1196-6E#3x-0AA0	0.38	5 @ 415 V			
		0.38	5 @ 500 V			
	2.2 kW	6SL4113-0..11-..F0	10	5SY7316-7	0.16	5 @ 400 V
				5SY7310-7	0.1	5 @ 400 V
			16	3VA1096-2ED3x-0AA0	0.38	5 @ 415 V
					0.38	5 @ 500 V
3VA1096-3ED3x-0AA0				0.38	5 @ 415 V	
				0.38	5 @ 500 V	
3VA1096-4ED3x-0AA0				0.38	5 @ 415 V	
				0.38	5 @ 500 V	
3VA1196-3E#3x-0AA0				0.38	5 @ 415 V	
				0.38	5 @ 500 V	

Converter			Protective device							
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA				
				3VA1196-4E#3x-0AA0	0.38	5 @ 415 V				
					0.38	5 @ 500 V				
				3VA1196-5E#3x-0AA0	0.38	5 @ 415 V				
					0.38	5 @ 500 V				
				3VA1196-6E#3x-0AA0	0.38	5 @ 415 V				
					0.38	5 @ 500 V				
				5SY7316-7	0.16	5 @ 400 V				
				3 kW	6SL4113-0..12-..F0		13	5SY7313-7	0.13	5 @ 400 V
								3VA1096-2ED3x-0AA0	0.38	5 @ 415 V
							0.38		5 @ 500 V	
	3VA1096-3ED3x-0AA0	0.38	5 @ 415 V							
		0.38	5 @ 500 V							
	3VA1096-4ED3x-0AA0	0.38	5 @ 415 V							
		0.38	5 @ 500 V							
	3VA1196-3E#3x-0AA0	0.38	5 @ 415 V							
		0.38	5 @ 500 V							
	3VA1196-4E#3x-0AA0	0.38	5 @ 415 V							
		0.38	5 @ 500 V							
	3VA1196-5E#3x-0AA0	0.38	5 @ 415 V							
		0.38	5 @ 500 V							
3VA1196-6E#3x-0AA0	0.38	5 @ 415 V								
	0.38	5 @ 500 V								
5SY7316-7			16	5SY7316-7	0.16	5 @ 400 V				
				3VA1096-2ED3x-0AA0	0.38	5 @ 415 V				
0.38	5 @ 500 V									
3VA1096-3ED3x-0AA0			16	3VA1096-3ED3x-0AA0	0.38	5 @ 415 V				
				0.38	5 @ 500 V					

Converter			Protective device						
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA			
					0.38	5 @ 500 V			
				3VA1096-4ED3x-0AA0	0.38	5 @ 415 V			
					0.38	5 @ 500 V			
				3VA1196-3E#3x-0AA0	0.38	5 @ 415 V			
					0.38	5 @ 500 V			
				3VA1196-4E#3x-0AA0	0.38	5 @ 415 V			
					0.38	5 @ 500 V			
				3VA1196-5E#3x-0AA0	0.38	5 @ 415 V			
					0.38	5 @ 500 V			
				3VA1196-6E#3x-0AA0	0.38	5 @ 415 V			
					0.38	5 @ 500 V			
				5SY7316-7	0.16	5 @ 400 V			
				5.5 kW	6SL4113-0..15-..F0	20	3VA1020-2ED3x-0AA0	0.38	5 @ 415 V
								0.38	5 @ 500 V
	3VA1020-3ED3x-0AA0	0.38	5 @ 415 V						
		0.38	5 @ 500 V						
	3VA1020-4ED3x-0AA0	0.38	5 @ 415 V						
		0.38	5 @ 500 V						
	3VA1120-3E#3x-0AA0	0.38	5 @ 415 V						
		0.38	5 @ 500 V						
3VA1120-4E#3x-0AA0	0.38	5 @ 415 V							
	0.38	5 @ 500 V							
3VA1120-5E#3x-0AA0	0.38	5 @ 415 V							
	0.38	5 @ 500 V							
3VA1120-6E#3x-0AA0	0.38	5 @ 415 V							
	0.38	5 @ 500 V							

Converter			Protective device				
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA	
			32	5SY7320-7	0.2	5 @ 400 V	
				3VA1032-2ED3x-0AA0	0.38	5 @ 415 V	
					0.38	5 @ 500 V	
				3VA1032-3ED3x-0AA0	0.38	5 @ 415 V	
					0.38	5 @ 500 V	
				3VA1032-4ED3x-0AA0	0.38	5 @ 415 V	
					0.38	5 @ 500 V	
				3VA1132-3E#3x-0AA0	0.38	5 @ 415 V	
					0.38	5 @ 500 V	
				3VA1132-4E#3x-0AA0	0.38	5 @ 415 V	
	0.38	5 @ 500 V					
	3VA1132-5E#3x-0AA0	0.38	5 @ 415 V				
		0.38	5 @ 500 V				
	3VA1132-6E#3x-0AA0	0.38	5 @ 415 V				
		0.38	5 @ 500 V				
	5SY7332-7	0.32	5 @ 400 V				
	7.5 kW	6SL4113-0..16-..F0	32	25	5SY7325-7	0.25	5 @ 400 V
				3VA1032-2ED3x-0AA0	0.38	5 @ 415 V	
					0.38	5 @ 500 V	
				3VA1032-3ED3x-0AA0	0.38	5 @ 415 V	
0.38					5 @ 500 V		
3VA1032-4ED3x-0AA0				0.38	5 @ 415 V		
				0.38	5 @ 500 V		
3VA1132-3E#3x-0AA0				0.38	5 @ 415 V		
				0.38	5 @ 500 V		
3VA1132-4E#3x-0AA0				0.38	5 @ 415 V		

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA
					0.38	5 @ 500 V
				3VA1132-5E#3x-0AA0	0.38	5 @ 415 V
					0.38	5 @ 500 V
				3VA1132-6E#3x-0AA0	0.38	5 @ 415 V
					0.38	5 @ 500 V
				5SY7332-7	0.32	5 @ 400 V
FSC	11 kW	6SL4113-0..17-..F0		Use MSP or fuse instead.		
	15 kW	6SL4113-0..18-..F0		Use MSP or fuse instead.		
FSD1	18.5 kW	6SL4113-0..20-..F0	63	3VA1063-2ED3x-0AA0	0.76	5 @ 415 V
					0.76	5 @ 500 V
				3VA1063-3ED3x-0AA0	0.76	5 @ 415 V
					0.76	5 @ 500 V
				3VA1063-4ED3x-0AA0	0.76	5 @ 415 V
					0.76	5 @ 500 V
				3VA1163-3E#3x-0AA0	0.76	5 @ 415 V
					0.76	5 @ 500 V
				3VA1163-4E#3x-0AA0	0.76	5 @ 415 V
					0.76	5 @ 500 V
				3VA1163-5E#3x-0AA0	0.76	5 @ 415 V
					0.76	5 @ 500 V
				3VA1163-6E#3x-0AA0	0.76	5 @ 415 V
					0.76	5 @ 500 V
				3VA2063-5##3x-0AA0	0.91	5 @ 415 V
					0.91	5 @ 500 V
				3VA2063-6##3x-0AA0	0.91	5 @ 415 V
					0.91	5 @ 500 V

Converter			Protective device				
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA	
				3VA2063-7##3x-0AA0	0.91	5 @ 415 V	
					0.91	5 @ 500 V	
				3VA2063-8##3x-0AA0	0.91	5 @ 415 V	
					0.91	5 @ 500 V	
				3VA2163-5##3x-0AA0	1.13	5 @ 415 V	
					1.13	5 @ 500 V	
				3VA2163-6##3x-0AA0	1.13	5 @ 415 V	
					1.13	5 @ 500 V	
				3VA2163-7##3x-0AA0	1.13	5 @ 415 V	
					1.13	5 @ 500 V	
				3VA2163-8##3x-0AA0	1.13	5 @ 415 V	
					1.13	5 @ 500 V	
				80	3VA1080-2ED3x-0AA0	0.96	5 @ 415 V
						0.96	5 @ 500 V
			3VA1080-3ED3x-0AA0		0.96	5 @ 415 V	
					0.96	5 @ 500 V	
			3VA1080-4ED3x-0AA0		0.96	5 @ 415 V	
					0.96	5 @ 500 V	
			3VA1180-3E#3x-0AA0		0.96	5 @ 415 V	
					0.96	5 @ 500 V	
			3VA1180-4E#3x-0AA0		0.96	5 @ 415 V	
					0.96	5 @ 500 V	
			3VA1180-5E#3x-0AA0	0.96	5 @ 415 V		
				0.96	5 @ 500 V		
3VA1180-6E#3x-0AA0	0.96	5 @ 415 V					
	0.96	5 @ 500 V					

Converter			Protective device						
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA			
			100	3VA2010-5##3x-0AA0	1.44	5 @ 415 V			
					1.44	5 @ 500 V			
				3VA2010-6##3x-0AA0	1.44	5 @ 415 V			
					1.44	5 @ 500 V			
				3VA2010-7##3x-0AA0	1.44	5 @ 415 V			
					1.44	5 @ 500 V			
				3VA2010-8##3x-0AA0	1.44	5 @ 415 V			
					1.44	5 @ 500 V			
				3VA2110-5##3x-0AA0	1.8	5 @ 415 V			
					1.8	5 @ 500 V			
				3VA2110-6##3x-0AA0	1.8	5 @ 415 V			
					1.8	5 @ 500 V			
				3VA2110-7##3x-0AA0	1.8	5 @ 415 V			
					1.8	5 @ 500 V			
				3VA2110-8##3x-0AA0	1.8	5 @ 415 V			
					1.8	5 @ 500 V			
				22 kW	6SL4113-0..21-..F0	80	3VA1080-2ED3x-0AA0	0.96	5 @ 415 V
								0.96	5 @ 500 V
3VA1080-3ED3x-0AA0	0.96	5 @ 415 V							
	0.96	5 @ 500 V							
3VA1080-4ED3x-0AA0	0.96	5 @ 415 V							
	0.96	5 @ 500 V							
3VA1180-3E#3x-0AA0	0.96	5 @ 415 V							
	0.96	5 @ 500 V							
3VA1180-4E#3x-0AA0	0.96	5 @ 415 V							
	0.96	5 @ 500 V							

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA
				3VA1180-5E#3x-0AA0	0.96	5 @ 415 V
					0.96	5 @ 500 V
				3VA1180-6E#3x-0AA0	0.96	5 @ 415 V
					0.96	5 @ 500 V
			100	3VA2010-5##3x-0AA0	1.44	5 @ 415 V
					1.44	5 @ 500 V
				3VA2010-6##3x-0AA0	1.44	5 @ 415 V
					1.44	5 @ 500 V
				3VA2010-7##3x-0AA0	1.44	5 @ 415 V
					1.44	5 @ 500 V
				3VA2010-8##3x-0AA0	1.44	5 @ 415 V
					1.44	5 @ 500 V
				3VA2110-5##3x-0AA0	1.8	5 @ 415 V
					1.8	5 @ 500 V
				3VA2110-6##3x-0AA0	1.8	5 @ 415 V
					1.8	5 @ 500 V
				3VA2110-7##3x-0AA0	1.8	5 @ 415 V
					1.8	5 @ 500 V
3VA2110-8##3x-0AA0	1.8	5 @ 415 V				
	1.8	5 @ 500 V				
FSD2	30 kW	6SL4113-0..23-..F0	100	3VA1010-2ED3x-0AA0	1.2	5 @ 415 V
					1.2	5 @ 500 V
				3VA1010-3ED3x-0AA0	1.2	5 @ 415 V
					1.2	5 @ 500 V
				3VA1010-4ED3x-0AA0	1.2	5 @ 415 V
					1.2	5 @ 500 V

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA
				3VA1110-3E#3x-0AA0	1.2	5 @ 415 V
					1.2	5 @ 500 V
				3VA1110-4E#3x-0AA0	1.2	5 @ 415 V
					1.2	5 @ 500 V
				3VA1110-5E#3x-0AA0	1.2	5 @ 415 V
					1.2	5 @ 500 V
				3VA1110-6E#3x-0AA0	1.2	5 @ 415 V
					1.2	5 @ 500 V
				3VA2010-5##3x-0AA0	1.44	5 @ 415 V
					1.44	5 @ 500 V
				3VA2010-6##3x-0AA0	1.44	5 @ 415 V
					1.44	5 @ 500 V
				3VA2010-7##3x-0AA0	1.44	5 @ 415 V
					1.44	5 @ 500 V
				3VA2010-8##3x-0AA0	1.44	5 @ 415 V
					1.44	5 @ 500 V
				3VA2110-5##3x-0AA0	1.8	5 @ 415 V
					1.8	5 @ 500 V
				3VA2110-6##3x-0AA0	1.8	5 @ 415 V
					1.8	5 @ 500 V
				3VA2110-7##3x-0AA0	1.8	5 @ 415 V
					1.8	5 @ 500 V
				3VA2110-8##3x-0AA0	1.8	5 @ 415 V
					1.8	5 @ 500 V
37 kW	6SL4113-0..24-..F0	100	3VA1010-2ED3x-0AA0	1.2	5 @ 415 V	
				1.2	5 @ 500 V	

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA
				3VA1010-3ED3x-0AA0	1.2	5 @ 415 V
					1.2	5 @ 500 V
				3VA1010-4ED3x-0AA0	1.2	5 @ 415 V
					1.2	5 @ 500 V
				3VA1110-3E#3x-0AA0	1.2	5 @ 415 V
					1.2	5 @ 500 V
				3VA1110-4E#3x-0AA0	1.2	5 @ 415 V
					1.2	5 @ 500 V
				3VA1110-5E#3x-0AA0	1.2	5 @ 415 V
					1.2	5 @ 500 V
				3VA1110-6E#3x-0AA0	1.2	5 @ 415 V
					1.2	5 @ 500 V
				3VA2010-5##3x-0AA0	1.44	5 @ 415 V
					1.44	5 @ 500 V
				3VA2010-6##3x-0AA0	1.44	5 @ 415 V
					1.44	5 @ 500 V
				3VA2010-7##3x-0AA0	1.44	5 @ 415 V
					1.44	5 @ 500 V
				3VA2010-8##3x-0AA0	1.44	5 @ 415 V
					1.44	5 @ 500 V
				3VA2110-5##3x-0AA0	1.8	5 @ 415 V
					1.8	5 @ 500 V
				3VA2110-6##3x-0AA0	1.8	5 @ 415 V
					1.8	5 @ 500 V
3VA2110-7##3x-0AA0	1.8	5 @ 415 V				
	1.8	5 @ 500 V				

Converter			Protective device				
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA	
FSE				3VA2110-8##3x-0AA0	1.8	5 @ 415 V	
					1.8	5 @ 500 V	
	45 kW	6SL4113-0..26-..F0	125	3VA1112-3E#3x-0AA0	1.5	7 @ 500 V	
					1.5	10 @ 415 V	
				3VA1112-4E#3x-0AA0	1.5	7 @ 500 V	
					1.5	10 @ 415 V	
				3VA1112-5E#3x-0AA0	1.5	10 @ 500 V	
				3VA1112-6E#3x-0AA0	1.5	10 @ 500 V	
				160	3VA2116-5##3x-0AA0	1.92	10 @ 500 V
					3VA2116-6##3x-0AA0	1.92	10 @ 500 V
					3VA2116-7##3x-0AA0	1.92	10 @ 500 V
					3VA2116-8##3x-0AA0	1.92	10 @ 500 V
	55 kW	6SL4113-0..27-..F0	125	3VA1112-3E#3x-0AA0	1.5	7 @ 500 V	
					1.5	10 @ 415 V	
				3VA1112-4E#3x-0AA0	1.5	7 @ 500 V	
					1.5	10 @ 415 V	
			3VA1112-5E#3x-0AA0	1.5	10 @ 500 V		
			3VA1112-6E#3x-0AA0	1.5	10 @ 500 V		
			160	3VA2116-5##3x-0AA0	1.92	10 @ 500 V	

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA
				3VA2116-6##3x-0AA0	1.92	10 @ 500 V
				3VA2116-7##3x-0AA0	1.92	10 @ 500 V
				3VA2116-8##3x-0AA0	1.92	10 @ 500 V
FSF1	75 kW	6SL4113-0..30-..F0	160	3VA1116-3E#3x-0AA0	1.92	7 @ 500 V
					1.92	10 @ 415 V
				3VA1116-4E#3x-0AA0	1.92	7 @ 500 V
					1.92	10 @ 415 V
				3VA1116-5E#3x-0AA0	1.92	10 @ 500 V
				3VA1116-6E#3x-0AA0	1.92	10 @ 500 V
				3VA1216-4EF3x-0AA0	1.92	10 @ 500 V
				3VA1216-5EF3x-0AA0	1.92	10 @ 500 V
				3VA1216-6EF3x-0AA0	1.92	10 @ 500 V
				3VA2116-5##3x-0AA0	1.92	10 @ 500 V
				3VA2116-6##3x-0AA0	1.92	10 @ 500 V
				3VA2116-7##3x-0AA0	1.92	10 @ 500 V
				3VA2116-8##3x-0AA0	1.92	10 @ 500 V
3VA2216-5##3x-0AA0	2.88	10 @ 500 V				

Converter			Protective device					
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA		
				3VA2216-6##3x-0AA0	2.88	10 @ 500 V		
				3VA2216-7##3x-0AA0	2.88	10 @ 500 V		
				3VA2216-8##3x-0AA0	2.88	10 @ 500 V		
			250	3VA1225-4EF3x-0AA0	3.0	10 @ 500 V		
				3VA1225-5EF3x-0AA0	3.0	10 @ 500 V		
				3VA1225-6EF3x-0AA0	3.0	10 @ 500 V		
				3VA2225-5##3x-0AA0	3.0	10 @ 500 V		
				3VA2225-6##3x-0AA0	3.0	10 @ 500 V		
				3VA2225-7##3x-0AA0	3.0	10 @ 500 V		
			400	3VA2225-8##3x-0AA0	3.0	10 @ 500 V		
				3VA2340-5##3x-0AA0	4.8	10 @ 500 V		
				3VA2340-6##3x-0AA0	4.8	10 @ 500 V		
			90 kW	6SL4113-0..31-..F0	200	3VA1220-4EF3x-0AA0	2.4	10 @ 500 V
						3VA1220-5EF3x-0AA0	2.4	10 @ 500 V
						3VA1220-6EF3x-0AA0	2.4	10 @ 500 V
250	3VA1225-4EF3x-0AA0	3.0			10 @ 500 V			

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA
				3VA1225-5EF3x-0AA0	3.0	10 @ 500 V
				3VA1225-6EF3x-0AA0	3.0	10 @ 500 V
				3VA2225-5##3x-0AA0	3.0	10 @ 500 V
				3VA2225-6##3x-0AA0	3.0	10 @ 500 V
				3VA2225-7##3x-0AA0	3.0	10 @ 500 V
				3VA2225-8##3x-0AA0	3.0	10 @ 500 V
			320	3VA1332-4EF32-0AA0	3.84	10 @ 500 V
				3VA1332-5EF32-0AA0	3.84	10 @ 500 V
				3VA1332-6EF32-0AA0	3.84	10 @ 500 V
				3VA1332-7EF32-0AA0	3.84	10 @ 500 V
			400	3VA2340-5##3x-0AA0	4.8	10 @ 500 V
				3VA2340-6##3x-0AA0	4.8	10 @ 500 V
	3VA2340-7##3x-0AA0	4.8		10 @ 500 V		
	110 kW	6SL4113-0..33-..F0	250	3VA1225-4EF3x-0AA0	3.0	10 @ 500 V
				3VA1225-5EF3x-0AA0	3.0	10 @ 500 V
				3VA1225-6EF3x-0AA0	3.0	10 @ 500 V
3VA2225-5##3x-0AA0				3.0	10 @ 500 V	

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA
				3VA2225-6##3x-0AA0	3.0	10 @ 500 V
				3VA2225-7##3x-0AA0	3.0	10 @ 500 V
				3VA2225-8##3x-0AA0	3.0	10 @ 500 V
			320	3VA1332-4EF32-0AA0	3.84	10 @ 500 V
				3VA1332-5EF32-0AA0	3.84	10 @ 500 V
				3VA1332-6EF32-0AA0	3.84	10 @ 500 V
				3VA1332-7EF32-0AA0	3.84	10 @ 500 V
			400	3VA2340-5##3x-0AA0	4.8	10 @ 500 V
				3VA2340-6##3x-0AA0	4.8	10 @ 500 V
				3VA2340-7##3x-0AA0	4.8	10 @ 500 V
				3VA2340-8##3x-0AA0	4.8	10 @ 415 V
				3VA2440-5##32-0AA0	7.2	10 @ 500 V
				3VA2440-6##32-0AA0	7.2	10 @ 500 V
				3VA2440-7##32-0AA0	7.2	10 @ 500 V

1) x stands for type of electrical connection and can be replaced by: 2 (nut keeper kit) or 6 (box terminal)

2) # stands for type of release and can be replaced by: D (fixed thermal fixed magnetic trip unit), E (adjustable thermal fixed magnetic trip Unit) or F (adjustable thermal adjustable magnetic Trip unit)

3) ## stands for type of release and can be replaced by: HL ( line protection LI), HM (line protection LIG), HK (line protection ELISA LI), HN (Line and generator protection LSI), JP (Line and generator protection LSI, with display), JQ (Line and generator protection LSIG, with display), KP (Line and generator protection LSI, with display, with measurement function), KQ (Line and generator protection LSIG, with display, with measurement function)

## IEC circuit breakers for IP55, 3AC 380...415/440...500V without maintenance switch

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mf</sub> / kA	I <sub>cc</sub> / kA
FSB	1.1 kW	6SL4113-0J.08-..F0	6	5SY7306-7	0.06	15 @ 400 V
			16	3VA1096-2ED3x-0AA0	0.38	5 @ 500 V
					0.38	16 @ 415 V
				3VA1096-3ED3x-0AA0	0.38	5 @ 500 V
					0.38	25 @ 415 V
				3VA1096-4ED3x-0AA0	0.38	5 @ 500 V
					0.38	36 @ 415 V
				3VA1196-3E#3x-0AA0	0.38	5 @ 500 V
					0.38	25 @ 415 V
			3VA1196-4E#3x-0AA0	0.38	5 @ 500 V	
	0.38	36 @ 415 V				
	3VA1196-5E#3x-0AA0	0.38	5 @ 500 V			
		0.38	55 @ 415 V			
	3VA1196-6E#3x-0AA0	0.38	5 @ 500 V			
		0.38	65 @ 415 V			
	1.5 kW	6SL4113-0J.10-..F0	8	5SY7308-7	0.08	15 @ 400 V
			16	3VA1096-2ED3x-0AA0	0.38	5 @ 500 V
					0.38	16 @ 415 V
				3VA1096-3ED3x-0AA0	0.38	5 @ 500 V
					0.38	25 @ 415 V
3VA1096-4ED3x-0AA0				0.38	5 @ 500 V	
				0.38	36 @ 415 V	
3VA1196-3E#3x-0AA0				0.38	5 @ 500 V	
				0.38	25 @ 415 V	

Converter			Protective device							
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA				
				3VA1196-4E#3x-0AA0	0.38	5 @ 500 V				
					0.38	36 @ 415 V				
				3VA1196-5E#3x-0AA0	0.38	5 @ 500 V				
					0.38	55 @ 415 V				
				3VA1196-6E#3x-0AA0	0.38	5 @ 500 V				
					0.38	65 @ 415 V				
				5SY7316-7	0.16	15 @ 400 V				
				2.2 kW	6SL4113-OJ.11-..F0		10	5SY7310-7	0.1	15 @ 400 V
								3VA1096-2ED3x-0AA0	0.38	5 @ 500 V
							0.38		16 @ 415 V	
	3VA1096-3ED3x-0AA0	0.38	5 @ 500 V							
		0.38	25 @ 415 V							
	3VA1096-4ED3x-0AA0	0.38	5 @ 500 V							
		0.38	36 @ 415 V							
	3VA1196-3E#3x-0AA0	0.38	5 @ 500 V							
		0.38	25 @ 415 V							
	3VA1196-4E#3x-0AA0	0.38	5 @ 500 V							
		0.38	36 @ 415 V							
	3VA1196-5E#3x-0AA0	0.38	5 @ 500 V							
		0.38	55 @ 415 V							
3VA1196-6E#3x-0AA0	0.38	5 @ 500 V								
	0.38	65 @ 415 V								
5SY7316-7	0.16	15 @ 400 V								
3 kW	6SL4113-OJ.12-..F0		13	5SY7313-7	0.13	15 @ 400 V				
				3VA1096-2ED3x-0AA0	0.38	5 @ 500 V				
	16	0.38	16 @ 415 V							

Converter			Protective device						
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA			
				3VA1096-3ED3x-0AA0	0.38	5 @ 500 V			
					0.38	25 @ 415 V			
				3VA1096-4ED3x-0AA0	0.38	5 @ 500 V			
					0.38	36 @ 415 V			
				3VA1196-3E#3x-0AA0	0.38	5 @ 500 V			
					0.38	25 @ 415 V			
				3VA1196-4E#3x-0AA0	0.38	5 @ 500 V			
					0.38	36 @ 415 V			
				3VA1196-5E#3x-0AA0	0.38	5 @ 500 V			
					0.38	55 @ 415 V			
				3VA1196-6E#3x-0AA0	0.38	5 @ 500 V			
					0.38	65 @ 415 V			
				5SY7316-7	0.16	15 @ 400 V			
				4 kW	6SL4113-0J.13-..F0	16	3VA1096-2ED3x-0AA0	0.38	5 @ 500 V
								0.38	16 @ 415 V
							3VA1096-3ED3x-0AA0	0.38	5 @ 500 V
0.38	25 @ 415 V								
3VA1096-4ED3x-0AA0	0.38	5 @ 500 V							
	0.38	36 @ 415 V							
3VA1196-3E#3x-0AA0	0.38	5 @ 500 V							
	0.38	25 @ 415 V							
3VA1196-4E#3x-0AA0	0.38	5 @ 500 V							
	0.38	36 @ 415 V							
3VA1196-5E#3x-0AA0	0.38	5 @ 500 V							
	0.38	55 @ 415 V							
3VA1196-6E#3x-0AA0	0.38	5 @ 500 V							

Converter			Protective device								
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA					
					0.38	65 @ 415 V					
				5SY7316-7	0.16	15 @ 400 V					
	5.5 kW	6SL4113-0J.15-..F0	20		3VA1020-2ED3x-0AA0	0.38	5 @ 500 V				
						0.38	16 @ 415 V				
					3VA1020-3ED3x-0AA0	0.38	5 @ 500 V				
						0.38	25 @ 415 V				
					3VA1020-4ED3x-0AA0	0.38	5 @ 500 V				
						0.38	36 @ 415 V				
					3VA1120-3E#3x-0AA0	0.38	5 @ 500 V				
						0.38	25 @ 415 V				
					3VA1120-4E#3x-0AA0	0.38	5 @ 500 V				
						0.38	36 @ 415 V				
					3VA1120-5E#3x-0AA0	0.38	5 @ 500 V				
						0.38	55 @ 415 V				
					3VA1120-6E#3x-0AA0	0.38	5 @ 500 V				
						0.38	65 @ 415 V				
					5SY7320-7	0.2	15 @ 400 V				
					32				3VA1032-2ED3x-0AA0	0.38	5 @ 500 V
										0.38	16 @ 415 V
									3VA1032-3ED3x-0AA0	0.38	5 @ 500 V
0.38	25 @ 415 V										
3VA1032-4ED3x-0AA0	0.38	5 @ 500 V									
	0.38	36 @ 415 V									
3VA1132-3E#3x-0AA0	0.38	5 @ 500 V									
	0.38	25 @ 415 V									
3VA1132-4E#3x-0AA0	0.38	5 @ 500 V									

Converter			Protective device							
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA				
					0.38	36 @ 415 V				
					3VA1132-5E#3x-0AA0	0.38	5 @ 500 V			
				0.38		55 @ 415 V				
				3VA1132-6E#3x-0AA0	0.38	5 @ 500 V				
					0.38	65 @ 415 V				
				5SY7332-7	0.32	15 @ 400 V				
				7.5 kW	6SL4113-0J.16-..F0		25	5SY7325-7	0.25	15 @ 400 V
								3VA1032-2ED3x-0AA0	0.38	5 @ 500 V
							0.38		16 @ 415 V	
							3VA1032-3ED3x-0AA0	0.38	5 @ 500 V	
	0.38	25 @ 415 V								
	3VA1032-4ED3x-0AA0	0.38	5 @ 500 V							
		0.38	36 @ 415 V							
	3VA1132-3E#3x-0AA0	0.38	5 @ 500 V							
		0.38	25 @ 415 V							
	3VA1132-4E#3x-0AA0	0.38	5 @ 500 V							
		0.38	36 @ 415 V							
	3VA1132-5E#3x-0AA0	0.38	5 @ 500 V							
		0.38	55 @ 415 V							
	3VA1132-6E#3x-0AA0	0.38	5 @ 500 V							
0.38		65 @ 415 V								
5SY7332-7	0.32	15 @ 400 V								
FSC	11 kW	6SL4113-0J.17-..F0		Use MSP or fuse instead.						
	15 kW	6SL4113-0J.18-..F0		Use MSP or fuse instead.						
FSD1	18.5 kW	6SL4113-0J.20-..F0	63	3VA1063-2ED3x-0AA0	0.76	5 @ 500 V				
					0.76	16 @ 415 V				

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA
				3VA1063-3ED3x-0AA0	0.76	5 @ 500 V
					0.76	25 @ 415 V
				3VA1063-4ED3x-0AA0	0.76	5 @ 500 V
					0.76	36 @ 415 V
				3VA1163-3E#3x-0AA0	0.76	5 @ 500 V
					0.76	25 @ 415 V
				3VA1163-4E#3x-0AA0	0.76	5 @ 500 V
					0.76	36 @ 415 V
				3VA1163-5E#3x-0AA0	0.76	5 @ 500 V
					0.76	55 @ 415 V
				3VA1163-6E#3x-0AA0	0.76	5 @ 500 V
					0.76	70 @ 415 V
				3VA2063-5##3x-0AA0	0.91	5 @ 500 V
					0.91	55 @ 415 V
				3VA2063-6##3x-0AA0	0.91	5 @ 500 V
					0.91	85 @ 415 V
				3VA2063-7##3x-0AA0	0.91	5 @ 500 V
					0.91	100 @ 415 V
				3VA2063-8##3x-0AA0	0.91	5 @ 500 V
					0.91	100 @ 415 V
				3VA2163-5##3x-0AA0	1.13	5 @ 500 V
					1.13	55 @ 415 V
				3VA2163-6##3x-0AA0	1.13	5 @ 500 V
					1.13	85 @ 415 V
3VA2163-7##3x-0AA0	1.13	5 @ 500 V				
	1.13	100 @ 415 V				

Converter			Protective device				
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA	
				3VA2163-8##3x-0AA0	1.13	5 @ 500 V	
					1.13	100 @ 415 V	
			80	3VA1080-2ED3x-0AA0	0.96	5 @ 500 V	
					0.96	16 @ 415 V	
				3VA1080-3ED3x-0AA0	0.96	5 @ 500 V	
					0.96	25 @ 415 V	
				3VA1080-4ED3x-0AA0	0.96	5 @ 500 V	
					0.96	36 @ 415 V	
				3VA1180-3E#3x-0AA0	0.96	5 @ 500 V	
					0.96	25 @ 415 V	
				3VA1180-4E#3x-0AA0	0.96	5 @ 500 V	
					0.96	36 @ 415 V	
				3VA1180-5E#3x-0AA0	0.96	5 @ 500 V	
					0.96	55 @ 415 V	
				3VA1180-6E#3x-0AA0	0.96	5 @ 500 V	
					0.96	70 @ 415 V	
				100	3VA2010-5##3x-0AA0	1.44	5 @ 500 V
						1.44	55 @ 415 V
			3VA2010-6##3x-0AA0		1.44	5 @ 500 V	
					1.44	85 @ 415 V	
			3VA2010-7##3x-0AA0		1.44	5 @ 500 V	
					1.44	100 @ 415 V	
			3VA2010-8##3x-0AA0		1.44	5 @ 500 V	
					1.44	100 @ 415 V	
3VA2110-5##3x-0AA0	1.8	5 @ 500 V					
	1.8	55 @ 415 V					

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA
				3VA2110-6##3x-0AA0	1.8	5 @ 500 V
					1.8	85 @ 415 V
				3VA2110-7##3x-0AA0	1.8	5 @ 500 V
					1.8	100 @ 415 V
				3VA2110-8##3x-0AA0	1.8	5 @ 500 V
					1.8	100 @ 415 V
			80	3VA1080-2ED3x-0AA0	0.96	5 @ 500 V
					0.96	16 @ 415 V
				3VA1080-3ED3x-0AA0	0.96	5 @ 500 V
					0.96	25 @ 415 V
				3VA1080-4ED3x-0AA0	0.96	5 @ 500 V
					0.96	36 @ 415 V
	3VA1180-3E#3x-0AA0	0.96	5 @ 500 V			
		0.96	25 @ 415 V			
	3VA1180-4E#3x-0AA0	0.96	5 @ 500 V			
		0.96	36 @ 415 V			
	3VA1180-5E#3x-0AA0	0.96	5 @ 500 V			
		0.96	55 @ 415 V			
	3VA1180-6E#3x-0AA0	0.96	5 @ 500 V			
		0.96	70 @ 415 V			
	100	3VA2010-5##3x-0AA0	1.44	5 @ 500 V		
			1.44	55 @ 415 V		
		3VA2010-6##3x-0AA0	1.44	5 @ 500 V		
			1.44	85 @ 415 V		
3VA2010-7##3x-0AA0		1.44	5 @ 500 V			
		1.44	100 @ 415 V			
22 kW	6SL4113-0J.21-..F0					

Converter			Protective device							
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA				
				3VA2010-8##3x-0AA0	1.44	5 @ 500 V				
					1.44	100 @ 415 V				
				3VA2110-5##3x-0AA0	1.8	5 @ 500 V				
					1.8	55 @ 415 V				
				3VA2110-6##3x-0AA0	1.8	5 @ 500 V				
					1.8	85 @ 415 V				
				3VA2110-7##3x-0AA0	1.8	5 @ 500 V				
					1.8	100 @ 415 V				
				3VA2110-8##3x-0AA0	1.8	5 @ 500 V				
					1.8	100 @ 415 V				
				FSD2	30 kW	6SL4113-0J.23-..F0	80	3VA1080-2ED3x-0AA0	0.96	5 @ 500 V
									0.96	16 @ 415 V
3VA1080-3ED3x-0AA0	0.96	5 @ 500 V								
	0.96	25 @ 415 V								
3VA1080-4ED3x-0AA0	0.96	5 @ 500 V								
	0.96	36 @ 415 V								
3VA1180-3E#3x-0AA0	0.96	5 @ 500 V								
	0.96	25 @ 415 V								
3VA1180-4E#3x-0AA0	0.96	5 @ 500 V								
	0.96	36 @ 415 V								
3VA1180-5E#3x-0AA0	0.96	5 @ 500 V								
	0.96	55 @ 415 V								
3VA1180-6E#3x-0AA0	0.96	5 @ 500 V								
	0.96	70 @ 415 V								
100				3VA1010-2ED3x-0AA0	1.2	5 @ 500 V				
					1.2	16 @ 415 V				

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA
				3VA1010-3ED3x-0AA0	1.2	5 @ 500 V
					1.2	25 @ 415 V
				3VA1010-4ED3x-0AA0	1.2	5 @ 500 V
					1.2	36 @ 415 V
				3VA1110-3E#3x-0AA0	1.2	5 @ 500 V
					1.2	25 @ 415 V
				3VA1110-4E#3x-0AA0	1.2	5 @ 500 V
					1.2	36 @ 415 V
				3VA1110-5E#3x-0AA0	1.2	5 @ 500 V
					1.2	55 @ 415 V
				3VA1110-6E#3x-0AA0	1.2	5 @ 500 V
					1.2	70 @ 415 V
				3VA2010-5##3x-0AA0	1.44	5 @ 500 V
					1.44	55 @ 415 V
				3VA2010-6##3x-0AA0	1.44	5 @ 500 V
					1.44	85 @ 415 V
				3VA2010-7##3x-0AA0	1.44	5 @ 500 V
					1.44	100 @ 415 V
				3VA2010-8##3x-0AA0	1.44	5 @ 500 V
					1.44	100 @ 415 V
				3VA2110-5##3x-0AA0	1.8	5 @ 500 V
					1.8	55 @ 415 V
				3VA2110-6##3x-0AA0	1.8	5 @ 500 V
					1.8	85 @ 415 V
3VA2110-7##3x-0AA0	1.8	5 @ 500 V				
	1.8	100 @ 415 V				

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA
	37 kW	6SL4113-0J.24-..F0	100	3VA2110-8##3x-0AA0	1.8	5 @ 500 V
					1.8	100 @ 415 V
				3VA1010-2ED3x-0AA0	1.2	5 @ 500 V
					1.2	16 @ 415 V
				3VA1010-3ED3x-0AA0	1.2	5 @ 500 V
					1.2	25 @ 415 V
				3VA1010-4ED3x-0AA0	1.2	5 @ 500 V
					1.2	36 @ 415 V
				3VA1110-3E#3x-0AA0	1.2	5 @ 500 V
					1.2	25 @ 415 V
				3VA1110-4E#3x-0AA0	1.2	5 @ 500 V
					1.2	36 @ 415 V
				3VA1110-5E#3x-0AA0	1.2	5 @ 500 V
					1.2	55 @ 415 V
				3VA1110-6E#3x-0AA0	1.2	5 @ 500 V
					1.2	70 @ 415 V
				3VA2010-5##3x-0AA0	1.44	5 @ 500 V
					1.44	55 @ 415 V
				3VA2010-6##3x-0AA0	1.44	5 @ 500 V
					1.44	85 @ 415 V
				3VA2010-7##3x-0AA0	1.44	5 @ 500 V
					1.44	100 @ 415 V
				3VA2010-8##3x-0AA0	1.44	5 @ 500 V
					1.44	100 @ 415 V
3VA2110-5##3x-0AA0	1.8	5 @ 500 V				
	1.8	55 @ 415 V				

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA
FSE	45 kW	6SL4113-0J.26-..F0	125	3VA2110-6##3x-0AA0	1.8	5 @ 500 V
					1.8	85 @ 415 V
				3VA2110-7##3x-0AA0	1.8	5 @ 500 V
					1.8	100 @ 415 V
				3VA2110-8##3x-0AA0	1.8	5 @ 500 V
					1.8	100 @ 415 V
	55 kW	6SL4113-0J.27-..F0	125	3VA1112-3E#3x-0AA0	1.5	7 @ 500 V
					1.5	25 @ 415 V
				3VA1112-4E#3x-0AA0	1.5	7 @ 500 V
					1.5	36 @ 415 V
				3VA1112-5E#3x-0AA0	1.5	10 @ 500 V
					1.5	55 @ 415 V
160	3VA1112-6E#3x-0AA0	1.5	10 @ 500 V			
		1.5	70 @ 415 V			
	3VA2116-5##3x-0AA0	1.92	10 @ 500 V			
		1.92	55 @ 415 V			
	3VA2116-6##3x-0AA0	1.92	10 @ 500 V			
		1.92	85 @ 415 V			
3VA2116-7##3x-0AA0	1.92	10 @ 500 V				
	1.92	100 @ 415 V				
3VA2116-8##3x-0AA0	1.92	10 @ 500 V				
	1.92	100 @ 415 V				
125	3VA1112-3E#3x-0AA0	1.5	7 @ 500 V			
		1.5	25 @ 415 V			
	3VA1112-4E#3x-0AA0	1.5	7 @ 500 V			
		1.5	36 @ 415 V			

Converter			Protective device						
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA			
				3VA1112-5E#3x-0AA0	1.5	10 @ 500 V			
					1.5	55 @ 415 V			
				3VA1112-6E#3x-0AA0	1.5	10 @ 500 V			
					1.5	70 @ 415 V			
				160	3VA2116-5##3x-0AA0	1.92	10 @ 500 V		
						1.92	55 @ 415 V		
					3VA2116-6##3x-0AA0	1.92	10 @ 500 V		
						1.92	85 @ 415 V		
			3VA2116-7##3x-0AA0		1.92	10 @ 500 V			
					1.92	100 @ 415 V			
			3VA2116-8##3x-0AA0	1.92	10 @ 500 V				
				1.92	100 @ 415 V				
			FSF1	75 kW	6SL4113-0J.30-..F0	160	3VA1116-3E#3x-0AA0	1.92	7 @ 500 V
								1.92	25 @ 415 V
3VA1116-4E#3x-0AA0	1.92	7 @ 500 V							
	1.92	36 @ 415 V							
3VA1116-5E#3x-0AA0	1.92	10 @ 500 V							
	1.92	55 @ 415 V							
3VA1116-6E#3x-0AA0	1.92	10 @ 500 V							
	1.92	70 @ 415 V							
3VA1216-4EF3x-0AA0	1.92	10 @ 500 V							
	1.92	36 @ 415 V							
3VA1216-5EF3x-0AA0	1.92	15 @ 500 V							
	1.92	55 @ 415 V							
3VA1216-6EF3x-0AA0	1.92	15 @ 500 V							
	1.92	70 @ 415 V							

Converter			Protective device				
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA	
				3VA2116-5##3x-0AA0	1.92	36 @ 500 V	
					1.92	55 @ 415 V	
				3VA2116-6##3x-0AA0	1.92	55 @ 500 V	
					1.92	85 @ 415 V	
				3VA2116-7##3x-0AA0	1.92	85 @ 500 V	
					1.92	100 @ 415 V	
				3VA2116-8##3x-0AA0	1.92	100 @ 415 V	
					1.92	100 @ 500 V	
				3VA2216-5##3x-0AA0	2.88	36 @ 500 V	
					2.88	55 @ 415 V	
				3VA2216-6##3x-0AA0	2.88	55 @ 500 V	
					2.88	85 @ 415 V	
				3VA2216-7##3x-0AA0	2.88	85 @ 500 V	
					2.88	100 @ 415 V	
				3VA2216-8##3x-0AA0	2.88	100 @ 415 V	
					2.88	100 @ 500 V	
				250	3VA1225-4EF3x-0AA0	3.0	10 @ 500 V
						3.0	36 @ 415 V
			3VA1225-5EF3x-0AA0		3.0	15 @ 500 V	
					3.0	55 @ 415 V	
			3VA1225-6EF3x-0AA0		3.0	15 @ 500 V	
					3.0	70 @ 415 V	
			3VA2225-5##3x-0AA0	3.0	36 @ 500 V		
				3.0	55 @ 415 V		
3VA2225-6##3x-0AA0	3.0	55 @ 500 V					
	3.0	85 @ 415 V					

Converter			Protective device							
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA				
		6SL4113-0J.31-..F0	400	3VA2225-7##3x-0AA0	3.0	85 @ 500 V				
					3.0	100 @ 415 V				
				3VA2225-8##3x-0AA0	3.0	100 @ 415 V				
					3.0	100 @ 500 V				
				3VA2340-5##3x-0AA0	4.8	36 @ 500 V				
					4.8	55 @ 415 V				
				3VA2340-6##3x-0AA0	4.8	55 @ 500 V				
					4.8	85 @ 415 V				
			3VA2340-7##3x-0AA0	4.8	85 @ 500 V					
				4.8	100 @ 415 V					
			3VA2340-8##3x-0AA0	4.8	100 @ 415 V					
			90 kW		6SL4113-0J.31-..F0	200	3VA1220-4EF3x-0AA0	2.4	10 @ 500 V	
								2.4	36 @ 415 V	
							3VA1220-5EF3x-0AA0	2.4	15 @ 500 V	
								2.4	55 @ 415 V	
							3VA1220-6EF3x-0AA0	2.4	15 @ 500 V	
								2.4	70 @ 415 V	
							250	3VA1225-4EF3x-0AA0	3.0	10 @ 500 V
									3.0	36 @ 415 V
						3VA1225-5EF3x-0AA0		3.0	15 @ 500 V	
								3.0	55 @ 415 V	
						3VA1225-6EF3x-0AA0		3.0	15 @ 500 V	
								3.0	70 @ 415 V	
3VA2225-5##3x-0AA0	3.0	36 @ 500 V								
	3.0	55 @ 415 V								
3VA2225-6##3x-0AA0	3.0	55 @ 500 V								

Converter			Protective device					
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA		
				3VA2225-7##3x-0AA0	3.0	85 @ 415 V		
					3.0	85 @ 500 V		
					3.0	100 @ 415 V		
					3VA2225-8##3x-0AA0	3.0	100 @ 415 V	
						3.0	100 @ 500 V	
					320	3VA1332-4EF32-0AA0	3.84	10 @ 500 V
				3.84			36 @ 415 V	
				3VA1332-5EF32-0AA0		3.84	10 @ 500 V	
						3.84	55 @ 415 V	
				3VA1332-6EF32-0AA0		3.84	10 @ 500 V	
						3.84	70 @ 415 V	
				3VA1332-7EF32-0AA0	3.84	10 @ 500 V		
			3.84		100 @ 415 V			
			400	3VA2340-5##3x-0AA0	4.8	36 @ 500 V		
					4.8	55 @ 415 V		
				3VA2340-6##3x-0AA0	4.8	55 @ 500 V		
					4.8	85 @ 415 V		
				3VA2340-7##3x-0AA0	4.8	85 @ 500 V		
					4.8	100 @ 415 V		
			3VA2340-8##3x-0AA0	4.8	100 @ 415 V			
			110 kW	6SL4113-0J.33-..F0	250	3VA1225-4EF3x-0AA0	3.0	10 @ 500 V
							3.0	36 @ 415 V
						3VA1225-5EF3x-0AA0	3.0	15 @ 500 V
							3.0	55 @ 415 V
3VA1225-6EF3x-0AA0	3.0	15 @ 500 V						
	3.0	70 @ 415 V						

Converter			Protective device				
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA	
				3VA2225-5##3x-0AA0	3.0	36 @ 500 V	
					3.0	55 @ 415 V	
				3VA2225-6##3x-0AA0	3.0	55 @ 500 V	
					3.0	85 @ 415 V	
				3VA2225-7##3x-0AA0	3.0	85 @ 500 V	
					3.0	100 @ 415 V	
				3VA2225-8##3x-0AA0	3.0	100 @ 415 V	
					3.0	100 @ 500 V	
				320	3VA1332-4EF32-0AA0	3.84	10 @ 500 V
						3.84	36 @ 415 V
					3VA1332-5EF32-0AA0	3.84	10 @ 500 V
						3.84	55 @ 415 V
			3VA1332-6EF32-0AA0		3.84	10 @ 500 V	
					3.84	70 @ 415 V	
			3VA1332-7EF32-0AA0	3.84	10 @ 500 V		
				3.84	100 @ 415 V		
			400	3VA2340-5##3x-0AA0	4.8	36 @ 500 V	
					4.8	55 @ 415 V	
				3VA2340-6##3x-0AA0	4.8	55 @ 500 V	
					4.8	85 @ 415 V	
				3VA2340-7##3x-0AA0	4.8	85 @ 500 V	
					4.8	100 @ 415 V	
				3VA2340-8##3x-0AA0	4.8	100 @ 415 V	
				3VA2440-5##32-0AA0	7.2	36 @ 500 V	
7.2	55 @ 415 V						
3VA2440-6##32-0AA0	7.2	55 @ 500 V					

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. <sup>1) 2) 3)</sup>	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA
					7.2	85 @ 415 V
				3VA2440-7##32-0AA0	7.2	85 @ 500 V
					7.2	100 @ 415 V
				3VA2440-8##32-0AA0	7.2	100 @ 415 V

<sup>1)</sup> x stands for type of electrical connection and can be replaced by: 2 (nut keeper kit) or 6 (box terminal)

<sup>2)</sup> # stands for type of release and can be replaced by: D (fixed thermal fixed magnetic trip unit), E (adjustable thermal fixed magnetic trip Unit) or F (adjustable thermal adjustable magnetic Trip unit)

<sup>3)</sup> ## stands for type of release and can be replaced by: HL ( line protection LI), HM (line protection LIG), HK (line protection ELISA LI), HN (Line and generator protection LSI), JP (Line and generator protection LSI, with display), JQ (Line and generator protection LSI, with display), KP (Line and generator protection LSI, with display, with measurement function), KQ (Line and generator protection LSI, with display, with measurement function)

## 1.3 SINAMICS G220 Clean Power

### 1.3.1 Protection class IP20

#### 1.3.1.1 IEC standard fuses

IEC standard fuses for IP20, 3AC 380...415/440...500V

Converter			Protective device				Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1)	I <sub>cp,mf</sub> / kA	I <sub>cc</sub> / kA	Metric	Imperial
FSD1	7.5 kW	6SL4113-2.A16-2.F0	25	3NA3810	0.62	100 @ 500 V	0.16 m <sup>3</sup>	5.65 ft <sup>3</sup>
			32	3NA3812	0.8	100 @ 500 V		
			50	3NA3820	1.25	100 @ 500 V		
	11 kW	6SL4113-2.A17-2.F0	40	3NA3817	1.0	100 @ 500 V		
			50	3NA3820	1.25	100 @ 500 V		
	15 kW	6SL4113-2.A18-2.F0	50	3NA3820	1.25	100 @ 500 V		
18.5 kW	6SL4113-2.A20-2.F0	63	3NA3822	1.57	100 @ 500 V			
		80	3NA3824	2.0	100 @ 500 V			
22 kW	6SL4113-2.A21-2.F0	80	3NA3824	2.0	100 @ 500 V			
FSD2	30 kW	6SL4113-2.A23-2.F0	80	3NA3824	2.0	100 @ 500 V	0.36 m <sup>3</sup>	12.71 ft <sup>3</sup>
			100	3NA3830	2.5	100 @ 500 V		
			125	3NA3832	3.12	100 @ 500 V		
	37 kW	6SL4113-2.A24-2.F0	100	3NA3830	2.5	100 @ 500 V		
125			3NA3832	3.12	100 @ 500 V			
FSE	45 kW	6SL4113-2.A26-2.F0	125	3NA3832	3.12	100 @ 500 V	0.384 m <sup>3</sup>	13.56 ft <sup>3</sup>
			160	3NA3836	4.0	100 @ 500 V		
	55 kW	6SL4113-2.A27-2.F0	160	3NA3836	4.0	100 @ 500 V		
FSF1	75 kW	6SL4113-2.A30-2.F0	160	3NA3836	4.0	100 @ 500 V	0.48 m <sup>3</sup>	16.95 ft <sup>3</sup>
			250	3NA3144	7.5	100 @ 500 V		

Converter			Protective device				Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. <sup>1)</sup>	I <sub>cp,mf</sub> / kA	I <sub>cc</sub> / kA	Metric	Imperial
	90 kW	6SL4113-2.A31-2.F0	160	3NA3836	4.0	100 @ 500 V		
			250	3NA3144	7.5	100 @ 500 V		
	110 kW	6SL4113-2.A33-2.F0	200	3NA3140	5.0	100 @ 500 V		
			250	3NA3144	7.5	100 @ 500 V		
FSF2	132 kW	6SL4113-2.A35-2.F0	250	3NA3144	7.5	100 @ 500 V	0.54 m <sup>3</sup>	19.07 ft <sup>3</sup>
			300	3NA3250	9.0	100 @ 500 V		
	160 kW	6SL4113-2.A36-2.F0	300	3NA3250	9.0	100 @ 500 V		
			355	3NA3254	10.65	100 @ 500 V		
				3NA3354	10.65	100 @ 500 V		

<sup>1)</sup> Siemens 3NA low-voltage fuses are recommended

## 1.3.1.2 IEC semiconductor fuses

## IEC semiconductor fuses for IP20, 3AC 380...415/440...500V

Converter			Protective device				Min. enclosure volume				
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no.	I <sub>cp,mf</sub> / kA	I <sub>cc</sub> / kA @ 500 V	Metric	Imperial			
FSD1	7.5 kW	6SL4113-2.A16-2.F0	25	3NE1815-0	0.38	100	0.16 m <sup>3</sup>	5.65 ft <sup>3</sup>			
			50	3NE1817-0	0.75	100					
	11 kW	6SL4113-2.A17-2.F0	40	3NE1802-0	0.6	100					
			50	3NE1817-0	0.75	100					
	15 kW	6SL4113-2.A18-2.F0	50	3NE1817-0	0.75	100					
	18.5 kW	6SL4113-2.A20-2.F0	63	3NE1818-0	0.94	100					
			80	3NE1820-0	1.2	100					
	22 kW	6SL4113-2.A21-2.F0	80	3NE1820-0	1.2	100					
	FSD2	30 kW	6SL4113-2.A23-2.F0	100	3NE1021-0	1.5			100	0.36 m <sup>3</sup>	12.71 ft <sup>3</sup>
				125	3NE1022-0	1.88			100		
37 kW		6SL4113-2.A24-2.F0	100	3NE1021-0	1.5	100					
			125	3NE1022-0	1.88	100					
FSE	45 kW	6SL4113-2.A26-2.F0	125	3NE1022-0	1.88	100	0.384 m <sup>3</sup>	13.56 ft <sup>3</sup>			
			160	3NE1224-0	2.4	100					
	55 kW	6SL4113-2.A27-2.F0	160	3NE1224-0	2.4	100					
FSF1	75 kW	6SL4113-2.A30-2.F0	160	3NE1224-0	2.4	100	0.48 m <sup>3</sup>	16.95 ft <sup>3</sup>			
			250	3NE1227-0	5.0	100					
	90 kW	6SL4113-2.A31-2.F0	200	3NE1225-0	3.0	100					
			250	3NE1227-0	5.0	100					
	110 kW	6SL4113-2.A33-2.F0	200	3NE1225-0	3.0	100					
			250	3NE1227-0	5.0	100					
FSF2	132 kW	6SL4113-2.A35-2.F0	250	3NE1227-0	5.0	100	0.54 m <sup>3</sup>	19.07 ft <sup>3</sup>			
			315	3NE1230-0	6.3	100					

Converter			Protective device				Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no.	I <sub>op,mf</sub> / kA	I <sub>cc</sub> / kA @ 500 V	Metric	Imperial
	160 kW	6SL4113-2.A36-2.F0	350	3NE1331-0	7.0	100		
			315	3NE1230-0	6.3	100		
			350	3NE1331-0	7.0	100		
			400	3NE1332-0	8.0	100		
			450	3NE1333-0	9.0	100		
			500	3NE1334-0	10.0	100		

## 1.3.1.3 IEC motor starter protectors

IEC motor starter protectors for IP20, 3AC 380...415/440...500V

Converter			Protective device				Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. <sup>1)</sup>	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA @ 415 V <sup>2)</sup>	Metric	Imperial
FSD1	7.5 kW	6SL4113-2.A16-2.F0	25	3RV2021-4DA..	0.39	55	0.16 m <sup>3</sup>	5.65 ft <sup>3</sup>
				3RV2031-4DA..	0.39	65		
				3RV2032-4DA..	0.39	65		
			50	3RV2041-4HA..	0.78	65		
				3RV2042-4HA..	0.78	100		
			52	3RV2031-4WA..	0.89	65		
	3RV2032-4WA..	0.89		65				
	11 kW	6SL4113-2.A17-2.F0	40	3RV2031-4UA..	0.7	65		
				3RV2032-4UA..	0.7	65		
				3RV2041-4FA..	0.62	65		
				3RV2042-4FA..	0.62	100		
			50	3RV2041-4HA..	0.78	65		
				3RV2042-4HA..	0.78	100		
	52	3RV2031-4WA..	0.89	65				
		3RV2032-4WA..	0.89	65				
	15 kW	6SL4113-2.A18-2.F0	50	3RV2041-4HA..	0.78	65		
				3RV2042-4HA..	0.78	100		
			52	3RV2031-4WA..	0.89	65		
				3RV2032-4WA..	0.89	65		
	18.5 kW	6SL4113-2.A20-2.F0	59	3RV2031-4XA..	1.01	65		
3RV2032-4XA..				1.01	100			
63			3RV2041-4JA..	0.98	65			
			3RV2042-4JA..	0.98	100			
73			3RV2031-4KA..	1.14	65			

Converter			Protective device				Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. <sup>1)</sup>	I <sub>op,mr</sub> / kA	I <sub>cc</sub> / kA @ 415 V <sup>2)</sup>	Metric	Imperial
	22 kW	6SL4113-2.A21-2.F0	75	3RV2032-4KA..	1.14	100	0.36 m <sup>3</sup>	12.71 ft <sup>3</sup>
				3RV2041-4KA..	1.17	65		
				3RV2042-4KA..	1.17	100		
			73	3RV2031-4KA..	1.14	65		
				3RV2032-4KA..	1.14	100		
				75	3RV2041-4KA..	1.17		
3RV2042-4KA..	1.17	100						
FSD2	30 kW	6SL4113-2.A23-2.F0	93	3RV2041-4YA..	1.56	65	0.36 m <sup>3</sup>	12.71 ft <sup>3</sup>
				3RV2042-4YA..	1.56	100		
			100	3RV2041-4MA..	1.56	65		
				3RV2042-4MA..	1.56	100		
	37 kW	6SL4113-2.A24-2.F0	100	3RV2041-4MA..	1.56	65		
				3RV2042-4MA..	1.56	100		
FSE	45 kW	6SL4113-2.A26-2.F0		Use a circuit breaker instead.				
	55 kW	6SL4113-2.A27-2.F0		Use a circuit breaker instead.				
FSF1	75 kW	6SL4113-2.A30-2.F0		Use a circuit breaker instead.			-	-
	90 kW	6SL4113-2.A31-2.F0		Use a circuit breaker instead.				
	110 kW	6SL4113-2.A33-2.F0		Use a circuit breaker instead.				
FSF2	132 kW	6SL4113-2.A35-2.F0		Use a circuit breaker instead.				
	160 kW	6SL4113-2.A36-2.F0		Use a circuit breaker instead.				

<sup>1)</sup> .. stands for type of electrical connection and can be replaced by: 10 (screw terminal); 20 (spring type terminal)

<sup>2)</sup> Icc values are only valid for supply grids with grounded star point (solidly grounded wye TN or TT systems)

## 1.3.1.4 IEC circuit breakers

IEC circuit breakers for IP20, 3AC 380...415/440...500V

Converter			Protective device				Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA	Metri c	Imperial
FSD1	7.5 kW	6SL4113-2.A16-2.F0	25	5SY7325-7	0.25	15 @ 400 V	0.16 m <sup>3</sup>	5.65 ft <sup>3</sup>
			32	3VA1032-2ED3x-0AA0	0.38	5 @ 500 V		
					0.38	16 @ 415 V		
				3VA1032-3ED3x-0AA0	0.38	5 @ 500 V		
					0.38	25 @ 415 V		
				3VA1032-4ED3x-0AA0	0.38	5 @ 500 V		
					0.38	36 @ 415 V		
				3VA1132-3E#3x-0AA0	0.38	5 @ 500 V		
					0.38	25 @ 415 V		
				3VA1132-4E#3x-0AA0	0.38	5 @ 500 V		
					0.38	36 @ 415 V		
				3VA1132-5E#3x-0AA0	0.38	5 @ 500 V		
					0.38	55 @ 415 V		
			3VA1132-6E#3x-0AA0	0.38	5 @ 500 V			
				0.38	65 @ 415 V			
			50	3VA1050-2ED3x-0AA0	0.6	5 @ 500 V		
					0.6	16 @ 415 V		
				3VA1050-3ED3x-0AA0	0.6	5 @ 500 V		
					0.6	25 @ 415 V		
				3VA1050-4ED3x-0AA0	0.6	5 @ 500 V		
					0.6	36 @ 415 V		
				3VA1150-3E#3x-0AA0	0.6	5 @ 500 V		
					0.6	25 @ 415 V		
				3VA1150-4E#3x-0AA0	0.6	5 @ 500 V		

Converter			Protective device				Min. enclosure volume					
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA	Metri c	Imperial				
					0.6	36 @ 415 V						
					3VA1150-5E#3x-0AA0	0.6			5 @ 500 V			
					0.6	55 @ 415 V						
					3VA1150-6E#3x-0AA0	0.6			5 @ 500 V			
					0.6	65 @ 415 V						
					5SY7350-7	0.5			15 @ 400 V			
				11 kW	6SL4113-2.A17-2.F0	32				3VA1032-2ED3x-0AA0	0.38	5 @ 500 V
										0.38	16 @ 415 V	
										3VA1032-3ED3x-0AA0	0.38	5 @ 500 V
										0.38	25 @ 415 V	
		3VA1032-4ED3x-0AA0	0.38				5 @ 500 V					
		0.38	36 @ 415 V									
		3VA1132-3E#3x-0AA0	0.38				5 @ 500 V					
		0.38	25 @ 415 V									
		3VA1132-4E#3x-0AA0	0.38				5 @ 500 V					
		0.38	36 @ 415 V									
		3VA1132-5E#3x-0AA0	0.38	5 @ 500 V								
		0.38	55 @ 415 V									
		3VA1132-6E#3x-0AA0	0.38	5 @ 500 V								
		0.38	65 @ 415 V									
		40	5SY7340-7	0.4	15 @ 400 V							
			50		3VA1050-2ED3x-0AA0	0.6	5 @ 500 V					
					0.6	16 @ 415 V						
					3VA1050-3ED3x-0AA0	0.6	5 @ 500 V					
					0.6	25 @ 415 V						
					3VA1050-4ED3x-0AA0	0.6	5 @ 500 V					



Converter			Protective device				Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA	Metri c	Imperial
		6SL4113-2.A20-2.F0			0.76	16 @ 415 V		
				3VA1063-3ED3x-0AA0	0.76	5 @ 500 V		
					0.76	25 @ 415 V		
				3VA1063-4ED3x-0AA0	0.76	5 @ 500 V		
					0.76	36 @ 415 V		
				3VA1163-3E#3x-0AA0	0.76	5 @ 500 V		
					0.76	25 @ 415 V		
				3VA1163-4E#3x-0AA0	0.76	5 @ 500 V		
					0.76	36 @ 415 V		
				3VA1163-5E#3x-0AA0	0.76	5 @ 500 V		
					0.76	55 @ 415 V		
				3VA1163-6E#3x-0AA0	0.76	5 @ 500 V		
					0.76	70 @ 415 V		
				3VA2063-5##3x-0AA0	0.91	5 @ 500 V		
					0.91	55 @ 415 V		
				3VA2063-6##3x-0AA0	0.91	5 @ 500 V		
					0.91	85 @ 415 V		
				3VA2063-7##3x-0AA0	0.91	5 @ 500 V		
					0.91	100 @ 415 V		
				3VA2063-8##3x-0AA0	0.91	5 @ 500 V		
				0.91	100 @ 415 V			
			3VA2163-5##3x-0AA0	1.13	5 @ 500 V			
				1.13	55 @ 415 V			
			3VA2163-6##3x-0AA0	1.13	5 @ 500 V			
				1.13	85 @ 415 V			
			3VA2163-7##3x-0AA0	1.13	5 @ 500 V			

Converter			Protective device				Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA	Metri c	Imperial
					1.13	100 @ 415 V		
					3VA2163-8##3x-0AA0	1.13		
					1.13	100 @ 415 V		
					3VA1080-2ED3x-0AA0	0.96		
					0.96	16 @ 415 V		
					3VA1080-3ED3x-0AA0	0.96		
				0.96	25 @ 415 V			
				3VA1080-4ED3x-0AA0	0.96	5 @ 500 V		
				0.96	36 @ 415 V			
				3VA1180-3E#3x-0AA0	0.96	5 @ 500 V		
				0.96	25 @ 415 V			
				3VA1180-4E#3x-0AA0	0.96	5 @ 500 V		
				0.96	36 @ 415 V			
				3VA1180-5E#3x-0AA0	0.96	5 @ 500 V		
				0.96	55 @ 415 V			
				3VA1180-6E#3x-0AA0	0.96	5 @ 500 V		
				0.96	70 @ 415 V			
				3VA2010-5##3x-0AA0	1.44	5 @ 500 V		
				1.44	55 @ 415 V			
				3VA2010-6##3x-0AA0	1.44	5 @ 500 V		
				1.44	85 @ 415 V			
				3VA2010-7##3x-0AA0	1.44	5 @ 500 V		
				1.44	100 @ 415 V			
				3VA2010-8##3x-0AA0	1.44	5 @ 500 V		
	1.44	100 @ 415 V						
	3VA2110-5##3x-0AA0	1.8	5 @ 500 V					

Converter			Protective device				Min. enclosure volume				
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA	Metri c	Imperial			
				3VA2110-6##3x-0AA0	1.8	55 @ 415 V					
					1.8	5 @ 500 V					
					1.8	85 @ 415 V					
					3VA2110-7##3x-0AA0	1.8			5 @ 500 V		
						1.8			100 @ 415 V		
					3VA2110-8##3x-0AA0	1.8			5 @ 500 V		
				1.8		100 @ 415 V					
				22 kW	6SL4113-2.A21-2.F0	80			3VA1080-2ED3x-0AA0	0.96	5 @ 500 V
										0.96	16 @ 415 V
									3VA1080-3ED3x-0AA0	0.96	5 @ 500 V
										0.96	25 @ 415 V
									3VA1080-4ED3x-0AA0	0.96	5 @ 500 V
	0.96	36 @ 415 V									
	3VA1180-3E#3x-0AA0	0.96	5 @ 500 V								
		0.96	25 @ 415 V								
	3VA1180-4E#3x-0AA0	0.96	5 @ 500 V								
		0.96	36 @ 415 V								
	3VA1180-5E#3x-0AA0	0.96	5 @ 500 V								
		0.96	55 @ 415 V								
	3VA1180-6E#3x-0AA0	0.96	5 @ 500 V								
		0.96	70 @ 415 V								
	100			3VA2010-5##3x-0AA0	1.44	5 @ 500 V					
					1.44	55 @ 415 V					
				3VA2010-6##3x-0AA0	1.44	5 @ 500 V					
1.44					85 @ 415 V						
3VA2010-7##3x-0AA0	1.44	5 @ 500 V									

Converter			Protective device				Min. enclosure volume							
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA	Metri c	Imperial						
					1.44	100 @ 415 V								
					3VA2010-8##3x-0AA0	1.44			5 @ 500 V					
					1.44	100 @ 415 V								
					3VA2110-5##3x-0AA0	1.8			5 @ 500 V					
					1.8	55 @ 415 V								
					3VA2110-6##3x-0AA0	1.8			5 @ 500 V					
					1.8	85 @ 415 V								
					3VA2110-7##3x-0AA0	1.8			5 @ 500 V					
					1.8	100 @ 415 V								
					3VA2110-8##3x-0AA0	1.8			5 @ 500 V					
					1.8	100 @ 415 V								
				FSD2	30 kW	6SL4113-2.A23-2.F0			80	3VA1080-2ED3x-0AA0	0.96	5 @ 500 V	0.36 m <sup>3</sup>	12.71 ft <sup>3</sup>
											0.96	16 @ 415 V		
										3VA1080-3ED3x-0AA0	0.96	5 @ 500 V		
0.96	25 @ 415 V													
3VA1080-4ED3x-0AA0	0.96	5 @ 500 V												
	0.96	36 @ 415 V												
3VA1180-3E#3x-0AA0	0.96	5 @ 500 V												
	0.96	25 @ 415 V												
3VA1180-4E#3x-0AA0	0.96	5 @ 500 V												
	0.96	36 @ 415 V												
3VA1180-5E#3x-0AA0	0.96	5 @ 500 V												
	0.96	55 @ 415 V												
3VA1180-6E#3x-0AA0	0.96	5 @ 500 V												
	0.96	70 @ 415 V												
100	3VA1010-2ED3x-0AA0	1.2	5 @ 500 V											

Converter			Protective device				Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA	Metri c	Imperial
					1.2	16 @ 415 V		
				3VA1010-3ED3x-0AA0	1.2	5 @ 500 V		
					1.2	25 @ 415 V		
				3VA1010-4ED3x-0AA0	1.2	5 @ 500 V		
					1.2	36 @ 415 V		
				3VA1110-3E#3x-0AA0	1.2	5 @ 500 V		
					1.2	25 @ 415 V		
				3VA1110-4E#3x-0AA0	1.2	5 @ 500 V		
					1.2	36 @ 415 V		
				3VA1110-5E#3x-0AA0	1.2	5 @ 500 V		
					1.2	55 @ 415 V		
				3VA1110-6E#3x-0AA0	1.2	5 @ 500 V		
					1.2	70 @ 415 V		
				3VA2010-5##3x-0AA0	1.44	5 @ 500 V		
					1.44	55 @ 415 V		
				3VA2010-6##3x-0AA0	1.44	5 @ 500 V		
					1.44	85 @ 415 V		
				3VA2010-7##3x-0AA0	1.44	5 @ 500 V		
					1.44	100 @ 415 V		
				3VA2010-8##3x-0AA0	1.44	5 @ 500 V		
					1.44	100 @ 415 V		
				3VA2110-5##3x-0AA0	1.8	5 @ 500 V		
					1.8	55 @ 415 V		
				3VA2110-6##3x-0AA0	1.8	5 @ 500 V		
					1.8	85 @ 415 V		
				3VA2110-7##3x-0AA0	1.8	5 @ 500 V		

Converter			Protective device				Min. enclosure volume		
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA	Metri c	Imperial	
	37 kW	6SL4113-2.A24-2.F0	100			1.8	100 @ 415 V		
					3VA2110-8##3x-0AA0	1.8	5 @ 500 V		
						1.8	100 @ 415 V		
				3VA1010-2ED3x-0AA0	1.2	5 @ 500 V			
					1.2	16 @ 415 V			
				3VA1010-3ED3x-0AA0	1.2	5 @ 500 V			
					1.2	25 @ 415 V			
				3VA1010-4ED3x-0AA0	1.2	5 @ 500 V			
					1.2	36 @ 415 V			
				3VA1110-3E#3x-0AA0	1.2	5 @ 500 V			
					1.2	25 @ 415 V			
				3VA1110-4E#3x-0AA0	1.2	5 @ 500 V			
					1.2	36 @ 415 V			
				3VA1110-5E#3x-0AA0	1.2	5 @ 500 V			
					1.2	55 @ 415 V			
				3VA1110-6E#3x-0AA0	1.2	5 @ 500 V			
					1.2	70 @ 415 V			
				3VA2010-5##3x-0AA0	1.44	5 @ 500 V			
					1.44	55 @ 415 V			
				3VA2010-6##3x-0AA0	1.44	5 @ 500 V			
					1.44	85 @ 415 V			
				3VA2010-7##3x-0AA0	1.44	5 @ 500 V			
					1.44	100 @ 415 V			
				3VA2010-8##3x-0AA0	1.44	5 @ 500 V			
1.44	100 @ 415 V								
3VA2110-5##3x-0AA0	1.8	5 @ 500 V							

Converter			Protective device				Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA	Metri c	Imperial
FSE	45 kW	6SL4113-2.A26-2.F0	125	3VA2110-6##3x-0AA0	1.8	55 @ 415 V	0.38 4 m <sup>3</sup>	13.56 ft <sup>3</sup>
					1.8	5 @ 500 V		
				3VA2110-7##3x-0AA0	1.8	85 @ 415 V		
					1.8	5 @ 500 V		
				3VA2110-8##3x-0AA0	1.8	100 @ 415 V		
					1.8	5 @ 500 V		
	55 kW	6SL4113-2.A27-2.F0	125	3VA1112-3E#3x-0AA0	1.5	7 @ 500 V		
					1.5	25 @ 415 V		
				3VA1112-4E#3x-0AA0	1.5	7 @ 500 V		
					1.5	36 @ 415 V		
				3VA1112-5E#3x-0AA0	1.5	10 @ 500 V		
					1.5	55 @ 415 V		
3VA1112-6E#3x-0AA0	1.5	10 @ 500 V						
	1.5	70 @ 415 V						
55 kW	6SL4113-2.A27-2.F0	160	3VA2116-5##3x-0AA0	1.92	10 @ 500 V			
				1.92	55 @ 415 V			
			3VA2116-6##3x-0AA0	1.92	10 @ 500 V			
				1.92	85 @ 415 V			
			3VA2116-7##3x-0AA0	1.92	10 @ 500 V			
				1.92	100 @ 415 V			
3VA2116-8##3x-0AA0	1.92	10 @ 500 V						
	1.92	100 @ 415 V						
55 kW	6SL4113-2.A27-2.F0	125	3VA1112-3E#3x-0AA0	1.5	7 @ 500 V			
				1.5	25 @ 415 V			
			3VA1112-4E#3x-0AA0	1.5	7 @ 500 V			

Converter			Protective device				Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA	Metri c	Imperial
					1.5	36 @ 415 V		
					3VA1112-5E#3x-0AA0	1.5		
					1.5	55 @ 415 V		
					3VA1112-6E#3x-0AA0	1.5		
					1.5	70 @ 415 V		
					3VA2116-5##3x-0AA0	1.92		
					1.92	55 @ 415 V		
					3VA2116-6##3x-0AA0	1.92		
				1.92	85 @ 415 V			
				3VA2116-7##3x-0AA0	1.92	10 @ 500 V		
				1.92	100 @ 415 V			
				3VA2116-8##3x-0AA0	1.92	10 @ 500 V		
				1.92	100 @ 415 V			
				3VA1116-3E#3x-0AA0	1.92	7 @ 500 V		
FSF1	75 kW	6SL4113-2.A30-2.F0	160		1.92	25 @ 415 V	0.48 m <sup>3</sup>	16.95 ft <sup>3</sup>
					3VA1116-4E#3x-0AA0	1.92		
					1.92	36 @ 415 V		
					3VA1116-5E#3x-0AA0	1.92		
					1.92	55 @ 415 V		
					3VA1116-6E#3x-0AA0	1.92		
					1.92	70 @ 415 V		
					3VA1216-4EF3x-0AA0	1.92		
					1.92	36 @ 415 V		
					3VA1216-5EF3x-0AA0	1.92		
					1.92	55 @ 415 V		
					3VA1216-6EF3x-0AA0	1.92		

Converter			Protective device				Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA	Metri c	Imperial
			250	3VA2116-5##3x-0AA0	1.92	70 @ 415 V		
					1.92	10 @ 500 V		
				3VA2116-6##3x-0AA0	1.92	55 @ 415 V		
					1.92	10 @ 500 V		
				3VA2116-7##3x-0AA0	1.92	10 @ 500 V		
					1.92	85 @ 415 V		
				3VA2116-8##3x-0AA0	1.92	10 @ 500 V		
					1.92	100 @ 415 V		
				3VA2216-5##3x-0AA0	2.88	10 @ 500 V		
					2.88	100 @ 415 V		
				3VA2216-6##3x-0AA0	2.88	10 @ 500 V		
					2.88	85 @ 415 V		
			3VA2216-7##3x-0AA0	2.88	10 @ 500 V			
				2.88	100 @ 415 V			
			3VA2216-8##3x-0AA0	2.88	10 @ 500 V			
				2.88	100 @ 415 V			
			250	3VA1225-4EF3x-0AA0	3.0	10 @ 500 V		
					3.0	36 @ 415 V		
				3VA1225-5EF3x-0AA0	3.0	10 @ 500 V		
					3.0	55 @ 415 V		
				3VA1225-6EF3x-0AA0	3.0	10 @ 500 V		
					3.0	70 @ 415 V		
			3VA2225-5##3x-0AA0	3.0	10 @ 500 V			
				3.0	55 @ 415 V			
3VA2225-6##3x-0AA0	3.0	10 @ 500 V						

Converter			Protective device				Min. enclosure volume		
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA	Metri c	Imperial	
					3.0	85 @ 415 V			
					3VA2225-7##3x-0AA0	3.0			10 @ 500 V
					3.0	100 @ 415 V			
					3VA2225-8##3x-0AA0	3.0			10 @ 500 V
					3.0	100 @ 415 V			
					3VA2325-5##3x-0AA0	4.5			10 @ 500 V
					4.5	55 @ 415 V			
					3VA2325-6##3x-0AA0	4.5			10 @ 500 V
		4.5	85 @ 415 V						
		3VA2325-7##3x-0AA0	4.5	10 @ 500 V					
		4.5	100 @ 415 V						
		3VA2325-8##3x-0AA0	4.5	100 @ 415 V					
	90 kW	6SL4113-2.A31-2.F0	160		3VA1116-3E#3x-0AA0	1.92			7 @ 500 V
					1.92	25 @ 415 V			
					3VA1116-4E#3x-0AA0	1.92			7 @ 500 V
					1.92	36 @ 415 V			
				3VA1116-5E#3x-0AA0	1.92	10 @ 500 V			
				1.92	55 @ 415 V				
				3VA1116-6E#3x-0AA0	1.92	10 @ 500 V			
				1.92	70 @ 415 V				
	3VA1216-4EF3x-0AA0	1.92	10 @ 500 V						
	1.92	36 @ 415 V							
	3VA1216-5EF3x-0AA0	1.92	10 @ 500 V						
	1.92	55 @ 415 V							
	3VA1216-6EF3x-0AA0	1.92	10 @ 500 V						
	1.92	70 @ 415 V							

Converter			Protective device				Min. enclosure volume				
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA	Metri c	Imperial			
				3VA2116-5##3x-0AA0	1.92	10 @ 500 V					
					1.92	55 @ 415 V					
				3VA2116-6##3x-0AA0	1.92	10 @ 500 V					
					1.92	85 @ 415 V					
				3VA2116-7##3x-0AA0	1.92	10 @ 500 V					
					1.92	100 @ 415 V					
				3VA2116-8##3x-0AA0	1.92	10 @ 500 V					
					1.92	100 @ 415 V					
				3VA2216-5##3x-0AA0	2.88	10 @ 500 V					
					2.88	55 @ 415 V					
				3VA2216-6##3x-0AA0	2.88	10 @ 500 V					
					2.88	85 @ 415 V					
				3VA2216-7##3x-0AA0	2.88	10 @ 500 V					
					2.88	100 @ 415 V					
				3VA2216-8##3x-0AA0	2.88	10 @ 500 V					
					2.88	100 @ 415 V					
				250					3VA1225-4EF3x-0AA0	3.0	10 @ 500 V
										3.0	36 @ 415 V
			3VA1225-5EF3x-0AA0						3.0	10 @ 500 V	
									3.0	55 @ 415 V	
			3VA1225-6EF3x-0AA0						3.0	10 @ 500 V	
									3.0	70 @ 415 V	
			3VA2225-5##3x-0AA0	3.0	10 @ 500 V						
				3.0	55 @ 415 V						
3VA2225-6##3x-0AA0	3.0	10 @ 500 V									
	3.0	85 @ 415 V									

Converter			Protective device				Min. enclosure volume					
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA	Metri c	Imperial				
				3VA2225-7##3x-0AA0	3.0	10 @ 500 V						
					3.0	100 @ 415 V						
				3VA2225-8##3x-0AA0	3.0	10 @ 500 V						
					3.0	100 @ 415 V						
				3VA2325-5##3x-0AA0	4.5	10 @ 500 V						
					4.5	55 @ 415 V						
				3VA2325-6##3x-0AA0	4.5	10 @ 500 V						
					4.5	85 @ 415 V						
				3VA2325-7##3x-0AA0	4.5	10 @ 500 V						
					4.5	100 @ 415 V						
				3VA2325-8##3x-0AA0	4.5	100 @ 415 V						
				110 kW	6SL4113-2.A33-2.F0				200	3VA1220-4EF3x-0AA0	2.4	10 @ 500 V
											2.4	36 @ 415 V
										3VA1220-5EF3x-0AA0	2.4	10 @ 500 V
	2.4	55 @ 415 V										
	3VA1220-6EF3x-0AA0	2.4	10 @ 500 V									
		2.4	70 @ 415 V									
	3VA1225-4EF3x-0AA0	3.0	10 @ 500 V									
		3.0	36 @ 415 V									
	3VA1225-5EF3x-0AA0	3.0	10 @ 500 V									
		3.0	55 @ 415 V									
	250			3VA1225-6EF3x-0AA0	3.0	10 @ 500 V						
					3.0	70 @ 415 V						
				3VA2225-5##3x-0AA0	3.0	10 @ 500 V						
3.0					55 @ 415 V							
3VA2225-6##3x-0AA0	3.0	10 @ 500 V										

Converter			Protective device				Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA	Metri c	Imperial
					3.0	85 @ 415 V		
					3.0	10 @ 500 V		
				3VA2225-7##3x-0AA0	3.0	100 @ 415 V		
					3.0	10 @ 500 V		
				3VA2225-8##3x-0AA0	3.0	100 @ 415 V		
					3.0	10 @ 500 V		
				3VA2325-5##3x-0AA0	4.5	10 @ 500 V		
					4.5	55 @ 415 V		
				3VA2325-6##3x-0AA0	4.5	10 @ 500 V		
					4.5	85 @ 415 V		
				3VA2325-7##3x-0AA0	4.5	10 @ 500 V		
					4.5	100 @ 415 V		
				3VA2325-8##3x-0AA0	4.5	100 @ 415 V		
					4.5	100 @ 415 V		
FSF2	132 kW	6SL4113-2.A35-2.F0	250	3VA1225-4EF3x-0AA0	3.0	10 @ 500 V	0.54 m <sup>3</sup>	19.07 ft <sup>3</sup>
					3.0	36 @ 415 V		
				3VA1225-5EF3x-0AA0	3.0	15 @ 500 V		
					3.0	55 @ 415 V		
				3VA1225-6EF3x-0AA0	3.0	15 @ 500 V		
					3.0	70 @ 415 V		
				3VA2225-5##3x-0AA0	3.0	36 @ 500 V		
					3.0	55 @ 415 V		
				3VA2225-6##3x-0AA0	3.0	55 @ 500 V		
					3.0	85 @ 415 V		
				3VA2225-7##3x-0AA0	3.0	85 @ 500 V		
					3.0	100 @ 415 V		
				3VA2225-8##3x-0AA0	3.0	100 @ 415 V		
					3.0	100 @ 500 V		

Converter			Protective device				Min. enclosure volume		
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA	Metri c	Imperial	
			320	3VA1332-4EF32-0AA0	3.84	25 @ 500 V			
					3.84	36 @ 415 V			
				3VA1332-5EF32-0AA0	3.84	36 @ 500 V			
					3.84	55 @ 415 V			
				3VA1332-6EF32-0AA0	3.84	55 @ 500 V			
					3.84	70 @ 415 V			
				3VA1332-7EF32-0AA0	3.84	70 @ 500 V			
					3.84	100 @ 415 V			
				400	3VA1340-4EF32-0AA0	4.8			25 @ 500 V
						4.8			36 @ 415 V
					3VA1340-5EF32-0AA0	4.8			36 @ 500 V
						4.8			55 @ 415 V
			3VA1340-6EF32-0AA0		4.8	55 @ 500 V			
					4.8	70 @ 415 V			
			3VA1340-7EF32-0AA0		4.8	70 @ 500 V			
					4.8	100 @ 415 V			
			3VA2340-5##3x-0AA0		4.8	36 @ 500 V			
					4.8	55 @ 415 V			
			3VA2340-6##3x-0AA0		4.8	55 @ 500 V			
					4.8	85 @ 415 V			
			3VA2340-7##3x-0AA0	4.8	85 @ 500 V				
				4.8	100 @ 415 V				
			3VA2340-8##3x-0AA0	4.8	100 @ 415 V				
			3VA2440-5##32-0AA0	7.2	36 @ 500 V				
7.2	55 @ 415 V								
3VA2440-6##32-0AA0	7.2	55 @ 500 V							

Converter			Protective device				Min. enclosure volume		
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA	Metri c	Imperial	
	160 kW	6SL4113-2.A36-2.F0	320	3VA2440-7##32-0AA0	7.2	85 @ 415 V			
					7.2	85 @ 500 V			
					7.2	100 @ 415 V			
					7.2	100 @ 415 V			
				3VA1332-4EF32-0AA0	3.84	25 @ 500 V			
					3.84	36 @ 415 V			
					3VA1332-5EF32-0AA0	3.84			36 @ 500 V
						3.84			55 @ 415 V
	3VA1332-6EF32-0AA0	3.84	55 @ 500 V						
		3.84	70 @ 415 V						
	3VA1332-7EF32-0AA0	3.84	70 @ 500 V						
		3.84	100 @ 415 V						
	400	3VA1340-4EF32-0AA0	4.8	25 @ 500 V					
			4.8	36 @ 415 V					
		3VA1340-5EF32-0AA0	4.8	36 @ 500 V					
			4.8	55 @ 415 V					
		3VA1340-6EF32-0AA0	4.8	55 @ 500 V					
			4.8	70 @ 415 V					
		3VA1340-7EF32-0AA0	4.8	70 @ 500 V					
			4.8	100 @ 415 V					
		3VA2340-5##3x-0AA0	4.8	36 @ 500 V					
			4.8	55 @ 415 V					
		3VA2340-6##3x-0AA0	4.8	55 @ 500 V					
			4.8	85 @ 415 V					
3VA2340-7##3x-0AA0		4.8	70 @ 500 V						
		4.8	100 @ 415 V						

Converter			Protective device				Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no. <sup>1) 2) 3)</sup>	I <sub>cp.mr</sub> / kA	I <sub>cc</sub> / kA	Metri c	Imperial
				3VA2340-8##3x-0AA0	4.8	100 @ 415 V		
				3VA2440-5##32-0AA0	7.2	36 @ 500 V		
					7.2	55 @ 415 V		
				3VA2440-6##32-0AA0	7.2	55 @ 500 V		
					7.2	85 @ 415 V		
				3VA2440-7##32-0AA0	7.2	85 @ 500 V		
					7.2	100 @ 415 V		
				3VA2440-8##32-0AA0	7.2	100 @ 415 V		

<sup>1)</sup> x stands for type of electrical connection and can be replaced by: 2 (nut keeper kit) or 6 (box terminal)

<sup>2)</sup> # stands for type of release and can be replaced by: D (fixed thermal fixed magnetic trip unit), E (adjustable thermal fixed magnetic trip Unit) or F (adjustable thermal adjustable magnetic Trip unit)

<sup>3)</sup> ## stands for type of release and can be replaced by: HL ( line protection LI), HM (line protection LIG), HK (line protection ELISA LI), HN (Line and generator protection LSI), JP (Line and generator protection LSI, with display), JQ (Line and generator protection LSI, with display), KP (Line and generator protection LSI, with display, with measurement function), KQ (Line and generator protection LSI, with display, with measurement function)

## 1.3.2 Protection class IP55

### 1.3.2.1 IEC standard fuses

IEC standard fuses for IP55, 3AC 380...415/440...500V with maintenance switch

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. <sup>1)</sup>	I <sub>cp,mf</sub> / kA	I <sub>cc</sub> / kA
FSD1	7.5 kW	6SL4113-2..16-2.F0	25	3NA3810	0.62	100 @ 500 V
			32	3NA3812	0.8	100 @ 500 V
			50	3NA3820	1.25	100 @ 500 V
	11 kW	6SL4113-2..17-2.F0	40	3NA3817	1.0	100 @ 500 V
			50	3NA3820	1.25	100 @ 500 V
	15 kW	6SL4113-2..18-2.F0	40	3NA3817	1.0	100 @ 500 V
			50	3NA3820	1.25	100 @ 500 V
	18.5 kW	6SL4113-2..20-2.F0	50	3NA3820	1.25	100 @ 500 V
			63	3NA3822	1.57	50 @ 500 V
			80	3NA3824	2.0	5 @ 500 V
	22 kW	6SL4113-2..21-2.F0	50	3NA3820	1.25	100 @ 500 V
			63	3NA3822	1.57	50 @ 500 V
FSD2	30 kW	6SL4113-2..23-2.F0	63	3NA3822	1.57	100 @ 500 V
			80	3NA3824	2.0	50 @ 500 V
			100	3NA3830	2.5	50 @ 500 V
			125	3NA3832	3.12	5 @ 500 V
	37 kW	6SL4113-2..24-2.F0	80	3NA3824	2.0	65 @ 500 V
			100	3NA3830	2.5	50 @ 500 V
FSE	45 kW	6SL4113-2..26-2.F0	100	3NA3830	2.5	100 @ 500 V
			125	3NA3832	3.12	50 @ 500 V
			160	3NA3836	4.0	50 @ 500 V
	55 kW	6SL4113-2..27-2.F0	125	3NA3832	3.12	100 @ 500 V

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. <sup>1)</sup>	I <sub>cp,mf</sub> / kA	I <sub>cc</sub> / kA
			160	3NA3836	4.0	50 @ 500 V
FSF1	75 kW	6SL4113-2..30-2.F0	160	3NA3836	4.0	65 @ 500 V
			250	3NA3144	7.5	20 @ 500 V
	90 kW	6SL4113-2..31-2.F0	160	3NA3836	4.0	65 @ 500 V
			200	3NA3140	5.0	55 @ 500 V
			250	3NA3144	7.5	20 @ 500 V
	110 kW	6SL4113-2..33-2.F0	200	3NA3140	5.0	55 @ 500 V
			250	3NA3144	7.5	20 @ 500 V

<sup>1)</sup> Siemens 3NA low-voltage fuses are recommended

#### IEC standard fuses for IP55, 3AC 380...415/440...500V without maintenance switch

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. <sup>1)</sup>	I <sub>cp,mf</sub> / kA	I <sub>cc</sub> / kA
FSD1	7.5 kW	6SL4113-2..16-2.F0	25	3NA3810	0.62	100 @ 500 V
			32	3NA3812	0.8	100 @ 500 V
			50	3NA3820	1.25	100 @ 500 V
	11 kW	6SL4113-2..17-2.F0	40	3NA3817	1.0	100 @ 500 V
			50	3NA3820	1.25	100 @ 500 V
	15 kW	6SL4113-2..18-2.F0	50	3NA3820	1.25	100 @ 500 V
	18.5 kW	6SL4113-2..20-2.F0	63	3NA3822	1.57	100 @ 500 V
			80	3NA3824	2.0	100 @ 500 V
	22 kW	6SL4113-2..21-2.F0	80	3NA3824	2.0	100 @ 500 V
	FSD2	30 kW	6SL4113-2..23-2.F0	80	3NA3824	2.0
100				3NA3830	2.5	100 @ 500 V
125				3NA3832	3.12	100 @ 500 V
37 kW		6SL4113-2..24-2.F0	100	3NA3830	2.5	100 @ 500 V

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. <sup>1)</sup>	I <sub>cp,mf</sub> / kA	I <sub>cc</sub> / kA
			125	3NA3832	3.12	100 @ 500 V
FSE	45 kW	6SL4113-2..26-2.F0	125	3NA3832	3.12	100 @ 500 V
			160	3NA3836	4.0	100 @ 500 V
	55 kW	6SL4113-2..27-2.F0	160	3NA3836	4.0	100 @ 500 V
FSF1	75 kW	6SL4113-2..30-2.F0	160	3NA3836	4.0	100 @ 500 V
			250	3NA3144	7.5	100 @ 500 V
	90 kW	6SL4113-2..31-2.F0	160	3NA3836	4.0	100 @ 500 V
			250	3NA3144	7.5	100 @ 500 V
	110 kW	6SL4113-2..33-2.F0	200	3NA3140	5.0	100 @ 500 V
			250	3NA3144	7.5	100 @ 500 V

<sup>1)</sup> Siemens 3NA low-voltage fuses are recommended

## 1.3.2.2 IEC semiconductor fuses

IEC semiconductor fuses for IP55, 3AC 380...415/440...500V with maintenance switch

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no.	I <sub>cp,mf</sub> / kA	I <sub>cc</sub> / kA @ 500 V
FSD1	7.5 kW	6SL4113-2..16-2.F0	25	3NE1815-0	0.38	100
			50	3NE1817-0	0.75	100
	11 kW	6SL4113-2..17-2.F0	40	3NE1802-0	0.6	100
			50	3NE1817-0	0.75	100
	15 kW	6SL4113-2..18-2.F0	50	3NE1817-0	0.75	100
	18.5 kW	6SL4113-2..20-2.F0	63	3NE1818-0	0.94	100
			80	3NE1820-0	1.2	5
	22 kW	6SL4113-2..21-2.F0	63	3NE1818-0	0.94	100
			80	3NE1820-0	1.2	5
	FSD2	30 kW	6SL4113-2..23-2.F0	80	3NE1820-0	1.2
100				3NE1021-0	1.5	80
125				3NE1022-0	1.88	5
37 kW		6SL4113-2..24-2.F0	80	3NE1820-0	1.2	100
			100	3NE1021-0	1.5	80
			125	3NE1022-0	1.88	5
FSE	45 kW	6SL4113-2..26-2.F0	125	3NE1022-0	1.88	100
			160	3NE1224-0	2.4	100
	55 kW	6SL4113-2..27-2.F0	160	3NE1224-0	2.4	100
FSF1	75 kW	6SL4113-2..30-2.F0	160	3NE1224-0	2.4	100
			250	3NE1227-0	5.0	100
	90 kW	6SL4113-2..31-2.F0	200	3NE1225-0	3.0	100
			250	3NE1227-0	5.0	100
	110 kW	6SL4113-2..33-2.F0	200	3NE1225-0	3.0	100
			250	3NE1227-0	5.0	100

## IEC semiconductor fuses for IP55, 3AC 380...415/440...500V without maintenance switch

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no.	I <sub>cp,mf</sub> / kA	I <sub>cc</sub> / kA @ 500 V
FSD1	7.5 kW	6SL4113-2..16-2.F0	25	3NE1815-0	0.38	100
			50	3NE1817-0	0.75	100
	11 kW	6SL4113-2..17-2.F0	40	3NE1802-0	0.6	100
			50	3NE1817-0	0.75	100
	15 kW	6SL4113-2..18-2.F0	50	3NE1817-0	0.75	100
	18.5 kW	6SL4113-2..20-2.F0	63	3NE1818-0	0.94	100
			80	3NE1820-0	1.2	100
22 kW	6SL4113-2..21-2.F0	80	3NE1820-0	1.2	100	
FSD2	30 kW	6SL4113-2..23-2.F0	100	3NE1021-0	1.5	100
			125	3NE1022-0	1.88	100
	37 kW	6SL4113-2..24-2.F0	100	3NE1021-0	1.5	100
			125	3NE1022-0	1.88	100
FSE	45 kW	6SL4113-2..26-2.F0	125	3NE1022-0	1.88	100
			160	3NE1224-0	2.4	100
	55 kW	6SL4113-2..27-2.F0	160	3NE1224-0	2.4	100
FSF1	75 kW	6SL4113-2..30-2.F0	160	3NE1224-0	2.4	100
			250	3NE1227-0	5.0	100
	90 kW	6SL4113-2..31-2.F0	200	3NE1225-0	3.0	100
			250	3NE1227-0	5.0	100
	110 kW	6SL4113-2..33-2.F0	200	3NE1225-0	3.0	100
			250	3NE1227-0	5.0	100

## 1.3.2.3 IEC motor starter protectors

IEC motor starter protectors for IP55, 3AC 380...415/440...500V with maintenance switch

Converter			Protective device					
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. <sup>1)</sup>	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA @ 415 V <sup>2)</sup>		
FSD1	7.5 kW	6SL4113-2..16-2.F0	25	3RV2021-4DA..	0.39	5		
				3RV2031-4DA..	0.39	5		
				3RV2032-4DA..	0.39	5		
			50	3RV2041-4HA..	0.78	5		
				3RV2042-4HA..	0.78	5		
			52	3RV2031-4WA..	0.89	5		
				3RV2032-4WA..	0.89	5		
			11 kW	6SL4113-2..17-2.F0	40	3RV2031-4UA..	0.7	5
						3RV2032-4UA..	0.7	5
	3RV2041-4FA..	0.62				5		
	3RV2042-4FA..	0.62				5		
	50	3RV2041-4HA..			0.78	5		
		3RV2042-4HA..			0.78	5		
	52	3RV2031-4WA..			0.89	5		
		3RV2032-4WA..			0.89	5		
	15 kW	6SL4113-2..18-2.F0			50	3RV2041-4HA..	0.78	5
			3RV2042-4HA..	0.78		5		
			52	3RV2031-4WA..	0.89	5		
				3RV2032-4WA..	0.89	5		
	18.5 kW	6SL4113-2..20-2.F0	59	3RV2031-4XA..	1.01	5		
				3RV2032-4XA..	1.01	5		
			63	3RV2041-4JA..	0.98	5		
				3RV2042-4JA..	0.98	5		
			73	3RV2031-4KA..	1.14	5		

Converter			Protective device				
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. <sup>1)</sup>	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA @ 415 V <sup>2)</sup>	
	22 kW	6SL4113-2..21-2.F0	75	3RV2032-4KA..	1.14	5	
				3RV2041-4KA..	1.17	5	
				3RV2042-4KA..	1.17	5	
			73	3RV2031-4KA..	1.14	5	
				3RV2032-4KA..	1.14	5	
				75	3RV2041-4KA..	1.17	5
FSD2	30 kW	6SL4113-2..23-2.F0	93	3RV2041-4YA..	1.56	5	
				3RV2042-4YA..	1.56	5	
			100	3RV2041-4MA..	1.56	5	
	3RV2042-4MA..			1.56	5		
	37 kW		6SL4113-2..24-2.F0	100	3RV2041-4MA..	1.56	5
					3RV2042-4MA..	1.56	5
FSE	45 kW	6SL4113-2..26-2.F0		Use a circuit breaker instead.			
FSF1	75 kW	6SL4113-2..30-2.F0		Use a circuit breaker instead.			
	110 kW	6SL4113-2..33-2.F0		Use a circuit breaker instead.			

<sup>1)</sup> .. stands for type of electrical connection and can be replaced by: 10 (screw terminal); 20 (spring type terminal)

<sup>2)</sup> I<sub>cc</sub> values are only valid for supply grids with grounded star point (solidly grounded wye TN or TT systems)

### IEC motor starter protectors for IP55, 3AC 380...415/440...500V without maintenance switch

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. <sup>1)</sup>	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA @ 415 V <sup>2)</sup>
FSD1	7.5 kW	6SL4113-2..16-2.F0	25	3RV2021-4DA..	0.39	55
				3RV2031-4DA..	0.39	65

Converter			Protective device					
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. <sup>1)</sup>	I <sub>cp,mfr</sub> / kA	I <sub>cc</sub> / kA @ 415 V <sup>2)</sup>		
			50	3RV2032-4DA..	0.39	65		
				3RV2041-4HA..	0.78	65		
			52	3RV2042-4HA..	0.78	100		
				3RV2031-4WA..	0.89	65		
			11 kW	6SL4113-2..17-2.F0	40	3RV2031-4UA..	0.7	65
						3RV2032-4UA..	0.7	65
	3RV2041-4FA..	0.62				65		
	3RV2042-4FA..	0.62				100		
	50	3RV2041-4HA..			0.78	65		
		3RV2042-4HA..			0.78	100		
	52	3RV2031-4WA..			0.89	65		
		3RV2032-4WA..			0.89	65		
	15 kW	6SL4113-2..18-2.F0			50	3RV2041-4HA..	0.78	65
						3RV2042-4HA..	0.78	100
					52	3RV2031-4WA..	0.89	65
						3RV2032-4WA..	0.89	65
	18.5 kW	6SL4113-2..20-2.F0	59	3RV2031-4XA..	1.01	65		
				3RV2032-4XA..	1.01	100		
			63	3RV2041-4JA..	0.98	65		
				3RV2042-4JA..	0.98	100		
			73	3RV2031-4KA..	1.14	65		
				3RV2032-4KA..	1.14	100		
			75	3RV2041-4KA..	1.17	65		
				3RV2042-4KA..	1.17	100		
22 kW			6SL4113-2..21-2.F0	73	3RV2031-4KA..	1.14	65	

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. <sup>1)</sup>	I <sub>cp,mir</sub> / kA	I <sub>cc</sub> / kA @ 415 V <sup>2)</sup>
			75	3RV2032-4KA..	1.14	100
				3RV2041-4KA..	1.17	65
				3RV2042-4KA..	1.17	100
FSD2	30 kW	6SL4113-2..23-2.F0	93	3RV2041-4YA..	1.56	65
				3RV2042-4YA..	1.56	100
			100	3RV2041-4MA..	1.56	65
	3RV2042-4MA..	1.56		100		
	37 kW	6SL4113-2..24-2.F0	100	3RV2041-4MA..	1.56	65
				3RV2042-4MA..	1.56	100
FSE	45 kW	6SL4113-2..26-2.F0		Use a circuit breaker instead.		
	55 kW	6SL4113-2..27-2.F0		Use a circuit breaker instead.		
FSF1	75 kW	6SL4113-2..30-2.F0		Use a circuit breaker instead.		
	90 kW	6SL4113-2..31-2.F0		Use a circuit breaker instead.		
	110 kW	6SL4113-2..33-2.F0		Use a circuit breaker instead.		

<sup>1)</sup> .. stands for type of electrical connection and can be replaced by: 10 (screw terminal); 20 (spring type terminal)

<sup>2)</sup> I<sub>cc</sub> values are only valid for supply grids with grounded star point (solidly grounded wye TN or TT systems)

## 1.3.2.4 IEC circuit breakers

IEC circuit breakers for IP55, 3AC 380...415/440...500V with maintenance switch

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. <sup>1) 2) 3)</sup>	I <sub>cp.mf</sub> / kA	I <sub>cc</sub> / kA
FSD1	7.5 kW	6SL4113-2..16-2.F0	25	5SY7325-7	0.25	5 @ 400 V
			32	3VA1032-2ED3x-0AA0	0.38	5 @ 415 V
					0.38	5 @ 500 V
				3VA1032-3ED3x-0AA0	0.38	5 @ 415 V
					0.38	5 @ 500 V
				3VA1032-4ED3x-0AA0	0.38	5 @ 415 V
					0.38	5 @ 500 V
				3VA1132-3E#3x-0AA0	0.38	5 @ 415 V
					0.38	5 @ 500 V
				3VA1132-4E#3x-0AA0	0.38	5 @ 415 V
					0.38	5 @ 500 V
				3VA1132-5E#3x-0AA0	0.38	5 @ 415 V
					0.38	5 @ 500 V
			3VA1132-6E#3x-0AA0	0.38	5 @ 415 V	
				0.38	5 @ 500 V	
			50	3VA1050-2ED3x-0AA0	0.6	5 @ 415 V
					0.6	5 @ 500 V
				3VA1050-3ED3x-0AA0	0.6	5 @ 415 V
					0.6	5 @ 500 V
				3VA1050-4ED3x-0AA0	0.6	5 @ 415 V
					0.6	5 @ 500 V
			3VA1150-3E#3x-0AA0	0.6	5 @ 415 V	
				0.6	5 @ 500 V	
			3VA1150-4E#3x-0AA0	0.6	5 @ 415 V	

Converter			Protective device						
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA			
					0.6	5 @ 500 V			
				3VA1150-5E#3x-0AA0	0.6	5 @ 415 V			
					0.6	5 @ 500 V			
				3VA1150-6E#3x-0AA0	0.6	5 @ 415 V			
					0.6	5 @ 500 V			
				5SY7350-7	0.5	5 @ 400 V			
				18.5 kW	6SL4113-2..20-2.F0	63	3VA1063-2ED3x-0AA0	0.76	5 @ 415 V
								0.76	5 @ 500 V
							3VA1063-3ED3x-0AA0	0.76	5 @ 415 V
								0.76	5 @ 500 V
	3VA1063-4ED3x-0AA0	0.76	5 @ 415 V						
		0.76	5 @ 500 V						
	3VA1163-3E#3x-0AA0	0.76	5 @ 415 V						
		0.76	5 @ 500 V						
	3VA1163-4E#3x-0AA0	0.76	5 @ 415 V						
		0.76	5 @ 500 V						
	3VA1163-5E#3x-0AA0	0.76	5 @ 415 V						
		0.76	5 @ 500 V						
	3VA1163-6E#3x-0AA0	0.76	5 @ 415 V						
		0.76	5 @ 500 V						
3VA2063-5##3x-0AA0	0.91	5 @ 415 V							
	0.91	5 @ 500 V							
3VA2063-6##3x-0AA0	0.91	5 @ 415 V							
	0.91	5 @ 500 V							
3VA2063-7##3x-0AA0	0.91	5 @ 415 V							
	0.91	5 @ 500 V							

Converter			Protective device				
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA	
				3VA2063-8##3x-0AA0	0.91	5 @ 415 V	
					0.91	5 @ 500 V	
				3VA2163-5##3x-0AA0	1.13	5 @ 415 V	
					1.13	5 @ 500 V	
				3VA2163-6##3x-0AA0	1.13	5 @ 415 V	
					1.13	5 @ 500 V	
				3VA2163-7##3x-0AA0	1.13	5 @ 415 V	
					1.13	5 @ 500 V	
				3VA2163-8##3x-0AA0	1.13	5 @ 415 V	
					1.13	5 @ 500 V	
				80	3VA1080-2ED3x-0AA0	0.96	5 @ 415 V
						0.96	5 @ 500 V
			3VA1080-3ED3x-0AA0		0.96	5 @ 415 V	
					0.96	5 @ 500 V	
			3VA1080-4ED3x-0AA0		0.96	5 @ 415 V	
					0.96	5 @ 500 V	
			3VA1180-3E#3x-0AA0		0.96	5 @ 415 V	
					0.96	5 @ 500 V	
			3VA1180-4E#3x-0AA0		0.96	5 @ 415 V	
					0.96	5 @ 500 V	
			3VA1180-5E#3x-0AA0		0.96	5 @ 415 V	
					0.96	5 @ 500 V	
			3VA1180-6E#3x-0AA0	0.96	5 @ 415 V		
				0.96	5 @ 500 V		
100	3VA2010-5##3x-0AA0	1.44	5 @ 415 V				
		1.44	5 @ 500 V				

Converter			Protective device						
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA			
				3VA2010-6##3x-0AA0	1.44	5 @ 415 V			
					1.44	5 @ 500 V			
				3VA2010-7##3x-0AA0	1.44	5 @ 415 V			
					1.44	5 @ 500 V			
				3VA2010-8##3x-0AA0	1.44	5 @ 415 V			
					1.44	5 @ 500 V			
				3VA2110-5##3x-0AA0	1.8	5 @ 415 V			
					1.8	5 @ 500 V			
				3VA2110-6##3x-0AA0	1.8	5 @ 415 V			
					1.8	5 @ 500 V			
				3VA2110-7##3x-0AA0	1.8	5 @ 415 V			
					1.8	5 @ 500 V			
				3VA2110-8##3x-0AA0	1.8	5 @ 415 V			
					1.8	5 @ 500 V			
				22 kW	6SL4113-2..21-2.F0	80	3VA1080-2ED3x-0AA0	0.96	5 @ 415 V
								0.96	5 @ 500 V
3VA1080-3ED3x-0AA0	0.96	5 @ 415 V							
	0.96	5 @ 500 V							
3VA1080-4ED3x-0AA0	0.96	5 @ 415 V							
	0.96	5 @ 500 V							
3VA1180-3E#3x-0AA0	0.96	5 @ 415 V							
	0.96	5 @ 500 V							
3VA1180-4E#3x-0AA0	0.96	5 @ 415 V							
	0.96	5 @ 500 V							
3VA1180-5E#3x-0AA0	0.96	5 @ 415 V							
	0.96	5 @ 500 V							

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA
				3VA1180-6E#3x-0AA0	0.96	5 @ 415 V
					0.96	5 @ 500 V
			100	3VA2010-5##3x-0AA0	1.44	5 @ 415 V
					1.44	5 @ 500 V
				3VA2010-6##3x-0AA0	1.44	5 @ 415 V
					1.44	5 @ 500 V
				3VA2010-7##3x-0AA0	1.44	5 @ 415 V
					1.44	5 @ 500 V
				3VA2010-8##3x-0AA0	1.44	5 @ 415 V
					1.44	5 @ 500 V
				3VA2110-5##3x-0AA0	1.8	5 @ 415 V
					1.8	5 @ 500 V
				3VA2110-6##3x-0AA0	1.8	5 @ 415 V
					1.8	5 @ 500 V
				3VA2110-7##3x-0AA0	1.8	5 @ 415 V
					1.8	5 @ 500 V
				3VA2110-8##3x-0AA0	1.8	5 @ 415 V
					1.8	5 @ 500 V
FSD2	30 kW	6SL4113-2..23-2.F0	80	3VA1080-2ED3x-0AA0	0.96	5 @ 415 V
					0.96	5 @ 500 V
				3VA1080-3ED3x-0AA0	0.96	5 @ 415 V
					0.96	5 @ 500 V
				3VA1080-4ED3x-0AA0	0.96	5 @ 415 V
					0.96	5 @ 500 V
				3VA1180-3E#3x-0AA0	0.96	5 @ 415 V
					0.96	5 @ 500 V

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA
				3VA1180-4E#3x-0AA0	0.96	5 @ 415 V
					0.96	5 @ 500 V
				3VA1180-5E#3x-0AA0	0.96	5 @ 415 V
					0.96	5 @ 500 V
				3VA1180-6E#3x-0AA0	0.96	5 @ 415 V
					0.96	5 @ 500 V
			100	3VA1010-2ED3x-0AA0	1.2	5 @ 415 V
					1.2	5 @ 500 V
				3VA1010-3ED3x-0AA0	1.2	5 @ 415 V
					1.2	5 @ 500 V
				3VA1010-4ED3x-0AA0	1.2	5 @ 415 V
					1.2	5 @ 500 V
				3VA1110-3E#3x-0AA0	1.2	5 @ 415 V
					1.2	5 @ 500 V
				3VA1110-4E#3x-0AA0	1.2	5 @ 415 V
					1.2	5 @ 500 V
				3VA1110-5E#3x-0AA0	1.2	5 @ 415 V
					1.2	5 @ 500 V
				3VA1110-6E#3x-0AA0	1.2	5 @ 415 V
					1.2	5 @ 500 V
				3VA2010-5##3x-0AA0	1.44	5 @ 415 V
					1.44	5 @ 500 V
				3VA2010-6##3x-0AA0	1.44	5 @ 415 V
					1.44	5 @ 500 V
3VA2010-7##3x-0AA0	1.44	5 @ 415 V				
	1.44	5 @ 500 V				

Converter			Protective device						
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA			
				3VA2010-8##3x-0AA0	1.44	5 @ 415 V			
					1.44	5 @ 500 V			
				3VA2110-5##3x-0AA0	1.8	5 @ 415 V			
					1.8	5 @ 500 V			
				3VA2110-6##3x-0AA0	1.8	5 @ 415 V			
					1.8	5 @ 500 V			
				3VA2110-7##3x-0AA0	1.8	5 @ 415 V			
					1.8	5 @ 500 V			
				3VA2110-8##3x-0AA0	1.8	5 @ 415 V			
					1.8	5 @ 500 V			
				37 kW	6SL4113-2..24-2.F0	100	3VA1010-2ED3x-0AA0	1.2	5 @ 415 V
								1.2	5 @ 500 V
	3VA1010-3ED3x-0AA0	1.2	5 @ 415 V						
		1.2	5 @ 500 V						
	3VA1010-4ED3x-0AA0	1.2	5 @ 415 V						
		1.2	5 @ 500 V						
	3VA1110-3E#3x-0AA0	1.2	5 @ 415 V						
		1.2	5 @ 500 V						
	3VA1110-4E#3x-0AA0	1.2	5 @ 415 V						
		1.2	5 @ 500 V						
	3VA1110-5E#3x-0AA0	1.2	5 @ 415 V						
		1.2	5 @ 500 V						
	3VA1110-6E#3x-0AA0	1.2	5 @ 415 V						
		1.2	5 @ 500 V						
3VA2010-5##3x-0AA0	1.44	5 @ 415 V							
	1.44	5 @ 500 V							

Converter			Protective device							
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA				
				3VA2010-6##3x-0AA0	1.44	5 @ 415 V				
					1.44	5 @ 500 V				
				3VA2010-7##3x-0AA0	1.44	5 @ 415 V				
					1.44	5 @ 500 V				
				3VA2010-8##3x-0AA0	1.44	5 @ 415 V				
					1.44	5 @ 500 V				
				3VA2110-5##3x-0AA0	1.8	5 @ 415 V				
					1.8	5 @ 500 V				
				3VA2110-6##3x-0AA0	1.8	5 @ 415 V				
					1.8	5 @ 500 V				
				3VA2110-7##3x-0AA0	1.8	5 @ 415 V				
					1.8	5 @ 500 V				
				3VA2110-8##3x-0AA0	1.8	5 @ 415 V				
					1.8	5 @ 500 V				
				FSE	45 kW	6SL4113-2..26-2.F0	125	3VA1112-3E#3x-0AA0	1.5	7 @ 500 V
									1.5	10 @ 415 V
3VA1112-4E#3x-0AA0	1.5	7 @ 500 V								
	1.5	10 @ 415 V								
3VA1112-5E#3x-0AA0	1.5	10 @ 500 V								
3VA1112-6E#3x-0AA0	1.5	10 @ 500 V								
160	3VA2116-5##3x-0AA0	1.92	10 @ 500 V							
	3VA2116-6##3x-0AA0	1.92	10 @ 500 V							
	3VA2116-7##3x-0AA0	1.92	10 @ 500 V							
	3VA2116-8##3x-0AA0	1.92	10 @ 500 V							
55 kW	6SL4113-2..27-2.F0	125	3VA1112-3E#3x-0AA0	1.5	7 @ 500 V					
				1.5	10 @ 415 V					

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA
FSF1				3VA1112-4E#3x-0AA0	1.5	7 @ 500 V
					1.5	10 @ 415 V
				3VA1112-5E#3x-0AA0	1.5	10 @ 500 V
				3VA1112-6E#3x-0AA0	1.5	10 @ 500 V
			160	3VA2116-5##3x-0AA0	1.92	10 @ 500 V
				3VA2116-6##3x-0AA0	1.92	10 @ 500 V
				3VA2116-7##3x-0AA0	1.92	10 @ 500 V
				3VA2116-8##3x-0AA0	1.92	10 @ 500 V
	75 kW	6SL4113-2..30-2.F0	160	3VA2116-7##3x-0AA0	1.92	10 @ 500 V
				3VA2116-8##3x-0AA0	1.92	10 @ 500 V
				3VA2216-5##3x-0AA0	2.88	10 @ 500 V
				3VA2216-6##3x-0AA0	2.88	10 @ 500 V
3VA2216-7##3x-0AA0				2.88	10 @ 500 V	
3VA2216-8##3x-0AA0				2.88	10 @ 500 V	
250			3VA2225-5##3x-0AA0	3.0	10 @ 500 V	
			3VA2225-6##3x-0AA0	3.0	10 @ 500 V	
			3VA2225-7##3x-0AA0	3.0	10 @ 500 V	
			3VA2225-8##3x-0AA0	3.0	10 @ 500 V	
90 kW	6SL4113-2..31-2.F0	160	3VA1116-3E#3x-0AA0	1.92	7 @ 500 V	
				1.92	10 @ 415 V	
			3VA1116-4E#3x-0AA0	1.92	7 @ 500 V	
				1.92	10 @ 415 V	
			3VA1116-5E#3x-0AA0	1.92	10 @ 500 V	

Converter			Protective device				
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA	
				3VA1116-6E#3x-0AA0	1.92	10 @ 500 V	
				3VA1216-4EF3x-0AA0	1.92	10 @ 500 V	
				3VA1216-5EF3x-0AA0	1.92	10 @ 500 V	
				3VA1216-6EF3x-0AA0	1.92	10 @ 500 V	
				3VA2116-5##3x-0AA0	1.92	10 @ 500 V	
				3VA2116-6##3x-0AA0	1.92	10 @ 500 V	
				3VA2116-7##3x-0AA0	1.92	10 @ 500 V	
				3VA2116-8##3x-0AA0	1.92	10 @ 500 V	
				3VA2216-5##3x-0AA0	2.88	10 @ 500 V	
				3VA2216-6##3x-0AA0	2.88	10 @ 500 V	
				3VA2216-7##3x-0AA0	2.88	10 @ 500 V	
				3VA2216-8##3x-0AA0	2.88	10 @ 500 V	
				250	3VA1225-4EF3x-0AA0	3.0	10 @ 500 V
				3VA1225-5EF3x-0AA0	3.0	10 @ 500 V	
				3VA1225-6EF3x-0AA0	3.0	10 @ 500 V	
				200	3VA1220-4EF3x-0AA0	2.4	10 @ 500 V
				3VA1220-5EF3x-0AA0	2.4	10 @ 500 V	
				3VA1220-6EF3x-0AA0	2.4	10 @ 500 V	
	250	3VA1225-4EF3x-0AA0	3.0	10 @ 500 V			
	3VA1225-5EF3x-0AA0	3.0	10 @ 500 V				
	3VA1225-6EF3x-0AA0	3.0	10 @ 500 V				
	3VA2225-5##3x-0AA0	3.0	10 @ 500 V				
	3VA2225-6##3x-0AA0	3.0	10 @ 500 V				
	3VA2225-7##3x-0AA0	3.0	10 @ 500 V				
3VA2225-8##3x-0AA0	3.0	10 @ 500 V					
3VA2325-5##3x-0AA0	4.5	10 @ 500 V					

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. <sup>1) 2) 3)</sup>	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA
				3VA2325-6##3x-0AA0	4.5	10 @ 500 V
				3VA2325-7##3x-0AA0	4.5	10 @ 500 V
				3VA2325-8##3x-0AA0	4.5	10 @ 415 V

<sup>1)</sup> x stands for type of electrical connection and can be replaced by: 2 (nut keeper kit) or 6 (box terminal)

<sup>2)</sup> # stands for type of release and can be replaced by: D (fixed thermal fixed magnetic trip unit), E (adjustable thermal fixed magnetic trip Unit) or F (adjustable thermal adjustable magnetic Trip unit)

<sup>3)</sup> ## stands for type of release and can be replaced by: HL ( line protection LI), HM (line protection LIG), HK (line protection ELISA LI), HN (Line and generator protection LSI), JP (Line and generator protection LSI, with display), JQ (Line and generator protection LSI, with display), KP (Line and generator protection LSI, with display, with measurement function), KQ (Line and generator protection LSI, with display, with measurement function)

### IEC circuit breakers for IP55, 3AC 380...415/440...500V without maintenance switch

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. <sup>1) 2) 3)</sup>	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA
			25	5SY7325-7	0.25	15 @ 400 V
				3VA1032-2ED3x-0AA0	0.38	5 @ 500 V
					0.38	16 @ 415 V
				3VA1032-3ED3x-0AA0	0.38	5 @ 500 V
					0.38	25 @ 415 V
				3VA1032-4ED3x-0AA0	0.38	5 @ 500 V
					0.38	36 @ 415 V
			32	3VA1132-3E#3x-0AA0	0.38	5 @ 500 V
					0.38	25 @ 415 V
				3VA1132-4E#3x-0AA0	0.38	5 @ 500 V
					0.38	36 @ 415 V
				3VA1132-5E#3x-0AA0	0.38	5 @ 500 V
					0.38	55 @ 415 V
				3VA1132-6E#3x-0AA0	0.38	5 @ 500 V
					0.38	65 @ 415 V

Converter			Protective device				
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA	
			50	3VA1050-2ED3x-0AA0	0.6	5 @ 500 V	
					0.6	16 @ 415 V	
				3VA1050-3ED3x-0AA0	0.6	5 @ 500 V	
					0.6	25 @ 415 V	
				3VA1050-4ED3x-0AA0	0.6	5 @ 500 V	
					0.6	36 @ 415 V	
				3VA1150-3E#3x-0AA0	0.6	5 @ 500 V	
					0.6	25 @ 415 V	
				3VA1150-4E#3x-0AA0	0.6	5 @ 500 V	
	0.6	36 @ 415 V					
	3VA1150-5E#3x-0AA0	0.6	5 @ 500 V				
		0.6	55 @ 415 V				
	3VA1150-6E#3x-0AA0	0.6	5 @ 500 V				
		0.6	65 @ 415 V				
					5SY7350-7	0.5	15 @ 400 V
	11 kW	6SL4113-2..17-2.F0	32	3VA1032-2ED3x-0AA0	0.38	5 @ 500 V	
					0.38	16 @ 415 V	
				3VA1032-3ED3x-0AA0	0.38	5 @ 500 V	
0.38					25 @ 415 V		
3VA1032-4ED3x-0AA0				0.38	5 @ 500 V		
				0.38	36 @ 415 V		
3VA1132-3E#3x-0AA0				0.38	5 @ 500 V		
				0.38	25 @ 415 V		
3VA1132-4E#3x-0AA0				0.38	5 @ 500 V		
	0.38	36 @ 415 V					
				3VA1132-5E#3x-0AA0	0.38	5 @ 500 V	

Converter			Protective device				
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA	
					0.38	55 @ 415 V	
					3VA1132-6E#3x-0AA0	0.38	5 @ 500 V
						0.38	65 @ 415 V
			40		5SY7340-7	0.4	15 @ 400 V
			50	3VA1050-2ED3x-0AA0	0.6	5 @ 500 V	
					0.6	16 @ 415 V	
				3VA1050-3ED3x-0AA0	0.6	5 @ 500 V	
					0.6	25 @ 415 V	
				3VA1050-4ED3x-0AA0	0.6	5 @ 500 V	
					0.6	36 @ 415 V	
				3VA1150-3E#3x-0AA0	0.6	5 @ 500 V	
					0.6	25 @ 415 V	
				3VA1150-4E#3x-0AA0	0.6	5 @ 500 V	
					0.6	36 @ 415 V	
				3VA1150-5E#3x-0AA0	0.6	5 @ 500 V	
					0.6	55 @ 415 V	
				3VA1150-6E#3x-0AA0	0.6	5 @ 500 V	
					0.6	65 @ 415 V	
			5SY7350-7	0.5	15 @ 400 V		
			15 kW	6SL4113-2..18-2.F0	50	3VA1050-2ED3x-0AA0	0.6
0.6	16 @ 415 V						
3VA1050-3ED3x-0AA0	0.6	5 @ 500 V					
	0.6	25 @ 415 V					
3VA1050-4ED3x-0AA0	0.6	5 @ 500 V					
	0.6	36 @ 415 V					
3VA1150-3E#3x-0AA0	0.6	5 @ 500 V					

Converter			Protective device							
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA				
					0.6	25 @ 415 V				
				3VA1150-4E#3x-0AA0	0.6	5 @ 500 V				
					0.6	36 @ 415 V				
				3VA1150-5E#3x-0AA0	0.6	5 @ 500 V				
					0.6	55 @ 415 V				
				3VA1150-6E#3x-0AA0	0.6	5 @ 500 V				
					0.6	65 @ 415 V				
				5SY7350-7	0.5	15 @ 400 V				
				18.5 kW	6SL4113-2..20-2.F0	63		3VA1063-2ED3x-0AA0	0.76	5 @ 500 V
									0.76	16 @ 415 V
								3VA1063-3ED3x-0AA0	0.76	5 @ 500 V
									0.76	25 @ 415 V
	3VA1063-4ED3x-0AA0	0.76	5 @ 500 V							
		0.76	36 @ 415 V							
	3VA1163-3E#3x-0AA0	0.76	5 @ 500 V							
		0.76	25 @ 415 V							
	3VA1163-4E#3x-0AA0	0.76	5 @ 500 V							
		0.76	36 @ 415 V							
	3VA1163-5E#3x-0AA0	0.76	5 @ 500 V							
		0.76	55 @ 415 V							
	3VA1163-6E#3x-0AA0	0.76	5 @ 500 V							
0.76		70 @ 415 V								
3VA2063-5##3x-0AA0	0.91	5 @ 500 V								
	0.91	55 @ 415 V								
3VA2063-6##3x-0AA0	0.91	5 @ 500 V								
	0.91	85 @ 415 V								

Converter			Protective device				
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA	
				3VA2063-7##3x-0AA0	0.91	5 @ 500 V	
					0.91	100 @ 415 V	
				3VA2063-8##3x-0AA0	0.91	5 @ 500 V	
					0.91	100 @ 415 V	
				3VA2163-5##3x-0AA0	1.13	5 @ 500 V	
					1.13	55 @ 415 V	
				3VA2163-6##3x-0AA0	1.13	5 @ 500 V	
					1.13	85 @ 415 V	
				3VA2163-7##3x-0AA0	1.13	5 @ 500 V	
					1.13	100 @ 415 V	
				3VA2163-8##3x-0AA0	1.13	5 @ 500 V	
					1.13	100 @ 415 V	
				80	3VA1080-2ED3x-0AA0	0.96	5 @ 500 V
						0.96	16 @ 415 V
			3VA1080-3ED3x-0AA0		0.96	5 @ 500 V	
					0.96	25 @ 415 V	
			3VA1080-4ED3x-0AA0		0.96	5 @ 500 V	
					0.96	36 @ 415 V	
			3VA1180-3E#3x-0AA0		0.96	5 @ 500 V	
					0.96	25 @ 415 V	
			3VA1180-4E#3x-0AA0		0.96	5 @ 500 V	
					0.96	36 @ 415 V	
			3VA1180-5E#3x-0AA0	0.96	5 @ 500 V		
				0.96	55 @ 415 V		
3VA1180-6E#3x-0AA0	0.96	5 @ 500 V					
	0.96	70 @ 415 V					

Converter			Protective device						
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA			
			100	3VA2010-5##3x-0AA0	1.44	5 @ 500 V			
					1.44	55 @ 415 V			
				3VA2010-6##3x-0AA0	1.44	5 @ 500 V			
					1.44	85 @ 415 V			
				3VA2010-7##3x-0AA0	1.44	5 @ 500 V			
					1.44	100 @ 415 V			
				3VA2010-8##3x-0AA0	1.44	5 @ 500 V			
					1.44	100 @ 415 V			
				3VA2110-5##3x-0AA0	1.8	5 @ 500 V			
					1.8	55 @ 415 V			
				3VA2110-6##3x-0AA0	1.8	5 @ 500 V			
					1.8	85 @ 415 V			
				3VA2110-7##3x-0AA0	1.8	5 @ 500 V			
					1.8	100 @ 415 V			
				3VA2110-8##3x-0AA0	1.8	5 @ 500 V			
					1.8	100 @ 415 V			
				22 kW	6SL4113-2..21-2.F0	80	3VA1080-2ED3x-0AA0	0.96	5 @ 500 V
								0.96	16 @ 415 V
3VA1080-3ED3x-0AA0	0.96	5 @ 500 V							
	0.96	25 @ 415 V							
3VA1080-4ED3x-0AA0	0.96	5 @ 500 V							
	0.96	36 @ 415 V							
3VA1180-3E#3x-0AA0	0.96	5 @ 500 V							
	0.96	25 @ 415 V							
3VA1180-4E#3x-0AA0	0.96	5 @ 500 V							
	0.96	36 @ 415 V							

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA
				3VA1180-5E#3x-0AA0	0.96	5 @ 500 V
					0.96	55 @ 415 V
				3VA1180-6E#3x-0AA0	0.96	5 @ 500 V
					0.96	70 @ 415 V
			100	3VA2010-5##3x-0AA0	1.44	5 @ 500 V
					1.44	55 @ 415 V
				3VA2010-6##3x-0AA0	1.44	5 @ 500 V
					1.44	85 @ 415 V
				3VA2010-7##3x-0AA0	1.44	5 @ 500 V
					1.44	100 @ 415 V
				3VA2010-8##3x-0AA0	1.44	5 @ 500 V
					1.44	100 @ 415 V
				3VA2110-5##3x-0AA0	1.8	5 @ 500 V
					1.8	55 @ 415 V
				3VA2110-6##3x-0AA0	1.8	5 @ 500 V
					1.8	85 @ 415 V
				3VA2110-7##3x-0AA0	1.8	5 @ 500 V
					1.8	100 @ 415 V
				3VA2110-8##3x-0AA0	1.8	5 @ 500 V
					1.8	100 @ 415 V
FSD2	30 kW	6SL4113-2..23-2.F0	80	3VA1080-2ED3x-0AA0	0.96	5 @ 500 V
					0.96	16 @ 415 V
				3VA1080-3ED3x-0AA0	0.96	5 @ 500 V
					0.96	25 @ 415 V
				3VA1080-4ED3x-0AA0	0.96	5 @ 500 V
					0.96	36 @ 415 V

Converter			Protective device				
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA	
				3VA1180-3E#3x-0AA0	0.96	5 @ 500 V	
					0.96	25 @ 415 V	
				3VA1180-4E#3x-0AA0	0.96	5 @ 500 V	
					0.96	36 @ 415 V	
				3VA1180-5E#3x-0AA0	0.96	5 @ 500 V	
					0.96	55 @ 415 V	
				3VA1180-6E#3x-0AA0	0.96	5 @ 500 V	
					0.96	70 @ 415 V	
				100	3VA1010-2ED3x-0AA0	1.2	5 @ 500 V
						1.2	16 @ 415 V
					3VA1010-3ED3x-0AA0	1.2	5 @ 500 V
						1.2	25 @ 415 V
			3VA1010-4ED3x-0AA0		1.2	5 @ 500 V	
					1.2	36 @ 415 V	
			3VA1110-3E#3x-0AA0		1.2	5 @ 500 V	
					1.2	25 @ 415 V	
			3VA1110-4E#3x-0AA0		1.2	5 @ 500 V	
					1.2	36 @ 415 V	
			3VA1110-5E#3x-0AA0		1.2	5 @ 500 V	
					1.2	55 @ 415 V	
			3VA1110-6E#3x-0AA0	1.2	5 @ 500 V		
				1.2	70 @ 415 V		
			3VA2010-5##3x-0AA0	1.44	5 @ 500 V		
				1.44	55 @ 415 V		
3VA2010-6##3x-0AA0	1.44	5 @ 500 V					
	1.44	85 @ 415 V					

Converter			Protective device						
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA			
				3VA2010-7##3x-0AA0	1.44	5 @ 500 V			
					1.44	100 @ 415 V			
				3VA2010-8##3x-0AA0	1.44	5 @ 500 V			
					1.44	100 @ 415 V			
				3VA2110-5##3x-0AA0	1.8	5 @ 500 V			
					1.8	55 @ 415 V			
				3VA2110-6##3x-0AA0	1.8	5 @ 500 V			
					1.8	85 @ 415 V			
				3VA2110-7##3x-0AA0	1.8	5 @ 500 V			
					1.8	100 @ 415 V			
				3VA2110-8##3x-0AA0	1.8	5 @ 500 V			
					1.8	100 @ 415 V			
				37 kW	6SL4113-2..24-2.F0	100	3VA1010-2ED3x-0AA0	1.2	5 @ 500 V
								1.2	16 @ 415 V
3VA1010-3ED3x-0AA0	1.2	5 @ 500 V							
	1.2	25 @ 415 V							
3VA1010-4ED3x-0AA0	1.2	5 @ 500 V							
	1.2	36 @ 415 V							
3VA1110-3E#3x-0AA0	1.2	5 @ 500 V							
	1.2	25 @ 415 V							
3VA1110-4E#3x-0AA0	1.2	5 @ 500 V							
	1.2	36 @ 415 V							
3VA1110-5E#3x-0AA0	1.2	5 @ 500 V							
	1.2	55 @ 415 V							
3VA1110-6E#3x-0AA0	1.2	5 @ 500 V							
	1.2	70 @ 415 V							

Converter			Protective device							
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA				
				3VA2010-5##3x-0AA0	1.44	5 @ 500 V				
					1.44	55 @ 415 V				
				3VA2010-6##3x-0AA0	1.44	5 @ 500 V				
					1.44	85 @ 415 V				
				3VA2010-7##3x-0AA0	1.44	5 @ 500 V				
					1.44	100 @ 415 V				
				3VA2010-8##3x-0AA0	1.44	5 @ 500 V				
					1.44	100 @ 415 V				
				3VA2110-5##3x-0AA0	1.8	5 @ 500 V				
					1.8	55 @ 415 V				
				3VA2110-6##3x-0AA0	1.8	5 @ 500 V				
					1.8	85 @ 415 V				
				3VA2110-7##3x-0AA0	1.8	5 @ 500 V				
					1.8	100 @ 415 V				
				3VA2110-8##3x-0AA0	1.8	5 @ 500 V				
					1.8	100 @ 415 V				
				FSE	45 kW	6SL4113-2..26-2.F0	125	3VA1112-3E#3x-0AA0	1.5	7 @ 500 V
									1.5	25 @ 415 V
3VA1112-4E#3x-0AA0	1.5	7 @ 500 V								
	1.5	36 @ 415 V								
3VA1112-5E#3x-0AA0	1.5	10 @ 500 V								
	1.5	55 @ 415 V								
3VA1112-6E#3x-0AA0	1.5	10 @ 500 V								
	1.5	70 @ 415 V								
3VA2116-5##3x-0AA0	1.92	10 @ 500 V								
	1.92	55 @ 415 V								

Converter			Protective device				
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA	
	55 kW	6SL4113-2..27-2.F0	125	3VA2116-6##3x-0AA0	1.92	10 @ 500 V	
					1.92	85 @ 415 V	
				3VA2116-7##3x-0AA0	1.92	10 @ 500 V	
					1.92	100 @ 415 V	
				3VA2116-8##3x-0AA0	1.92	10 @ 500 V	
					1.92	100 @ 415 V	
			160	3VA1112-3E#3x-0AA0	1.5	7 @ 500 V	
					1.5	25 @ 415 V	
				3VA1112-4E#3x-0AA0	1.5	7 @ 500 V	
					1.5	36 @ 415 V	
				3VA1112-5E#3x-0AA0	1.5	10 @ 500 V	
					1.5	55 @ 415 V	
	3VA1112-6E#3x-0AA0	1.5	10 @ 500 V				
		1.5	70 @ 415 V				
	FSF1	75 kW	6SL4113-2..30-2.F0	160	3VA2116-5##3x-0AA0	1.92	10 @ 500 V
						1.92	55 @ 415 V
					3VA2116-6##3x-0AA0	1.92	10 @ 500 V
						1.92	85 @ 415 V
3VA2116-7##3x-0AA0					1.92	10 @ 500 V	
					1.92	100 @ 415 V	
3VA2116-8##3x-0AA0					1.92	10 @ 500 V	
					1.92	100 @ 415 V	
3VA1116-3E#3x-0AA0					1.92	7 @ 500 V	
					1.92	25 @ 415 V	
3VA1116-4E#3x-0AA0					1.92	7 @ 500 V	
					1.92	36 @ 415 V	

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA
				3VA1116-5E#3x-0AA0	1.92	10 @ 500 V
					1.92	55 @ 415 V
				3VA1116-6E#3x-0AA0	1.92	10 @ 500 V
					1.92	70 @ 415 V
				3VA1216-4EF3x-0AA0	1.92	10 @ 500 V
					1.92	36 @ 415 V
				3VA1216-5EF3x-0AA0	1.92	15 @ 500 V
					1.92	55 @ 415 V
				3VA1216-6EF3x-0AA0	1.92	15 @ 500 V
					1.92	70 @ 415 V
				3VA2116-5##3x-0AA0	1.92	10 @ 500 V
					1.92	55 @ 415 V
				3VA2116-6##3x-0AA0	1.92	10 @ 500 V
					1.92	85 @ 415 V
				3VA2116-7##3x-0AA0	1.92	10 @ 500 V
					1.92	100 @ 415 V
				3VA2116-8##3x-0AA0	1.92	10 @ 500 V
					1.92	100 @ 415 V
				3VA2216-5##3x-0AA0	2.88	10 @ 500 V
					2.88	55 @ 415 V
				3VA2216-6##3x-0AA0	2.88	10 @ 500 V
					2.88	85 @ 415 V
				3VA2216-7##3x-0AA0	2.88	10 @ 500 V
					2.88	100 @ 415 V
3VA2216-8##3x-0AA0	2.88	10 @ 500 V				
	2.88	100 @ 415 V				

Converter			Protective device						
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA			
			250	3VA1225-4EF3x-0AA0	3.0	10 @ 500 V			
					3.0	36 @ 415 V			
				3VA1225-5EF3x-0AA0	3.0	10 @ 500 V			
					3.0	55 @ 415 V			
				3VA1225-6EF3x-0AA0	3.0	10 @ 500 V			
					3.0	70 @ 415 V			
				3VA2225-5##3x-0AA0	3.0	10 @ 500 V			
					3.0	55 @ 415 V			
				3VA2225-6##3x-0AA0	3.0	10 @ 500 V			
					3.0	85 @ 415 V			
				3VA2225-7##3x-0AA0	3.0	10 @ 500 V			
					3.0	100 @ 415 V			
				3VA2225-8##3x-0AA0	3.0	10 @ 500 V			
					3.0	100 @ 415 V			
				3VA2325-5##3x-0AA0	4.5	10 @ 500 V			
					4.5	55 @ 415 V			
				3VA2325-6##3x-0AA0	4.5	10 @ 500 V			
					4.5	85 @ 415 V			
				3VA2325-7##3x-0AA0	4.5	10 @ 500 V			
					4.5	100 @ 415 V			
				3VA2325-8##3x-0AA0	4.5	100 @ 415 V			
				90 kW	6SL4113-2..31-2.F0	160	3VA1116-3E#3x-0AA0	1.92	7 @ 500 V
								1.92	25 @ 415 V
							3VA1116-4E#3x-0AA0	1.92	7 @ 500 V
1.92	36 @ 415 V								
3VA1116-5E#3x-0AA0	1.92	10 @ 500 V							

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA
					1.92	55 @ 415 V
				3VA1116-6E#3x-0AA0	1.92	10 @ 500 V
					1.92	70 @ 415 V
				3VA1216-4EF3x-0AA0	1.92	10 @ 500 V
					1.92	36 @ 415 V
				3VA1216-5EF3x-0AA0	1.92	10 @ 500 V
					1.92	55 @ 415 V
				3VA1216-6EF3x-0AA0	1.92	10 @ 500 V
					1.92	70 @ 415 V
				3VA2116-5##3x-0AA0	1.92	10 @ 500 V
					1.92	55 @ 415 V
				3VA2116-6##3x-0AA0	1.92	10 @ 500 V
					1.92	85 @ 415 V
				3VA2116-7##3x-0AA0	1.92	10 @ 500 V
					1.92	100 @ 415 V
				3VA2116-8##3x-0AA0	1.92	10 @ 500 V
					1.92	100 @ 415 V
				3VA2216-5##3x-0AA0	2.88	10 @ 500 V
					2.88	55 @ 415 V
				3VA2216-6##3x-0AA0	2.88	10 @ 500 V
					2.88	85 @ 415 V
				3VA2216-7##3x-0AA0	2.88	10 @ 500 V
					2.88	100 @ 415 V
				3VA2216-8##3x-0AA0	2.88	10 @ 500 V
					2.88	100 @ 415 V
			250	3VA1225-4EF3x-0AA0	3.0	10 @ 500 V

Converter			Protective device							
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2) 3)	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA				
					3.0	36 @ 415 V				
				3VA1225-5EF3x-0AA0	3.0	10 @ 500 V				
						3.0	55 @ 415 V			
				3VA1225-6EF3x-0AA0	3.0	10 @ 500 V				
						3.0	70 @ 415 V			
				3VA2225-5##3x-0AA0	3.0	10 @ 500 V				
						3.0	55 @ 415 V			
				3VA2225-6##3x-0AA0	3.0	10 @ 500 V				
						3.0	85 @ 415 V			
				3VA2225-7##3x-0AA0	3.0	10 @ 500 V				
						3.0	100 @ 415 V			
				3VA2225-8##3x-0AA0	3.0	10 @ 500 V				
						3.0	100 @ 415 V			
				3VA2325-5##3x-0AA0	4.5	10 @ 500 V				
						4.5	55 @ 415 V			
				3VA2325-6##3x-0AA0	4.5	10 @ 500 V				
						4.5	85 @ 415 V			
				3VA2325-7##3x-0AA0	4.5	10 @ 500 V				
						4.5	100 @ 415 V			
						3VA2325-8##3x-0AA0	4.5	100 @ 415 V		
				110 kW	6SL4113-2..33-2.F0	200		3VA1220-4EF3x-0AA0	2.4	10 @ 500 V
										2.4
								3VA1220-5EF3x-0AA0	2.4	10 @ 500 V
										2.4
3VA1220-6EF3x-0AA0	2.4	10 @ 500 V								
		2.4	70 @ 415 V							

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. <sup>1) 2) 3)</sup>	I <sub>cp,mr</sub> / kA	I <sub>cc</sub> / kA
			250	3VA1225-4EF3x-0AA0	3.0	10 @ 500 V
					3.0	36 @ 415 V
				3VA1225-5EF3x-0AA0	3.0	10 @ 500 V
					3.0	55 @ 415 V
				3VA1225-6EF3x-0AA0	3.0	10 @ 500 V
					3.0	70 @ 415 V
				3VA2225-5##3x-0AA0	3.0	10 @ 500 V
					3.0	55 @ 415 V
				3VA2225-6##3x-0AA0	3.0	10 @ 500 V
					3.0	85 @ 415 V
				3VA2225-7##3x-0AA0	3.0	10 @ 500 V
					3.0	100 @ 415 V
				3VA2225-8##3x-0AA0	3.0	10 @ 500 V
					3.0	100 @ 415 V
				3VA2325-5##3x-0AA0	4.5	10 @ 500 V
					4.5	55 @ 415 V
				3VA2325-6##3x-0AA0	4.5	10 @ 500 V
					4.5	85 @ 415 V
				3VA2325-7##3x-0AA0	4.5	10 @ 500 V
					4.5	100 @ 415 V
				3VA2325-8##3x-0AA0	4.5	100 @ 415 V

<sup>1)</sup> x stands for type of electrical connection and can be replaced by: 2 (nut keeper kit) or 6 (box terminal)

<sup>2)</sup> # stands for type of release and can be replaced by: D (fixed thermal fixed magnetic trip unit), E (adjustable thermal fixed magnetic trip Unit) or F (adjustable thermal adjustable magnetic Trip unit)

<sup>3)</sup> ## stands for type of release and can be replaced by: HL ( line protection LI), HM (line protection LIG), HK (line protection ELISA LI), HN (Line and generator protection LSI), JP (Line and generator protection LSI, with display), JQ (Line and generator protection LSIG, with display), KP (Line and generator protection LSI, with display, with measurement function), KQ (Line and generator protection LSIG, with display, with measurement function)

## 2 UL/CSA applications

### 2.1 General Notes

Branch circuit protection must be provided in accordance with

- The National Electrical Code (NEC) for USA
- The Canadian Electrical Code (CEC) Part I for Canada
- Any additional local codes and regulations.

The tables below provide information for each converter type and article number on the following items:

- **Suitable protective devices:** The specification includes the type or article number of the overcurrent protective devices (OCPD). In many cases, two values of rated current are shown for the same converter. The higher one represents the maximum permissible nominal current of the OCPD that provides protection, the lower one is a typical nominal current that better fits to the converter. Current ratings between these two values are suitable as well.
- **Maximum SCCR (Short-Circuit Current Rating):** This is the maximum prospective symmetrical fault current at the specified voltage to which the converter system can be connected without sustaining damage exceeding defined acceptance criteria. The specified SCCR applies to the complete converter including built-in EMI filters and pluggable terminals (where applicable).
- **Minimum enclosure volume:** In the end application, the converter shall be installed in an outer enclosure or control cabinet which shall meet the minimum enclosure volume requirement.

Notes on the selection of protective devices (in accordance with NEC and CEC)

- Suitable Protective devices of the same type as specified in the tables with a lower ampere rating may be used, if suitable for the application.
- Protective devices of the same type as specified in the tables with a lower interrupting rating than the specified SCCR may be used, if suitable for the application. In such case, this lower interrupting current rating of a protective device shall be specified as the SCCR of a converter and protective device combination.
- The voltage rating of the protective device must be at least the voltage rating of the supply circuit. Protective devices with a straight voltage rating, such as 480V, are permitted on any supply circuits. The specified SCCR is valid for corner grounded delta and solidly grounded wye systems. Protective devices with a slash voltage rating, such as 480Y/277V, are permitted only on solidly grounded wye circuits where the nominal voltage of any conductor to ground does not exceed the lower of the two values.

The converter modules provide:

- Integral Motor Overload Protection which reduces the output current flow under overload conditions. Refer to manual for adjustments.
- Integral Output Short-Circuit Protection. Components on the load side of the converter module are not required to have a short-circuit current rating (UL 508A).

UL File-Number: E192450 Vol. 27

## 2.2 SINAMICS G220

### 2.2.1 UL open type

#### 2.2.1.1 UL/CSA non-semiconductor fuses

UL/CSA non-semiconductor fuses for UL open type, 3AC 200...240V

Converter			Protective device		Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A <sup>1)</sup>	SCCR / kA @ 240 V	Metric	Imperial
FSA	0.75 hp	6SL4112-OCA05-0.F0	6	100	0.192 m <sup>3</sup>	6.78 ft <sup>3</sup>
			15	100		
	1 hp	6SL4112-OCA06-0.F0	8	100		
			15	100		
	1.5 hp	6SL4112-OCA08-0.F0	10	100		
			15	100		
2 hp	6SL4112-OCA10-0.F0	12	100			
		15	100			
3 hp	6SL4112-OCA11-0.F0	15	100			
		4 hp	6SL4112-OCA12-0.F0	20	100	0.24 m <sup>3</sup>
35	100					
5 hp	6SL4112-OCA13-0.F0	30	100			
		35	100			
FSC	7.5 hp	6SL4112-OCA15-0.F0	40	100	0.12 m <sup>3</sup>	4.24 ft <sup>3</sup>
			50	100		
	10 hp	6SL4112-OCA16-0.F0	50	100		
FSD2	15 hp	6SL4112-OCA17-0.F0	70	100	0.36 m <sup>3</sup>	12.71 ft <sup>3</sup>
	20 hp	6SL4112-OCA18-0.F0	90	100		
			110	100		
25 hp	6SL4112-OCA20-0.F0	110	100			

Converter			Protective device		Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A <sup>1)</sup>	SCCR / kA @ 240 V	Metric	Imperial
FSE	30 hp	6SL4112-OCA21-0.F0	125	100	0.384 m <sup>3</sup>	13.56 ft <sup>3</sup>
			150	100		
	40 hp	6SL4112-OCA23-0.F0	150	100		
FSF1	50 hp	6SL4112-OCA24-0.F0	150	100	0.48 m <sup>3</sup>	16.95 ft <sup>3</sup>
			300	100		
	60 hp	6SL4112-OCA26-0.F0	175	100		
			200	100		
			300	100		
	75 hp	6SL4112-OCA27-0.F0	250	100		
			300	100		

<sup>1)</sup> 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

*UL/CSA non-semiconductor fuses for UL open type, 3AC 380...415/440...500V*

Converter			Protective device		Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A <sup>1)</sup>	SCCR / kA @ 480 V	Metric	Imperial
FSA	1.5 hp	6SL4113-OCA08-..F0	6	100	0.192 m <sup>3</sup>	6.78 ft <sup>3</sup>
			15	100		
	2 hp	6SL4113-OCA10-..F0	8	100		
			15	100		
	3 hp	6SL4113-OCA11-..F0	10	100		
			15	100		
	4 hp	6SL4113-OCA12-..F0	12	100		
			15	100		
	5 hp	6SL4113-OCA13-..F0	15	100		

Converter			Protective device		Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A <sup>1)</sup>	SCCR / kA @ 480 V	Metric	Imperial
FSB	7.5 hp	6SL4113-OCA15-..F0	20	100	0.24 m <sup>3</sup>	8.48 ft <sup>3</sup>
			35	100		
	10 hp	6SL4113-OCA16-..F0	30	100		
			35	100		
FSC	15 hp	6SL4113-OCA17-..F0	40	100	0.12 m <sup>3</sup>	4.24 ft <sup>3</sup>
			50	100		
	20 hp	6SL4113-OCA18-..F0	50	100		
	FSD1	25 hp	6SL4113-OCA20-..F0	60	100	0.16 m <sup>3</sup>
70				100		
30 hp		6SL4113-OCA21-..F0	70	100		
FSD2	40 hp	6SL4113-OCA23-..F0	90	100	0.36 m <sup>3</sup>	12.71 ft <sup>3</sup>
			110	100		
	50 hp	6SL4113-OCA24-..F0	110	100		
FSE	60 hp	6SL4113-OCA26-..F0	125	100	0.384 m <sup>3</sup>	13.56 ft <sup>3</sup>
			150	100		
	75 hp	6SL4113-OCA27-..F0	150	100		
FSF1	100 hp	6SL4113-OCA30-..F0	150	100	0.48 m <sup>3</sup>	16.95 ft <sup>3</sup>
			300	100		
	125 hp	6SL4113-OCA31-..F0	175	100		
			200	100		
			300	100		
	150 hp	6SL4113-OCA33-..F0	250	100		
300			100			
FSF2	175 hp	6SL4113-OCA35-..F0	250	100		
			300	100		
			350	100		

Converter			Protective device		Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A <sup>1)</sup>	SCCR / kA @ 480 V	Metric	Imperial
	200 hp	6SL4113-OCA36-...F0	350	100		
			400	100		

<sup>1)</sup> 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

## 2.2.1.2 UL/CSA semiconductor fuses

UL/CSA semiconductor fuses for UL open type, 3AC 200...240V

Converter			Protective device			Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. <sup>1) 2)</sup>	SCCR / kA @ 240 V	Metric	Imperial
FSA	0.75 hp	6SL4112-OCA05-0.F0	16	3NE1813-0	100	0.192 m <sup>3</sup>	6.78 ft <sup>3</sup>
	1 hp	6SL4112-OCA06-0.F0	16	3NE1813-0	100		
	1.5 hp	6SL4112-OCA08-0.F0	16	3NE1813-0	100		
	2 hp	6SL4112-OCA10-0.F0	16	3NE1813-0	100		
	3 hp	6SL4112-OCA11-0.F0	16	3NE1813-0	100		
FSB	4 hp	6SL4112-OCA12-0.F0	20	3NE1814-0	100	0.24 m <sup>3</sup>	8.48 ft <sup>3</sup>
			35	3NE1803-0	100		
	5 hp	6SL4112-OCA13-0.F0	25	3NE1815-0	100		
			35	3NE1803-0	100		
FSC	7.5 hp	6SL4112-OCA15-0.F0	40	3NE1802-0	100	0.12 m <sup>3</sup>	4.24 ft <sup>3</sup>
			50	3NE1817-0	100		
	10 hp	6SL4112-OCA16-0.F0	50	3NE1817-0	100		
FSD2	15 hp	6SL4112-OCA17-0.F0	80	3NE1820-0	100	0.36 m <sup>3</sup>	12.71 ft <sup>3</sup>
			100	3NE1021-0	100		
			125	3NE1022-0	100		
	20 hp	6SL4112-OCA18-0.F0	100	3NE1021-0	100		
			125	3NE1022-0	100		
	25 hp	6SL4112-OCA20-0.F0	100	3NE1021-0	100		
125			3NE1022-0	100			
FSE	30 hp	6SL4112-OCA21-0.F0	125	3NE1022-0	100	0.384 m <sup>3</sup>	13.56 ft <sup>3</sup>
			160	3NE1224-0	100		

Converter			Protective device			Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2)	SCCR / kA @ 240 V	Metric	Imperial
	40 hp	6SL4112-OCA23-0.F0	160	3NE1224-0	100		
FSF1	50 hp	6SL4112-OCA24-0.F0	160	3NE1224-0	100	0.48 m <sup>3</sup>	16.95 ft <sup>3</sup>
			315	3NE1230-0	100		
	60 hp	6SL4112-OCA26-0.F0	200	3NE1225-0	100		
			315	3NE1230-0	100		
	75 hp	6SL4112-OCA27-0.F0	250	3NE1227-0	100		
			315	3NE1230-0	100		

1) Semiconductor fuses must be installed in the same overall assembly as the converter.

2) Recognized semiconductor fuses (JFHR2/8) made by SIEMENS

#### UL/CSA semiconductor fuses for UL open type, 3AC 380...415/440...500V

Converter			Protective device			Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. 1) 2)	SCCR / kA @ 480 V	Metric	Imperial
FSA	1.5 hp	6SL4113-OCA08-..F0	16	3NE1813-0	100	0.192 m <sup>3</sup>	6.78 ft <sup>3</sup>
	2 hp	6SL4113-OCA10-..F0	16	3NE1813-0	100		
	3 hp	6SL4113-OCA11-..F0	16	3NE1813-0	100		
	4 hp	6SL4113-OCA12-..F0	16	3NE1813-0	100		
	5 hp	6SL4113-OCA13-..F0	16	3NE1813-0	100		
FSB	7.5 hp	6SL4113-OCA15-..F0	20	3NE1814-0	100	0.24 m <sup>3</sup>	8.48 ft <sup>3</sup>
			35	3NE1803-0	100		
	10 hp	6SL4113-OCA16-..F0	25	3NE1815-0	100		
			35	3NE1803-0	100		
FSC	15 hp	6SL4113-OCA17-..F0	40	3NE1802-0	100	0.12 m <sup>3</sup>	4.24 ft <sup>3</sup>
			50	3NE1817-0	100		
	20 hp	6SL4113-OCA18-..F0	50	3NE1817-0	100		

Converter			Protective device			Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. <sup>1) 2)</sup>	SCCR / kA @ 480 V	Metric	Imperial
FSD1	25 hp	6SL4113-0CA20-..F0	63	3NE1818-0	100	0.16 m <sup>3</sup>	5.65 ft <sup>3</sup>
			80	3NE1820-0	100		
	30 hp	6SL4113-0CA21-..F0	80	3NE1820-0	100		
FSD2	40 hp	6SL4113-0CA23-..F0	100	3NE1021-0	100	0.36 m <sup>3</sup>	12.71 ft <sup>3</sup>
			125	3NE1022-0	100		
	50 hp	6SL4113-0CA24-..F0	100	3NE1021-0	100		
			125	3NE1022-0	100		
FSE	60 hp	6SL4113-0CA26-..F0	125	3NE1022-0	100	0.384 m <sup>3</sup>	13.56 ft <sup>3</sup>
			160	3NE1224-0	100		
	75 hp	6SL4113-0CA27-..F0	160	3NE1224-0	100		
FSF1	100 hp	6SL4113-0CA30-..F0	160	3NE1224-0	100	0.48 m <sup>3</sup>	16.95 ft <sup>3</sup>
			315	3NE1230-0	100		
	125 hp	6SL4113-0CA31-..F0	200	3NE1225-0	100		
			315	3NE1230-0	100		
	150 hp	6SL4113-0CA33-..F0	250	3NE1227-0	100		
			315	3NE1230-0	100		
FSF2	175 hp	6SL4113-0CA35-..F0	315	3NE1230-0	100		
			350	3NE1331-0	100		
	200 hp	6SL4113-0CA36-..F0	350	3NE1331-0	100		
			400	3NE1332-0	100		
			450	3NE1333-0	100		
			500	3NE1334-0	100		

<sup>1)</sup> Semiconductor fuses must be installed in the same overall assembly as the converter.

<sup>2)</sup> Recognized semiconductor fuses (JFHR2/8) made by SIEMENS

2.2.1.3 UL/CSA type E combination motor controllers

UL/CSA type E combination motor controllers for UL open type, 3AC 200...240V

Converter			Protective device				Min. enclosure volume			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Rated Power @ 240 V	Article no. 1) 2) 3)	SCCR / kA @ 240 V	Metric	Imperial		
FSA	0.75 hp	6SL4112-OCA05-0.F0	6	2 hp	3RV2011-1GA..	65	0.192 m <sup>3</sup>	6.78 ft <sup>3</sup>		
					3RV2021-1GA..	65				
			14	5 hp	3RV2031-4SA..	65				
					3RV2032-4SA..	65				
					16	3RV2011-4AA..			65	
						3RV2021-4AA..			65	
			17	7.5 hp	3RV2031-4TA..	65				
					3RV2032-4TA..	65				
			1 hp	6SL4112-OCA06-0.F0	8	3 hp			3RV2011-1HA..	65
									3RV2021-1HA..	65
					14	5 hp			3RV2031-4SA..	65
									3RV2032-4SA..	65
	16	3RV2011-4AA..							65	
		3RV2021-4AA..							65	
	17	7.5 hp			3RV2031-4TA..	65				
					3RV2032-4TA..	65				
	1.5 hp	6SL4112-OCA08-0.F0			10	3 hp			3RV2011-1JA..	65
									3RV2021-1JA..	65
					14	5 hp			3RV2031-4SA..	65
									3RV2032-4SA..	65
			16	3RV2011-4AA..					65	
				3RV2021-4AA..					65	
			17	7.5 hp	3RV2031-4TA..	65				
					3RV2032-4TA..	65				

Converter			Protective device				Min. enclosure volume		
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Rated Power @ 240 V	Article no. 1) 2) 3)	SCCR / kA @ 240 V	Metric	Imperial	
	2 hp	6SL4112-OCA10-0.F0	12	5 hp	3RV2011-1KA..	65	0.24 m <sup>3</sup>	8.48 ft <sup>3</sup>	
					3RV2021-1KA..	65			
			14		3RV2031-4SA..	65			
					3RV2032-4SA..	65			
			16		3RV2011-4AA..	65			
					3RV2021-4AA..	65			
			17		3RV2031-4TA..	65			
					3RV2032-4TA..	65			
	3 hp	6SL4112-OCA11-0.F0	16	5 hp	3RV2011-4AA..	65			
					3RV2021-4AA..	65			
			17	7.5 hp	3RV2031-4TA..	65			
					3RV2032-4TA..	65			
	FSB	4 hp	6SL4112-OCA12-0.F0	20	7.5 hp	3RV2021-4BA..			65
						3RV2031-4BA..			65
3RV2032-4BA..						65			
32				10 hp		3RV2021-4EA..	50		
						3RV2031-4EA..	65		
						3RV2032-4EA..	65		
5 hp		6SL4112-OCA13-0.F0	25	10 hp	3RV2021-4DA..	50			
					3RV2031-4DA..	65			
					3RV2032-4DA..	65			
			32		3RV2021-4EA..	50			
					3RV2031-4EA..	65			
					3RV2032-4EA..	65			
FSC	7.5 hp	6SL4112-OCA15-0.F0	40	15 hp	3RV2031-4UA..	5	0.12 m <sup>3</sup>	4.24 ft <sup>3</sup>	
					65	0.32 m <sup>3</sup>	11.30 ft <sup>3</sup>		

Converter			Protective device				Min. enclosure volume			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Rated Power @ 240 V	Article no. 1) 2) 3)	SCCR / kA @ 240 V	Metric	Imperial		
					3RV2032-4UA..	5	0.12 m <sup>3</sup>	4.24 ft <sup>3</sup>		
						65	0.32 m <sup>3</sup>	11.30 ft <sup>3</sup>		
					3RV2041-4FA..	5	0.12 m <sup>3</sup>	4.24 ft <sup>3</sup>		
						3RV2042-4FA..			5	
					3RV2041-4HA..	5				
						3RV2042-4HA..			5	
			50	20 hp	3RV2031-4WA..	5				
						65			0.32 m <sup>3</sup>	11.30 ft <sup>3</sup>
			52	20 hp	3RV2032-4WA..	5	0.12 m <sup>3</sup>	4.24 ft <sup>3</sup>		
						65	0.32 m <sup>3</sup>	11.30 ft <sup>3</sup>		
			10 hp	6SL4112-0CA16-0.FO	50	20 hp	3RV2041-4HA..	5	0.12 m <sup>3</sup>	4.24 ft <sup>3</sup>
							3RV2042-4HA..	5		
					52	20 hp	3RV2031-4WA..	5	0.32 m <sup>3</sup>	11.30 ft <sup>3</sup>
							65	0.32 m <sup>3</sup>	11.30 ft <sup>3</sup>	
52	20 hp	3RV2032-4WA..			5	0.12 m <sup>3</sup>	4.24 ft <sup>3</sup>			
		65			0.32 m <sup>3</sup>	11.30 ft <sup>3</sup>				
FSD2	15 hp	6SL4112-0CA17-0.FO	75	30 hp	3RV2041-4KA..	65	0.36 m <sup>3</sup>	12.71 ft <sup>3</sup>		
					3RV2042-4KA..	65				
			100	40 hp	3RV2041-4MA..	65				
					3RV2042-4MA..	65				
	20 hp	6SL4112-0CA18-0.FO	93	40 hp	3RV2041-4YA..	65				
					3RV2042-4YA..	65				
			100		3RV2041-4MA..	65				
					3RV2042-4MA..	65				
	25 hp	6SL4112-0CA20-0.FO	100	40 hp	3RV2041-4MA..	65				
					3RV2042-4MA..	65				

Converter			Protective device				Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Rated Power @ 240 V	Article no. 1) 2) 3)	SCCR / kA @ 240 V	Metric	Imperial
FSE	30 hp	6SL4112-OCA21-0.F0			Use a circuit breaker instead.		no restrictions	no restrictions
	40 hp	6SL4112-OCA23-0.F0			Use a circuit breaker instead.			

1) .. stands for type of electrical connection and can be replaced by: 10 (screw terminal); 20 (spring type terminal)

2) SIEMENS Type E combination motor controllers (NKJH/7)

3) 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 3RV2938-1; 3RV204. with 3RT2946-4GA07; not necessary for CSA.

UL/CSA type E combination motor controllers for UL open type, 3AC 380...415/440...500V

Converter			Protective device				Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Rated Power @ 480 V	Article no. 1) 2) 3)	SCCR / kA @ 480Y/277V AC	Metric	Imperial
FSA	1.5 hp	6SL4113-OCA08-..F0	6	5 hp	3RV2011-1GA..	65	0.192 m <sup>3</sup>	6.78 ft <sup>3</sup>
					3RV2021-1GA..	65		
			14	10 hp	3RV2031-4SA..	65		
					3RV2032-4SA..	65		
			16	10 hp	3RV2011-4AA..	65		
					3RV2021-4AA..	65		
	17	15 hp	3RV2031-4TA..	65				
			3RV2032-4TA..	65				
	2 hp	6SL4113-OCA10-..F0	8	5 hp	3RV2011-1HA..	65		
					3RV2021-1HA..	65		
			14	10 hp	3RV2031-4SA..	65		
					3RV2032-4SA..	65		
			16	10 hp	3RV2011-4AA..	65		
					3RV2021-4AA..	65		

Converter			Protective device				Min. enclosure volume			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Rated Power @ 480 V	Article no. 1) 2) 3)	SCCR / kA @ 480Y/277V AC	Metric	Imperial		
	3 hp	6SL4113-0CA11-..F0	17	15 hp	3RV2031-4TA..	65	0.24 m <sup>3</sup>	8.48 ft <sup>3</sup>		
					3RV2032-4TA..	65				
			10	7.5 hp	3RV2011-1JA..	65				
					3RV2021-1JA..	65				
			14	10 hp	3RV2031-4SA..	65				
					3RV2032-4SA..	65				
			16	10 hp	3RV2011-4AA..	65				
					3RV2021-4AA..	65				
			17	15 hp	3RV2031-4TA..	65				
					3RV2032-4TA..	65				
			4 hp	6SL4113-0CA12-..F0	12	7.5 hp			3RV2011-1KA..	65
									3RV2021-1KA..	65
	14	10 hp			3RV2031-4SA..	65				
					3RV2032-4SA..	65				
	16	10 hp			3RV2011-4AA..	65				
					3RV2021-4AA..	65				
	17	15 hp			3RV2031-4TA..	65				
					3RV2032-4TA..	65				
5 hp	6SL4113-0CA13-..F0	16	10 hp	3RV2011-4AA..	65					
				3RV2021-4AA..	65					
		17	15 hp	3RV2031-4TA..	65					
				3RV2032-4TA..	65					
FSB	7.5 hp	6SL4113-0CA15-..F0	20	15 hp	3RV2021-4BA..	65	0.24 m <sup>3</sup>	8.48 ft <sup>3</sup>		
					3RV2031-4BA..	65				
					3RV2032-4BA..	65				

Converter			Protective device				Min. enclosure volume			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Rated Power @ 480 V	Article no. 1) 2) 3)	SCCR / kA @ 480Y/277V AC	Metric	Imperial		
FSC	10 hp	6SL4113-0CA16-..F0	32	20 hp	3RV2021-4EA..	50				
				25 hp	3RV2031-4EA..	65				
					3RV2032-4EA..	65				
			25	20 hp	3RV2021-4DA..	65				
					3RV2031-4DA..	65				
					3RV2032-4DA..	65				
	32	25 hp	3RV2021-4EA..	50						
			3RV2031-4EA..	65						
			3RV2032-4EA..	65						
	15 hp	6SL4113-0CA17-..F0	40	30 hp	3RV2031-4UA..	5			0.12 m <sup>3</sup>	4.24 ft <sup>3</sup>
						65			0.32 m <sup>3</sup>	11.30 ft <sup>3</sup>
					3RV2032-4UA..	5			0.12 m <sup>3</sup>	4.24 ft <sup>3</sup>
65						0.32 m <sup>3</sup>	11.30 ft <sup>3</sup>			
3RV2041-4FA..					5	0.12 m <sup>3</sup>	4.24 ft <sup>3</sup>			
					3RV2042-4FA..			5		
50			40 hp	3RV2041-4HA..	5					
				3RV2042-4HA..	5					
52			40 hp	3RV2031-4WA..	5					
					65			0.32 m <sup>3</sup>	11.30 ft <sup>3</sup>	
				3RV2032-4WA..	5	0.12 m <sup>3</sup>	4.24 ft <sup>3</sup>			
					65	0.32 m <sup>3</sup>	11.30 ft <sup>3</sup>			
20 hp			6SL4113-0CA18-..F0	50	40 hp	3RV2041-4HA..	5	0.12 m <sup>3</sup>	4.24 ft <sup>3</sup>	
						3RV2042-4HA..	5			
				52		3RV2031-4WA..	5			
						65	0.32 m <sup>3</sup>			11.30 ft <sup>3</sup>

Converter			Protective device				Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Rated Power @ 480 V	Article no. <sup>1) 2) 3)</sup>	SCCR / kA @ 480Y/277V AC	Metric	Imperial
					3RV2032-4WA..	5	0.12 m <sup>3</sup>	4.24 ft <sup>3</sup>
						65	0.32 m <sup>3</sup>	11.30 ft <sup>3</sup>
FSD1	25 hp	6SL4113-0CA20-..F0	59	50 hp	3RV2031-4XA..	20	0.16 m <sup>3</sup>	5.65 ft <sup>3</sup>
					3RV2032-4XA..	30		
			63		3RV2041-4JA..	65		
					3RV2042-4JA..	65		
	30 hp	6SL4113-0CA21-..F0	73	60 hp	3RV2031-4KA..	20		
					3RV2032-4KA..	30		
			75		3RV2041-4KA..	65		
					3RV2042-4KA..	65		
	40 hp	6SL4113-0CA23-..F0	73	60 hp	3RV2031-4KA..	20		
					3RV2032-4KA..	30		
75			3RV2041-4KA..		65			
			3RV2042-4KA..		65			
FSD2	40 hp	6SL4113-0CA23-..F0	93	75 hp	3RV2041-4YA..	65	0.36 m <sup>3</sup>	12.71 ft <sup>3</sup>
					3RV2042-4YA..	65		
	100		3RV2041-4MA..		65			
			3RV2042-4MA..		65			
50 hp	6SL4113-0CA24-..F0	100	75 hp	3RV2041-4MA..	65			
				3RV2042-4MA..	65			
FSE	60 hp	6SL4113-0CA26-..F0			Use a circuit breaker instead.		no restrictions	no restrictions
	75 hp	6SL4113-0CA27-..F0			Use a circuit breaker instead.			

Converter			Protective device				Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Rated Power @ 480 V	Article no. <sup>1) 2) 3)</sup>	SCCR / kA @ 480Y/277V AC	Metric	Imperial
FSF1	100 hp	6SL4113-0CA30-..F0			Use a circuit breaker instead.			
	125 hp	6SL4113-0CA31-..F0			Use a circuit breaker instead.			
	150 hp	6SL4113-0CA33-..F0			Use a circuit breaker instead.			
FSF2	175 hp	6SL4113-0CA35-..F0			Use a circuit breaker instead.			
	200 hp	6SL4113-0CA36-..F0			Use a circuit breaker instead.			

<sup>1)</sup> .. stands for type of electrical connection and can be replaced by: 10 (screw terminal); 20 (spring type terminal)

<sup>2)</sup> SIEMENS Type E combination motor controllers (NKJH/7)

<sup>3)</sup> 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 3RV2938-1; 3RV204. with 3RT2946-4GA07; not necessary for CSA.

## 2.2.1.4 UL/CSA circuit breaker

UL/CSA circuit breaker for UL open type, 3AC 200...240V

Converter			Protective device				Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)4)</sup>	SCCR / kA @ 240 V	Metric	Imperial
FSA	0.75 hp	6SL4112-OCA05-0.F0	6	3RV	3RV2711-1GD..	65	0.192 m <sup>3</sup>	6.78 ft <sup>3</sup>
			15			3RV2711-4AD..		
				HEAB	3VA4195-6ED34-0AA0	65		
				HEAS	3VA5195-6E#31-0AA0	65		
				MEAB	3VA4195-5ED34-0AA0	65		
				MEAS	3VA5195-5E#31-0AA0	65		
				SEAB	3VA4195-4ED34-0AA0	65		
	SEAS	3VA5195-4E#31-0AA0	65					
	1 hp	6SL4112-OCA06-0.F0	8	3RV	3RV2711-1HD..	65		
			15			3RV2711-4AD..		
				HEAB	3VA4195-6ED34-0AA0	65		
				HEAS	3VA5195-6E#31-0AA0	65		
				MEAB	3VA4195-5ED34-0AA0	65		
				MEAS	3VA5195-5E#31-0AA0	65		
				SEAB	3VA4195-4ED34-0AA0	65		
	SEAS	3VA5195-4E#31-0AA0	65					
	1.5 hp	6SL4112-OCA08-0.F0	10	3RV	3RV2711-1JD..	65		
			15			3RV2711-4AD..		
				HEAB	3VA4195-6ED34-0AA0	65		
				HEAS	3VA5195-6E#31-0AA0	65		
				MEAB	3VA4195-5ED34-0AA0	65		
MEAS				3VA5195-5E#31-0AA0	65			
SEAB				3VA4195-4ED34-0AA0	65			
SEAS	3VA5195-4E#31-0AA0	65						

Converter			Protective device				Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)4)</sup>	SCCR / kA @ 240 V	Metric	Imperial
FSB	2 hp	6SL4112-OCA10-0.F0	12	3RV	3RV2711-1KD..	65	0.24 m <sup>3</sup>	8.48 ft <sup>3</sup>
					3RV2711-4AD..	65		
			15	HEAB	3VA4195-6ED34-0AA0	65		
				HEAS	3VA5195-6E#31-0AA0	65		
				MEAB	3VA4195-5ED34-0AA0	65		
				MEAS	3VA5195-5E#31-0AA0	65		
				SEAB	3VA4195-4ED34-0AA0	65		
	SEAS	3VA5195-4E#31-0AA0	65					
	3 hp	6SL4112-OCA11-0.F0	15	3RV	3RV2711-4AD..	65		
				HEAB	3VA4195-6ED34-0AA0	65		
				HEAS	3VA5195-6E#31-0AA0	65		
				MEAB	3VA4195-5ED34-0AA0	65		
				MEAS	3VA5195-5E#31-0AA0	65		
				SEAB	3VA4195-4ED34-0AA0	65		
SEAS				3VA5195-4E#31-0AA0	65			
FSB	4 hp	6SL4112-OCA12-0.F0	20	HEAB	3VA4120-6ED34-0AA0	65		
				HEAS	3VA5120-6E#31-0AA0	65		
				MEAB	3VA4120-5ED34-0AA0	65		
				MEAS	3VA5120-5E#31-0AA0	65		
				SEAB	3VA4120-4ED34-0AA0	65		
			SEAS	3VA5120-4E#31-0AA0	65			
			35	HEAB	3VA4135-6ED34-0AA0	65		
				HEAS	3VA5135-6E#31-0AA0	65		
				MEAB	3VA4135-5ED34-0AA0	65		
				MEAS	3VA5135-5E#31-0AA0	65		
SEAB	3VA4135-4ED34-0AA0	65						

Converter			Protective device				Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)4)</sup>	SCCR / kA @ 240 V	Metric	Imperial
	5 hp	6SL4112-0CA13-0.F0	35	SEAS	3VA5135-4E#31-0AA0	65		
				HEAB	3VA4135-6ED34-0AA0	65		
				HEAS	3VA5135-6E#31-0AA0	65		
				MEAB	3VA4135-5ED34-0AA0	65		
				MEAS	3VA5135-5E#31-0AA0	65		
				SEAB	3VA4135-4ED34-0AA0	65		
				SEAS	3VA5135-4E#31-0AA0	65		
FSC	7.5 hp	6SL4112-0CA15-0.F0	35	HEAB	3VA4135-6ED34-0AA0	5	0.12 m <sup>3</sup>	4.24 ft <sup>3</sup>
				HEAS	3VA5135-6E#31-0AA0	5		
				MEAB	3VA4135-5ED34-0AA0	5		
				MEAS	3VA5135-5E#31-0AA0	5		
				SEAB	3VA4135-4ED34-0AA0	5		
				SEAS	3VA5135-4E#31-0AA0	5		
			50	HEAB	3VA4150-6ED34-0AA0	5		
				HEAS	3VA5150-6E#31-0AA0	5		
				MEAB	3VA4150-5ED34-0AA0	5		
				MEAS	3VA5150-5E#31-0AA0	5		
				SEAB	3VA4150-4ED34-0AA0	5		
				SEAS	3VA5150-4E#31-0AA0	5		
	10 hp	6SL4112-0CA16-0.F0	50	HEAB	3VA4150-6ED34-0AA0	5		
				HEAS	3VA5150-6E#31-0AA0	5		
				MEAB	3VA4150-5ED34-0AA0	5		
				MEAS	3VA5150-5E#31-0AA0	5		
				SEAB	3VA4150-4ED34-0AA0	5		
				SEAS	3VA5150-4E#31-0AA0	5		

Converter			Protective device				Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)4)</sup>	SCCR / kA @ 240 V	Metric	Imperial
FSD2	15 hp	6SL4112-OCA17-0.F0	70	CFAS	3VA5270-7E#31-0AA0	100	0.36 m <sup>3</sup>	12.71 ft <sup>3</sup>
				HEAB	3VA4170-6ED34-0AA0	100		
				HEAS	3VA5170-6E#31-0AA0	100		
				HFAS	3VA5270-6E#31-0AA0	100		
				MEAB	3VA4170-5ED34-0AA0	85		
				MEAS	3VA5170-5E#31-0AA0	85		
				MFAS	3VA5270-5E#31-0AA0	85		
				SEAB	3VA4170-4ED34-0AA0	65		
				SEAS	3VA5170-4E#31-0AA0	65		
			100	CDAE	3VA6110-7##31-0AA0	100		
				CFAE	3VA6210-7##31-0AA0	100		
				HDAE	3VA6110-6##31-0AA0	100		
				HFAE	3VA6210-6##31-0AA0	100		
				LDAE	3VA6110-8##31-0AA0	100		
				LFAE	3VA6210-8##31-0AA0	100		
				MDAE	3VA6110-5##31-0AA0	100		
				MFAE	3VA6210-5##31-0AA0	100		
				110	CFAS	3VA5211-7E#31-0AA0		
			HEAB		3VA4111-6ED34-0AA0	100		
			HEAS		3VA5111-6E#31-0AA0	100		
			HFAS		3VA5211-6E#31-0AA0	100		
			MEAB		3VA4111-5ED34-0AA0	85		
			MEAS		3VA5111-5E#31-0AA0	85		
			MFAS		3VA5211-5E#31-0AA0	85		
			SEAB		3VA4111-4ED34-0AA0	65		
			SEAS		3VA5111-4E#31-0AA0	65		

Converter			Protective device				Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)4)</sup>	SCCR / kA @ 240 V	Metric	Imperial
	20 hp	6SL4112-OCA18-0.F0	80	CFAS	3VA5280-7E#31-0AA0	100		
				HEAB	3VA4180-6ED34-0AA0	100		
				HEAS	3VA5180-6E#31-0AA0	100		
				HFAS	3VA5280-6E#31-0AA0	100		
				MEAB	3VA4180-5ED34-0AA0	85		
				MEAS	3VA5180-5E#31-0AA0	85		
				MFAS	3VA5280-5E#31-0AA0	85		
				SEAB	3VA4180-4ED34-0AA0	65		
				SEAS	3VA5180-4E#31-0AA0	65		
			100	CDAE	3VA6110-7##31-0AA0	100		
				CFAE	3VA6210-7##31-0AA0	100		
				HDAE	3VA6110-6##31-0AA0	100		
				HFAE	3VA6210-6##31-0AA0	100		
				LDAE	3VA6110-8##31-0AA0	100		
				LFAE	3VA6210-8##31-0AA0	100		
				MDAE	3VA6110-5##31-0AA0	100		
				MFAE	3VA6210-5##31-0AA0	100		
			110	CFAS	3VA5211-7E#31-0AA0	100		
				HEAB	3VA4111-6ED34-0AA0	100		
				HEAS	3VA5111-6E#31-0AA0	100		
				HFAS	3VA5211-6E#31-0AA0	100		
				MEAB	3VA4111-5ED34-0AA0	85		
				MEAS	3VA5111-5E#31-0AA0	85		
				MFAS	3VA5211-5E#31-0AA0	85		
				SEAB	3VA4111-4ED34-0AA0	65		
			SEAS	3VA5111-4E#31-0AA0	65			

Converter			Protective device				Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)4)</sup>	SCCR / kA @ 240 V	Metric	Imperial
	25 hp	6SL4112-OCA20-0.F0	100	CDAE	3VA6110-7##31-0AA0	100	0.384 m <sup>3</sup>	13.56 ft <sup>3</sup>
				CFAE	3VA6210-7##31-0AA0	100		
				HDAE	3VA6110-6##31-0AA0	100		
				HFAE	3VA6210-6##31-0AA0	100		
				LDAE	3VA6110-8##31-0AA0	100		
				LFAE	3VA6210-8##31-0AA0	100		
				MDAE	3VA6110-5##31-0AA0	100		
				MFAE	3VA6210-5##31-0AA0	100		
			110	CFAS	3VA5211-7E#31-0AA0	100		
				HEAB	3VA4111-6ED34-0AA0	100		
				HEAS	3VA5111-6E#31-0AA0	100		
				HFAS	3VA5211-6E#31-0AA0	100		
				MEAB	3VA4111-5ED34-0AA0	85		
				MEAS	3VA5111-5E#31-0AA0	85		
				MFAS	3VA5211-5E#31-0AA0	85		
				SEAB	3VA4111-4ED34-0AA0	65		
				SEAS	3VA5111-4E#31-0AA0	65		
					30 hp	6SL4112-OCA21-0.F0		
HEAS	3VA5112-6E#31-0AA0	100						
MEAB	3VA4112-5ED34-0AA0	85						
MEAS	3VA5112-5E#31-0AA0	85						
SEAB	3VA4112-4ED34-0AA0	65						
SEAS	3VA5112-4E#31-0AA0	65						
150	CDAE	3VA6115-7##31-0AA0	100					
	CFAS	3VA5215-7E#31-0AA0	100					
	HDAE	3VA6115-6##31-0AA0	100					

Converter			Protective device				Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)4)</sup>	SCCR / kA @ 240 V	Metric	Imperial
				HFAS	3VA5215-6E#31-0AA0	100	0.48 m <sup>3</sup>	16.95 ft <sup>3</sup>
				LDAE	3VA6115-8##31-0AA0	100		
				MDAE	3VA6115-5##31-0AA0	100		
				MFAS	3VA5215-5E#31-0AA0	85		
	40 hp	6SL4112-OCA23-0.F0	150	CDAE	3VA6115-7##31-0AA0	100		
				CFAS	3VA5215-7E#31-0AA0	100		
				HDAE	3VA6115-6##31-0AA0	100		
				HFAS	3VA5215-6E#31-0AA0	100		
				LDAE	3VA6115-8##31-0AA0	100		
				MDAE	3VA6115-5##31-0AA0	100		
				MFAS	3VA5215-5E#31-0AA0	85		
				FSF1	50 hp	6SL4112-OCA24-0.F0		
HDAE	3VA6115-6##31-0AA0	100						
LDAE	3VA6115-8##31-0AA0	100						
MDAE	3VA6115-5##31-0AA0	100						
175	CFAS	3VA5217-7E#31-0AA0	100					
	HFAS	3VA5217-6E#31-0AA0	100					
	MFAS	3VA5217-5E#31-0AA0	85					
250	CFAE	3VA6225-7##31-0AA0	100					
	CFAS	3VA5225-7E#31-0AA0	100					
	CJAS	3VA5325-7E#31-0AA0	100					
	HFAE	3VA6225-6##31-0AA0	100					
	HFAS	3VA5225-6E#31-0AA0	100					
	HJAS	3VA5325-6E#31-0AA0	100					
	LFAE	3VA6225-8##31-0AA0	100					
MFAE	3VA6225-5##31-0AA0	100						

Converter			Protective device				Min. enclosure volume		
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)4)</sup>	SCCR / kA @ 240 V	Metric	Imperial	
				MFAS	3VA5225-5E#31-0AA0	85			
				MJAS	3VA5325-5E#31-0AA0	85			
			400	CJAE	3VA6340-7##31-0AA0	100			
				CJAS	3VA5340-7E#31-0AA0	100			
				HJAE	3VA6340-6##31-0AA0	100			
				HJAS	3VA5340-6E#31-0AA0	100			
				LJAE	3VA6340-8##31-0AA0	100			
				MJAE	3VA6340-5##31-0AA0	100			
			175	CFAS	3VA5217-7E#31-0AA0	100			
				HFAS	3VA5217-6E#31-0AA0	100			
				MFAS	3VA5217-5E#31-0AA0	85			
				250	CFAE	3VA6225-7##31-0AA0			100
			CFAS		3VA5225-7E#31-0AA0	100			
			CJAS		3VA5325-7E#31-0AA0	100			
	HFAE	3VA6225-6##31-0AA0	100						
	HFAS	3VA5225-6E#31-0AA0	100						
	HJAS	3VA5325-6E#31-0AA0	100						
	LFAE	3VA6225-8##31-0AA0	100						
	MFAE	3VA6225-5##31-0AA0	100						
	MFAS	3VA5225-5E#31-0AA0	85						
	MJAS	3VA5325-5E#31-0AA0	85						
	400	CJAE	3VA6340-7##31-0AA0	100					
		CJAS	3VA5340-7E#31-0AA0	100					
		HJAE	3VA6340-6##31-0AA0	100					
		HJAS	3VA5340-6E#31-0AA0	100					
	60 hp	6SL4112-0CA26-0.F0		175	CFAS	3VA5217-7E#31-0AA0			100
					HFAS	3VA5217-6E#31-0AA0			100
					MFAS	3VA5217-5E#31-0AA0			85
250				CFAE	3VA6225-7##31-0AA0	100			
				CFAS	3VA5225-7E#31-0AA0	100			
				CJAS	3VA5325-7E#31-0AA0	100			
				HFAE	3VA6225-6##31-0AA0	100			
				HFAS	3VA5225-6E#31-0AA0	100			
				HJAS	3VA5325-6E#31-0AA0	100			
				LFAE	3VA6225-8##31-0AA0	100			
				MFAE	3VA6225-5##31-0AA0	100			
				MFAS	3VA5225-5E#31-0AA0	85			
				MJAS	3VA5325-5E#31-0AA0	85			
400				CJAE	3VA6340-7##31-0AA0	100			
	CJAS	3VA5340-7E#31-0AA0	100						
	HJAE	3VA6340-6##31-0AA0	100						
	HJAS	3VA5340-6E#31-0AA0	100						

Converter			Protective device				Min. enclosure volume		
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)4)</sup>	SCCR / kA @ 240 V	Metric	Imperial	
				LJAE	3VA6340-8##31-0AAO	100			
				MJAE	3VA6340-5##31-0AAO	100			
				MJAS	3VA5340-5E#31-0AAO	85			
	75 hp	6SL4112-0CA27-0.F0		250	CFAE	3VA6225-7##31-0AAO			100
					CFAS	3VA5225-7E#31-0AAO			100
					CJAS	3VA5325-7E#31-0AAO			100
					HFAE	3VA6225-6##31-0AAO			100
					HFAS	3VA5225-6E#31-0AAO			100
					HJAS	3VA5325-6E#31-0AAO			100
					LFAE	3VA6225-8##31-0AAO			100
					MFAE	3VA6225-5##31-0AAO			100
					MFAS	3VA5225-5E#31-0AAO			85
				MJAS	3VA5325-5E#31-0AAO	85			
				400	CJAE	3VA6340-7##31-0AAO			100
					CJAS	3VA5340-7E#31-0AAO			100
					HJAE	3VA6340-6##31-0AAO			100
					HJAS	3VA5340-6E#31-0AAO			100
					LJAE	3VA6340-8##31-0AAO			100
MJAE	3VA6340-5##31-0AAO	100							
MJAS	3VA5340-5E#31-0AAO	85							

<sup>1)</sup> .. stands for type of electrical connection and can be replaced by: 10 (screw terminal); 20 (spring type terminal)

<sup>2)</sup> ## stands for type of release and can be replaced by: HL (line protection LI), HM (line protection LIG), HN (Line and generator protection LSI), JP (Line and generator protection LSI, with display), JQ (Line and generator protection LSI, with display), KP (Line and generator protection LSI, with display, with measurement function), KQ (Line and generator protection LSI, with display, with measurement function)

<sup>3)</sup> SIEMENS circuit breaker (DIVQ/7)

<sup>4)</sup> # stands for type of release and can be replaced by: C (fixed thermal adjustable magnetic trip unit), D (fixed thermal fixed magnetic trip unit) or F (adjustable thermal adjustable magnetic trip unit)

## UL/CSA circuit breaker for UL open type, 3AC 380...415/440...500V

Converter			Protective device					Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)4)</sup>	SCCR / kA @ 480 V	SCCR / kA @ 480Y/277V AC	Metric	Imperial
FSA	1.5 hp	6SL4113-0CA08-..F0	6	3RV	3RV2711-1GD..	-	65	0.192 m <sup>3</sup>	6.78 ft <sup>3</sup>
					3RV2711-4AD..	-	65		
			15	HEAB	3VA4195-6ED34-0AA0	65	65		
				HEAS	3VA5195-6E#31-0AA0	65	65		
				MEAB	3VA4195-5ED34-0AA0	35	35		
				MEAS	3VA5195-5E#31-0AA0	35	35		
				SEAB	3VA4195-4ED34-0AA0	25	25		
				SEAS	3VA5195-4E#31-0AA0	25	25		
	2 hp	6SL4113-0CA10-..F0	8	3RV	3RV2711-1HD..	-	65		
					3RV2711-4AD..	-	65		
			15	HEAB	3VA4195-6ED34-0AA0	65	65		
				HEAS	3VA5195-6E#31-0AA0	65	65		
				MEAB	3VA4195-5ED34-0AA0	35	35		
				MEAS	3VA5195-5E#31-0AA0	35	35		
				SEAB	3VA4195-4ED34-0AA0	25	25		
				SEAS	3VA5195-4E#31-0AA0	25	25		
	3 hp	6SL4113-0CA11-..F0	10	3RV	3RV2711-1JD..	-	65		
					3RV2711-4AD..	-	65		
			15	HEAB	3VA4195-6ED34-0AA0	65	65		
				HEAS	3VA5195-6E#31-0AA0	65	65		
				MEAB	3VA4195-5ED34-0AA0	35	35		
MEAS				3VA5195-5E#31-0AA0	35	35			
SEAB				3VA4195-4ED34-0AA0	25	25			
SEAS				3VA5195-4E#31-0AA0	25	25			

Converter			Protective device					Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)4)</sup>	SCCR / kA @ 480 V	SCCR / kA @ 480Y/277V AC	Metric	Imperial
	4 hp	6SL4113-0CA12-..F0	12	3RV	3RV2711-1KD..	-	65	0.24 m <sup>3</sup>	8.48 ft <sup>3</sup>
					3RV2711-4AD..	-	65		
			15	HEAB	3VA4195-6ED34-0AA0	65	65		
				HEAS	3VA5195-6E#31-0AA0	65	65		
				MEAB	3VA4195-5ED34-0AA0	35	35		
				MEAS	3VA5195-5E#31-0AA0	35	35		
				SEAB	3VA4195-4ED34-0AA0	25	25		
	SEAS	3VA5195-4E#31-0AA0	25	25					
	5 hp	6SL4113-0CA13-..F0	15	3RV	3RV2711-4AD..	-	65		
				HEAB	3VA4195-6ED34-0AA0	65	65		
				HEAS	3VA5195-6E#31-0AA0	65	65		
				MEAB	3VA4195-5ED34-0AA0	35	35		
				MEAS	3VA5195-5E#31-0AA0	35	35		
				SEAS	3VA5195-4E#31-0AA0	25	25		
FSB	7.5 hp	6SL4113-0CA15-..F0	20	HEAB	3VA4120-6ED34-0AA0	65	65		
				HEAS	3VA5120-6E#31-0AA0	65	65		
				MEAB	3VA4120-5ED34-0AA0	35	35		
				MEAS	3VA5120-5E#31-0AA0	35	35		
				SEAB	3VA4120-4ED34-0AA0	25	25		
				SEAS	3VA5120-4E#31-0AA0	25	25		
			35	HEAB	3VA4135-6ED34-0AA0	65	65		
				HEAS	3VA5135-6E#31-0AA0	65	65		
				MEAB	3VA4135-5ED34-0AA0	35	35		
				MEAS	3VA5135-5E#31-0AA0	35	35		

Converter			Protective device					Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)4)</sup>	SCCR / kA @ 480 V	SCCR / kA @ 480Y/277V AC	Metric	Imperial
FSC	10 hp	6SL4113-0CA16-..F0	35	SEAB	3VA4135-4ED34-0AA0	25	25	0.12 m <sup>3</sup>	4.24 ft <sup>3</sup>
				SEAS	3VA5135-4E#31-0AA0	25	25		
				HEAB	3VA4135-6ED34-0AA0	65	65		
				HEAS	3VA5135-6E#31-0AA0	65	65		
				MEAB	3VA4135-5ED34-0AA0	35	35		
				MEAS	3VA5135-5E#31-0AA0	35	35		
				SEAB	3VA4135-4ED34-0AA0	25	25		
				SEAS	3VA5135-4E#31-0AA0	25	25		
	15 hp	6SL4113-0CA17-..F0	35	HEAB	3VA4135-6ED34-0AA0	5	5		
				HEAS	3VA5135-6E#31-0AA0	5	5		
				MEAB	3VA4135-5ED34-0AA0	5	5		
				MEAS	3VA5135-5E#31-0AA0	5	5		
				SEAB	3VA4135-4ED34-0AA0	5	5		
				SEAS	3VA5135-4E#31-0AA0	5	5		
50				HEAB	3VA4150-6ED34-0AA0	5	5		
				HEAS	3VA5150-6E#31-0AA0	5	5		
				MEAB	3VA4150-5ED34-0AA0	5	5		
				MEAS	3VA5150-5E#31-0AA0	5	5		
	SEAB	3VA4150-4ED34-0AA0	5	5					
	SEAS	3VA5150-4E#31-0AA0	5	5					
20 hp	6SL4113-0CA18-..F0	50	HEAB	3VA4150-6ED34-0AA0	5	5			
			HEAS	3VA5150-6E#31-0AA0	5	5			
			MEAB	3VA4150-5ED34-0AA0	5	5			
			MEAS	3VA5150-5E#31-0AA0	5	5			
			SEAB	3VA4150-4ED34-0AA0	5	5			

Converter			Protective device					Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3) 4)</sup>	SCCR / kA @ 480 V	SCCR / kA @ 480Y/277V AC	Metric	Imperial
				SEAS	3VA5150-4E#31-0AA0	5	5		
FSD1	25 hp	6SL4113-0CA20-..F0	60	3RV	3RV2742-5LD..	-	65	0.16 m <sup>3</sup>	5.65 ft <sup>3</sup>
				CFAS	3VA5260-7E#31-0AA0	100	100		
				HEAB	3VA4160-6ED34-0AA0	65	65		
				HEAS	3VA5160-6E#31-0AA0	65	65		
				HFAS	3VA5260-6E#31-0AA0	65	65		
				MEAB	3VA4160-5ED34-0AA0	35	35		
				MEAS	3VA5160-5E#31-0AA0	35	35		
				MFAS	3VA5260-5E#31-0AA0	35	35		
				SEAB	3VA4160-4ED34-0AA0	25	25		
				SEAS	3VA5160-4E#31-0AA0	25	25		
	70	3RV	3RV2742-5QD..	-	65				
		CFAS	3VA5270-7E#31-0AA0	100	100				
		HEAB	3VA4170-6ED34-0AA0	65	65				
		HEAS	3VA5170-6E#31-0AA0	65	65				
		HFAS	3VA5270-6E#31-0AA0	65	65				
		MEAB	3VA4170-5ED34-0AA0	35	35				
		MEAS	3VA5170-5E#31-0AA0	35	35				
		MFAS	3VA5270-5E#31-0AA0	35	35				
		SEAB	3VA4170-4ED34-0AA0	25	25				
		SEAS	3VA5170-4E#31-0AA0	25	25				
30 hp	6SL4113-0CA21-..F0	70	3RV	3RV2742-5QD..	-	65			
			CFAS	3VA5270-7E#31-0AA0	100	100			
			HEAB	3VA4170-6ED34-0AA0	65	65			
			HEAS	3VA5170-6E#31-0AA0	65	65			

Converter			Protective device					Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3) 4)</sup>	SCCR / kA @ 480 V	SCCR / kA @ 480Y/277V AC	Metric	Imperial
				HFAS	3VA5270-6E#31-0AA0	65	65		
				MEAB	3VA4170-5ED34-0AA0	35	35		
				MEAS	3VA5170-5E#31-0AA0	35	35		
				MFAS	3VA5270-5E#31-0AA0	35	35		
				SEAB	3VA4170-4ED34-0AA0	25	25		
				SEAS	3VA5170-4E#31-0AA0	25	25		
FSD2	40 hp	6SL4113-0CA23-..F0	80	CFAS	3VA5280-7E#31-0AA0	100	100	0.36 m <sup>3</sup>	12.71 ft <sup>3</sup>
				HEAB	3VA4180-6ED34-0AA0	65	65		
				HEAS	3VA5180-6E#31-0AA0	65	65		
				HFAS	3VA5280-6E#31-0AA0	65	65		
				MEAB	3VA4180-5ED34-0AA0	35	35		
				MEAS	3VA5180-5E#31-0AA0	35	35		
				MFAS	3VA5280-5E#31-0AA0	35	35		
				SEAB	3VA4180-4ED34-0AA0	25	25		
				SEAS	3VA5180-4E#31-0AA0	25	25		
			100	CDAE	3VA6110-7##31-0AA0	100	100		
				CFAE	3VA6210-7##31-0AA0	100	100		
				EDAE	3VA6110-0##31-0AA0	100	100		
				HDAE	3VA6110-6##31-0AA0	65	65		
				HFAE	3VA6210-6##31-0AA0	65	65		
				LDAE	3VA6110-8##31-0AA0	100	100		
				LFAE	3VA6210-8##31-0AA0	100	100		
				MDAE	3VA6110-5##31-0AA0	35	35		
				MFAE	3VA6210-5##31-0AA0	35	35		
110	CFAS	3VA5211-7E#31-0AA0	100	100					

Converter			Protective device					Min. enclosure volume		
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)4)</sup>	SCCR / kA @ 480 V	SCCR / kA @ 480Y/277V AC	Metric	Imperial	
				HEAB	3VA4111-6ED34-0AA0	65	65			
				HEAS	3VA5111-6E#31-0AA0	65	65			
				HFAS	3VA5211-6E#31-0AA0	65	65			
				MEAB	3VA4111-5ED34-0AA0	35	35			
				MEAS	3VA5111-5E#31-0AA0	35	35			
				MFAS	3VA5211-5E#31-0AA0	35	35			
				SEAB	3VA4111-4ED34-0AA0	25	25			
				SEAS	3VA5111-4E#31-0AA0	25	25			
	50 hp	6SL4113-0CA24-..F0		100	CDAE	3VA6110-7##31-0AA0	100			100
					CFAE	3VA6210-7##31-0AA0	100			100
					EDAE	3VA6110-0##31-0AA0	100			100
					HDAE	3VA6110-6##31-0AA0	65			65
					HFAE	3VA6210-6##31-0AA0	65			65
					LDAE	3VA6110-8##31-0AA0	100			100
					LFAE	3VA6210-8##31-0AA0	100			100
					MDAE	3VA6110-5##31-0AA0	35			35
				MFAE	3VA6210-5##31-0AA0	35	35			
				110	CFAS	3VA5211-7E#31-0AA0	100			100
					HEAB	3VA4111-6ED34-0AA0	65			65
					HEAS	3VA5111-6E#31-0AA0	65			65
					HFAS	3VA5211-6E#31-0AA0	65			65
MEAB	3VA4111-5ED34-0AA0	35	35							
MEAS	3VA5111-5E#31-0AA0	35	35							
MFAS	3VA5211-5E#31-0AA0	35	35							
SEAB	3VA4111-4ED34-0AA0	25	25							

Converter			Protective device					Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)4)</sup>	SCCR / kA @ 480 V	SCCR / kA @ 480Y/277V AC	Metric	Imperial
				SEAS	3VA5111-4E#31-0AA0	25	25		
FSE	60 hp	6SL4113-0CA26-..F0	125	HEAB	3VA4112-6ED34-0AA0	65	65	0.384 m <sup>3</sup>	13.56 ft <sup>3</sup>
				HEAS	3VA5112-6E#31-0AA0	65	65		
				MEAB	3VA4112-5ED34-0AA0	35	35		
				MEAS	3VA5112-5E#31-0AA0	35	35		
				SEAB	3VA4112-4ED34-0AA0	25	25		
				SEAS	3VA5112-4E#31-0AA0	25	25		
	75 hp	6SL4113-0CA27-..F0	150	CDAE	3VA6115-7##31-0AA0	100	100		
				CFAS	3VA5215-7E#31-0AA0	100	100		
				EDAE	3VA6115-0##31-0AA0	100	100		
				HDAE	3VA6115-6##31-0AA0	65	65		
				HFAS	3VA5215-6E#31-0AA0	65	65		
				LDAE	3VA6115-8##31-0AA0	100	100		
				MDAE	3VA6115-5##31-0AA0	35	35		
				MFAS	3VA5215-5E#31-0AA0	35	35		
FSF1	100 hp	6SL4113-0CA30-..F0	150	CDAE	3VA6115-7##31-0AA0	100	100	0.48 m <sup>3</sup>	16.95 ft <sup>3</sup>
				EDAE	3VA6115-0##31-0AA0	100	100		

Converter			Protective device					Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)4)</sup>	SCCR / kA @ 480 V	SCCR / kA @ 480Y/277V AC	Metric	Imperial
				HDAE	3VA6115-6##31-0AA0	65	65		
				LDAE	3VA6115-8##31-0AA0	100	100		
				MDAE	3VA6115-5##31-0AA0	35	35		
			175	CFAS	3VA5217-7E#31-0AA0	100	100		
				HFAS	3VA5217-6E#31-0AA0	65	65		
				MFAS	3VA5217-5E#31-0AA0	35	35		
			250	CFAE	3VA6225-7##31-0AA0	100	100		
				CFAS	3VA5225-7E#31-0AA0	100	100		
				CJAS	3VA5325-7E#31-0AA0	100	100		
				EFAE	3VA6225-0##31-0AA0	100	100		
				HFAE	3VA6225-6##31-0AA0	65	65		
				HFAS	3VA5225-6E#31-0AA0	65	65		
				HJAS	3VA5325-6E#31-0AA0	65	65		
				LFAE	3VA6225-8##31-0AA0	100	100		
				MFAE	3VA6225-5##31-0AA0	35	35		
				MFAS	3VA5225-5E#31-0AA0	35	35		
				MJAS	3VA5325-5E#31-0AA0	35	35		
			400	CJAE	3VA6340-7##31-0AA0	100	100		
				CJAS	3VA5340-7E#31-0AA0	100	100		
				EJAE	3VA6340-0##31-0AA0	100	100		
				HJAE	3VA6340-6##31-0AA0	65	65		
				HJAS	3VA5340-6E#31-0AA0	65	65		
				LJAE	3VA6340-8##31-0AA0	100	100		
				MJAE	3VA6340-5##31-0AA0	35	35		
MJAS	3VA5340-5E#31-0AA0	35	35						

Converter			Protective device					Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)4)</sup>	SCCR / kA @ 480 V	SCCR / kA @ 480Y/277V AC	Metric	Imperial
	125 hp	6SL4113-0CA31-..F0	175	CFAS	3VA5217-7E#31-0AA0	100	100		
				HFAS	3VA5217-6E#31-0AA0	65	65		
				MFAS	3VA5217-5E#31-0AA0	35	35		
			250	CFAE	3VA6225-7##31-0AA0	100	100		
				CFAS	3VA5225-7E#31-0AA0	100	100		
				CJAS	3VA5325-7E#31-0AA0	100	100		
				EFAE	3VA6225-0##31-0AA0	100	100		
				HFAE	3VA6225-6##31-0AA0	65	65		
				HFAS	3VA5225-6E#31-0AA0	65	65		
				HJAS	3VA5325-6E#31-0AA0	65	65		
				LFAE	3VA6225-8##31-0AA0	100	100		
				MFAE	3VA6225-5##31-0AA0	35	35		
			MFAS	3VA5225-5E#31-0AA0	35	35			
			MJAS	3VA5325-5E#31-0AA0	35	35			
	400	CJAE	3VA6340-7##31-0AA0	100	100				
		CJAS	3VA5340-7E#31-0AA0	100	100				
		EJAE	3VA6340-0##31-0AA0	100	100				
		HJAE	3VA6340-6##31-0AA0	65	65				
		HJAS	3VA5340-6E#31-0AA0	65	65				
		LJAE	3VA6340-8##31-0AA0	100	100				
		MJAE	3VA6340-5##31-0AA0	35	35				
MJAS	3VA5340-5E#31-0AA0	35	35						
150 hp	6SL4113-0CA33-..F0	250	CFAE	3VA6225-7##31-0AA0	100	100			
			CFAS	3VA5225-7E#31-0AA0	100	100			
			CJAS	3VA5325-7E#31-0AA0	100	100			

Converter			Protective device					Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)4)</sup>	SCCR / kA @ 480 V	SCCR / kA @ 480Y/277V AC	Metric	Imperial
				EFAE	3VA6225-0##31-0AA0	100	100		
				HFAE	3VA6225-6##31-0AA0	65	65		
				HFAS	3VA5225-6E#31-0AA0	65	65		
				HJAS	3VA5325-6E#31-0AA0	65	65		
				LFAE	3VA6225-8##31-0AA0	100	100		
				MFAE	3VA6225-5##31-0AA0	35	35		
				MFAS	3VA5225-5E#31-0AA0	35	35		
				MJAS	3VA5325-5E#31-0AA0	35	35		
			400	CJAE	3VA6340-7##31-0AA0	100	100		
				CJAS	3VA5340-7E#31-0AA0	100	100		
				EJAE	3VA6340-0##31-0AA0	100	100		
				HJAE	3VA6340-6##31-0AA0	65	65		
				HJAS	3VA5340-6E#31-0AA0	65	65		
				LJAE	3VA6340-8##31-0AA0	100	100		
FSF2	175 hp	6SL4113-0CA35-..F0	300	CJAS	3VA5330-7E#31-0AA0	100	100		
				HJAS	3VA5330-6E#31-0AA0	65	65		
				MJAS	3VA5330-5E#31-0AA0	35	35		
			350	CJAS	3VA5335-7E#31-0AA0	100	100		
				HJAS	3VA5335-6E#31-0AA0	65	65		
				MJAS	3VA5335-5E#31-0AA0	35	35		
			400	CJAE	3VA6340-7##31-0AA0	100	100		
				CLAE	3VA6440-7##31-0AA0	100	100		
				EJAE	3VA6340-0##31-0AA0	100	100		

Converter			Protective device					Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)4)</sup>	SCCR / kA @ 480 V	SCCR / kA @ 480Y/277V AC	Metric	Imperial
				ELAE	3VA6440-0##31-0AA0	100	100		
				HJAE	3VA6340-6##31-0AA0	65	65		
				HLAE	3VA6440-6##31-0AA0	65	65		
				LJAE	3VA6340-8##31-0AA0	100	100		
				LLAE	3VA6440-8##31-0AA0	100	100		
				MJAE	3VA6340-5##31-0AA0	35	35		
				MLAE	3VA6440-5##31-0AA0	35	35		
	200 hp	6SL4113-0CA36-..F0	350	CJAS	3VA5335-7E#31-0AA0	100	100		
				HJAS	3VA5335-6E#31-0AA0	65	65		
				MJAS	3VA5335-5E#31-0AA0	35	35		
			400	CJAE	3VA6340-7##31-0AA0	100	100		
				CJAS	3VA5340-7E#31-0AA0	100	100		
				CLAE	3VA6440-7##31-0AA0	100	100		
				EJAE	3VA6340-0##31-0AA0	100	100		
				ELAE	3VA6440-0##31-0AA0	100	100		
				HJAE	3VA6340-6##31-0AA0	65	65		
				HJAS	3VA5340-6E#31-0AA0	65	65		
				HLAE	3VA6440-6##31-0AA0	65	65		
				LJAE	3VA6340-8##31-0AA0	100	100		
				LLAE	3VA6440-8##31-0AA0	100	100		
MJAE	3VA6340-5##31-0AA0	35	35						
MJAS	3VA5340-5E#31-0AA0	35	35						
MLAE	3VA6440-5##31-0AA0	35	35						

<sup>1)</sup> .. stands for type of electrical connection and can be replaced by: 10 (screw terminal); 20 (spring type terminal)

<sup>2)</sup> ## stands for type of release and can be replaced by: HL (line protection LI), HM (line protection LIG), HN (Line and generator protection LSI), JP (Line and generator protection LSI, with display), JQ (Line and generator protection LSIG, with display), KP

(Line and generator protection LSI, with display, with measurement function), KQ (Line and generator protection LSIG, with display, with measurement function)

<sup>3)</sup> SIEMENS circuit breaker (DIVQ/7)

<sup>4)</sup> # stands for type of release and can be replaced by: C (fixed thermal adjustable magnetic trip unit), D (fixed thermal fixed magnetic trip unit) or F (adjustable thermal adjustable magnetic trip unit)

## 2.2.2 UL type 12

### 2.2.2.1 UL/CSA non-semiconductor fuses

UL/CSA non-semiconductor fuses for UL type 12, 3AC 200...240V with maintenance switch

Converter			Protective device	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A <sup>1)</sup>	SCCR / kA @ 240 V
FSB	1.5 hp	6SL4112-0..08-0.F0	10	5
			15	5
	2 hp	6SL4112-0..10-0.F0	12	5
			15	5
	3 hp	6SL4112-0..11-0.F0	15	5
	4 hp	6SL4112-0..12-0.F0	20	5
			35	5
	5 hp	6SL4112-0..13-0.F0	30	5
			35	5
	FSC	7.5 hp	6SL4112-0..15-0.F0	40
50				5
	10 hp	6SL4112-0..16-0.F0	50	5
	FSD2	15 hp	6SL4112-0..17-0.F0	70
90				5
20 hp		6SL4112-0..18-0.F0	110	5
	25 hp	6SL4112-0..20-0.F0	110	5
			FSE	30 hp
150	10			
	40 hp	6SL4112-0..23-0.F0	150	10
			FSF1	50 hp
300	10			
60 hp	6SL4112-0..26-0.F0	175		10
		200		10

Converter			Protective device	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A <sup>1)</sup>	SCCR / kA @ 240 V
	75 hp	6SL4112-0..27-0.F0	300	10
			250	10
			300	10

<sup>1)</sup> 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

### UL/CSA non-semiconductor fuses for UL type 12, 3AC 200...240V without maintenance switch

Converter			Protective device		
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A <sup>1)</sup>	SCCR / kA @ 240 V	
FSB	1.5 hp	6SL4112-0J.08-0.F0	10	100	
			15	100	
	2 hp	6SL4112-0J.10-0.F0	12	100	
			15	100	
	3 hp	6SL4112-0J.11-0.F0	15	100	
	4 hp	6SL4112-0J.12-0.F0	20	100	
			35	100	
	5 hp	6SL4112-0J.13-0.F0	30	100	
			35	100	
	FSC	7.5 hp	6SL4112-0J.15-0.F0	40	100
				50	100
	10 hp	6SL4112-0J.16-0.F0	50	100	
FSD2	15 hp	6SL4112-0J.17-0.F0	70	100	
	20 hp	6SL4112-0J.18-0.F0	90	100	
			110	100	
25 hp	6SL4112-0J.20-0.F0	110	100		
FSE	30 hp	6SL4112-0J.21-0.F0	125	100	
			150	100	

Converter			Protective device	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A <sup>1)</sup>	SCCR / kA @ 240 V
	40 hp	6SL4112-0J.23-0.F0	150	100
FSF1	50 hp	6SL4112-0J.24-0.F0	150	100
			300	100
	60 hp	6SL4112-0J.26-0.F0	175	100
			200	100
			300	100
	75 hp	6SL4112-0J.27-0.F0	250	100
			300	100

<sup>1)</sup> 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

*UL/CSA non-semiconductor fuses for UL type 12, 3AC 380...415/440...500V with maintenance switch*

Converter			Protective device	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A <sup>1)</sup>	SCCR / kA @ 480 V
FSB	1.5 hp	6SL4113-0..08-..F0	6	5
			15	5
	2 hp	6SL4113-0..10-..F0	8	5
			15	5
	3 hp	6SL4113-0..11-..F0	10	5
			15	5
	4 hp	6SL4113-0..12-..F0	12	5
			15	5
	5 hp	6SL4113-0..13-..F0	15	5
	7.5 hp	6SL4113-0..15-..F0	20	5
			35	5
	10 hp	6SL4113-0..16-..F0	30	5
			35	5

Converter			Protective device	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A <sup>1)</sup>	SCCR / kA @ 480 V
FSC	15 hp	6SL4113-0..17-..F0	40	5
			50	5
FSD1	25 hp	6SL4113-0..20-..F0	60	5
			70	5
	30 hp	6SL4113-0..21-..F0	70	5
FSD2	40 hp	6SL4113-0..23-..F0	90	5
			110	5
	50 hp	6SL4113-0..24-..F0	110	5
FSE	60 hp	6SL4113-0..26-..F0	125	10
			150	10
	75 hp	6SL4113-0..27-..F0	150	10
FSF1	100 hp	6SL4113-0..30-..F0	150	10
			300	10
	125 hp	6SL4113-0..31-..F0	175	10
			200	10
			300	10
	150 hp	6SL4113-0..33-..F0	250	10
300			10	

<sup>1)</sup> 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

*UL/CSA non-semiconductor fuses for UL type 12, 3AC 380...415/440...500V without maintenance switch*

Converter			Protective device	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A <sup>1)</sup>	SCCR / kA @ 480 V
FSB	1.5 hp	6SL4113-0J.08-..F0	6	100
			15	100

Converter			Protective device	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A <sup>1)</sup>	SCCR / kA @ 480 V
	2 hp	6SL4113-0J.10-..F0	8	100
			15	100
	3 hp	6SL4113-0J.11-..F0	10	100
			15	100
	4 hp	6SL4113-0J.12-..F0	12	100
			15	100
	5 hp	6SL4113-0J.13-..F0	15	100
	7.5 hp	6SL4113-0J.15-..F0	20	100
			35	100
	10 hp	6SL4113-0J.16-..F0	30	100
			35	100
	FSC	15 hp	6SL4113-0J.17-..F0	40
50				100
20 hp		6SL4113-0J.18-..F0	50	100
FSD1	25 hp	6SL4113-0J.20-..F0	60	100
			70	100
	30 hp	6SL4113-0J.21-..F0	70	100
FSD2	40 hp	6SL4113-0J.23-..F0	90	100
			110	100
	50 hp	6SL4113-0J.24-..F0	110	100
FSE	60 hp	6SL4113-0J.26-..F0	125	100
			150	100
	75 hp	6SL4113-0J.27-..F0	150	100
FSF1	100 hp	6SL4113-0J.30-..F0	150	100
			300	100
	125 hp	6SL4113-0J.31-..F0	175	100

Converter			Protective device	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A <sup>1)</sup>	SCCR / kA @ 480 V
			200	100
			300	100
	150 hp	6SL4113-0J.33-..F0	250	100
			300	100

<sup>1)</sup> 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

## 2.2.2.2 UL/CSA type E combination motor controllers

UL/CSA type E combination motor controllers for UL type 12, 3AC 200...240V with maintenance switch

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Rated Power @ 240 V	Article no. 1) 2) 3)	SCCR / kA @ 240 V
FSB	1.5 hp	6SL4112-0..08-0.F0	10	3 hp	3RV2011-1JA..	5
					3RV2021-1JA..	5
			14	5 hp	3RV2031-4SA..	5
					3RV2032-4SA..	5
					3RV2011-4AA..	5
					3RV2021-4AA..	5
			17	7.5 hp	3RV2031-4TA..	5
					3RV2032-4TA..	5
	2 hp	6SL4112-0..10-0.F0	12	5 hp	3RV2011-1KA..	5
					3RV2021-1KA..	5
					3RV2031-4SA..	5
					3RV2032-4SA..	5
			16	5 hp	3RV2011-4AA..	5
					3RV2021-4AA..	5
			17	7.5 hp	3RV2031-4TA..	5
					3RV2032-4TA..	5
	3 hp	6SL4112-0..11-0.F0	16	5 hp	3RV2011-4AA..	5
					3RV2021-4AA..	5
			17	7.5 hp	3RV2031-4TA..	5
					3RV2032-4TA..	5
4 hp	6SL4112-0..12-0.F0	20	7.5 hp	3RV2021-4BA..	5	
				3RV2031-4BA..	5	
				3RV2032-4BA..	5	
		32	10 hp	3RV2021-4EA..	5	

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Rated Power @ 240 V	Article no. <sup>1) 2) 3)</sup>	SCCR / kA @ 240 V
	5 hp	6SL4112-0..13-0.F0	25		3RV2031-4EA..	5
					3RV2032-4EA..	5
				7.5 hp	3RV2021-4DA..	5
				10 hp	3RV2031-4DA..	5
			32	3RV2032-4DA..	5	
				3RV2021-4EA..	5	
				3RV2031-4EA..	5	
				3RV2032-4EA..	5	
FSC	7.5 hp	6SL4112-0..15-0.F0	40	15 hp	3RV2031-4UA..	5
				3RV2032-4UA..	5	
			52	20 hp	3RV2031-4WA..	5
				3RV2032-4WA..	5	
	10 hp	6SL4112-0..16-0.F0	52	20 hp	3RV2031-4WA..	5
					3RV2032-4WA..	5
FSD2	15 hp	6SL4112-0..17-0.F0	75	30 hp	3RV2041-4KA..	5
					3RV2042-4KA..	5
			100	40 hp	3RV2041-4MA..	5
					3RV2042-4MA..	5
	20 hp	6SL4112-0..18-0.F0	93	40 hp	3RV2041-4YA..	5
					3RV2042-4YA..	5
			100		3RV2041-4MA..	5
					3RV2042-4MA..	5
	25 hp	6SL4112-0..20-0.F0	100	40 hp	3RV2041-4MA..	5
					3RV2042-4MA..	5

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Rated Power @ 240 V	Article no. 1) 2) 3)	SCCR / kA @ 240 V
FSE	30 hp	6SL4112-0..21-0.F0			Use a circuit breaker instead.	
	40 hp	6SL4112-0..23-0.F0			Use a circuit breaker instead.	

1) .. stands for type of electrical connection and can be replaced by: 10 (screw terminal); 20 (spring type terminal)

2) SIEMENS Type E combination motor controllers (NKJH/7)

3) 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 3RV2938-1; 3RV204. with 3RT2946-4GA07; not necessary for CSA.

*UL/CSA type E combination motor controllers for UL type 12, 3AC 200...240V without maintenance switch*

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Rated Power @ 240 V	Article no. 1) 2) 3)	SCCR / kA @ 240 V
FSB	1.5 hp	6SL4112-0J.08-0.F0	10	3 hp	3RV2011-1JA..	65
					3RV2021-1JA..	65
			14	5 hp	3RV2031-4SA..	65
					3RV2032-4SA..	65
					3RV2011-4AA..	65
					3RV2021-4AA..	65
			17	7.5 hp	3RV2031-4TA..	65
					3RV2032-4TA..	65
	2 hp	6SL4112-0J.10-0.F0	12	5 hp	3RV2011-1KA..	65
					3RV2021-1KA..	65
			14		3RV2031-4SA..	65
					3RV2032-4SA..	65
			16		3RV2011-4AA..	65
					3RV2021-4AA..	65
17	7.5 hp	3RV2031-4TA..	65			

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Rated Power @ 240 V	Article no. <sup>1) 2) 3)</sup>	SCCR / kA @ 240 V
	3 hp	6SL4112-OJ.11-0.F0	16	5 hp	3RV2032-4TA..	65
					3RV2011-4AA..	65
					3RV2021-4AA..	65
			17	7.5 hp	3RV2031-4TA..	65
					3RV2032-4TA..	65
	4 hp	6SL4112-OJ.12-0.F0	20	7.5 hp	3RV2021-4BA..	65
					3RV2031-4BA..	65
					3RV2032-4BA..	65
			32	10 hp	3RV2021-4EA..	50
					3RV2031-4EA..	65
					3RV2032-4EA..	65
	5 hp	6SL4112-OJ.13-0.F0	25	7.5 hp	3RV2021-4DA..	50
					3RV2031-4DA..	65
					3RV2032-4DA..	65
			32	10 hp	3RV2021-4EA..	50
3RV2031-4EA..					65	
3RV2032-4EA..					65	
FSC	7.5 hp	6SL4112-OJ.15-0.F0	40	15 hp	3RV2031-4UA..	65
					3RV2032-4UA..	65
			52	20 hp	3RV2031-4WA..	65
					3RV2032-4WA..	65
	10 hp	6SL4112-OJ.16-0.F0	52	20 hp	3RV2031-4WA..	65
					3RV2032-4WA..	65
FSD2	15 hp	6SL4112-OJ.17-0.F0	75	30 hp	3RV2041-4KA..	65
					3RV2042-4KA..	65
			100	40 hp	3RV2041-4MA..	65

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Rated Power @ 240 V	Article no. 1) 2) 3)	SCCR / kA @ 240 V
	20 hp	6SL4112-0J.18-0.F0	93	40 hp	3RV2042-4MA..	65
					3RV2041-4YA..	65
			3RV2042-4YA..		65	
			3RV2041-4MA..		65	
	25 hp	6SL4112-0J.20-0.F0	100	40 hp	3RV2041-4MA..	65
					3RV2042-4MA..	65
FSE	30 hp	6SL4112-0J.21-0.F0			Use a circuit breaker instead.	
	40 hp	6SL4112-0J.23-0.F0			Use a circuit breaker instead.	

1) .. stands for type of electrical connection and can be replaced by: 10 (screw terminal); 20 (spring type terminal)

2) SIEMENS Type E combination motor controllers (NKJH/7)

3) 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 3RV2938-1; 3RV204. with 3RT2946-4GA07; not necessary for CSA.

### UL/CSA type E combination motor controllers for UL type 12, 3AC 380...415/440...500V with maintenance switch

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Rated Power @ 480 V	Article no. 1) 2) 3)	SCCR / kA @ 480Y/277V AC
FSB	1.5 hp	6SL4113-0..08-..F0	6	5 hp	3RV2011-1GA..	5
					3RV2021-1GA..	5
			14	10 hp	3RV2031-4SA..	5
					3RV2032-4SA..	5
					3RV2011-4AA..	5
			16	10 hp	3RV2021-4AA..	5
					3RV2031-4TA..	5
			17	15 hp	3RV2032-4TA..	5

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Rated Power @ 480 V	Article no. <sup>1) 2) 3)</sup>	SCCR / kA @ 480Y/277V AC
	2 hp	6SL4113-0..10-..F0	8	5 hp	3RV2011-1HA..	5
					3RV2021-1HA..	5
			14	10 hp	3RV2031-4SA..	5
					3RV2032-4SA..	5
					3RV2011-4AA..	5
					3RV2021-4AA..	5
	17	15 hp	3RV2031-4TA..	5		
			3RV2032-4TA..	5		
	3 hp	6SL4113-0..11-..F0	10	7.5 hp	3RV2011-1JA..	5
					3RV2021-1JA..	5
			14	10 hp	3RV2031-4SA..	5
					3RV2032-4SA..	5
					3RV2011-4AA..	5
					3RV2021-4AA..	5
17	15 hp	3RV2031-4TA..	5			
		3RV2032-4TA..	5			
4 hp	6SL4113-0..12-..F0	12	7.5 hp	3RV2011-1KA..	5	
				3RV2021-1KA..	5	
		14	10 hp	3RV2031-4SA..	5	
				3RV2032-4SA..	5	
				3RV2011-4AA..	5	
				3RV2021-4AA..	5	
17	15 hp	3RV2031-4TA..	5			
		3RV2032-4TA..	5			
5 hp	6SL4113-0..13-..F0	16	10 hp	3RV2011-4AA..	5	
				3RV2021-4AA..	5	

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Rated Power @ 480 V	Article no. <sup>1) 2) 3)</sup>	SCCR / kA @ 480Y/277V AC
	7.5 hp	6SL4113-0..15-..F0	17	15 hp	3RV2031-4TA..	5
					3RV2032-4TA..	5
			20	15 hp	3RV2021-4BA..	5
					3RV2031-4BA..	5
					3RV2032-4BA..	5
					3RV2021-4EA..	5
	32	20 hp	3RV2031-4EA..	5		
			3RV2032-4EA..	5		
	10 hp	6SL4113-0..16-..F0	25	20 hp	3RV2021-4DA..	5
					3RV2031-4DA..	5
					3RV2032-4DA..	5
			32	25 hp	3RV2021-4EA..	5
3RV2031-4EA..					5	
3RV2032-4EA..					5	
FSC	15 hp	6SL4113-0..17-..F0	40	30 hp	3RV2031-4UA..	5
					3RV2032-4UA..	5
			52	40 hp	3RV2031-4WA..	5
					3RV2032-4WA..	5
	20 hp	6SL4113-0..18-..F0	52	40 hp	3RV2031-4WA..	5
					3RV2032-4WA..	5
FSD1	25 hp	6SL4113-0..20-..F0	59	50 hp	3RV2031-4XA..	5
					3RV2032-4XA..	5
			63		3RV2041-4JA..	5
					3RV2042-4JA..	5
			73	60 hp	3RV2031-4KA..	5
					3RV2032-4KA..	5

Converter			Protective device				
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Rated Power @ 480 V	Article no. <sup>1) 2) 3)</sup>	SCCR / kA @ 480Y/277V AC	
	30 hp	6SL4113-0..21-..F0	75	60 hp	3RV2041-4KA..	5	
					3RV2042-4KA..	5	
			73		3RV2031-4KA..	5	
					3RV2032-4KA..	5	
			75		3RV2041-4KA..	5	
					3RV2042-4KA..	5	
FSD2	40 hp	6SL4113-0..23-..F0	93	75 hp	3RV2041-4YA..	5	
					3RV2042-4YA..	5	
			100		3RV2041-4MA..	5	
					3RV2042-4MA..	5	
	50 hp	6SL4113-0..24-..F0	100		75 hp	3RV2041-4MA..	5
						3RV2042-4MA..	5
FSE	60 hp	6SL4113-0..26-..F0			Use a circuit breaker instead.		
	75 hp	6SL4113-0..27-..F0			Use a circuit breaker instead.		
FSF1	100 hp	6SL4113-0..30-..F0			Use a circuit breaker instead.		
	125 hp	6SL4113-0..31-..F0			Use a circuit breaker instead.		
	150 hp	6SL4113-0..33-..F0			Use a circuit breaker instead.		

<sup>1)</sup> .. stands for type of electrical connection and can be replaced by: 10 (screw terminal); 20 (spring type terminal)

<sup>2)</sup> SIEMENS Type E combination motor controllers (NKJH/7)

<sup>3)</sup> 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 3RV2938-1; 3RV204. with 3RT2946-4GA07; not necessary for CSA.

UL/CSA type E combination motor controllers for UL type 12, 3AC 380...415/440...500V without maintenance switch

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Rated Power @ 480 V	Article no. <sup>1) 2) 3)</sup>	SCCR / kA @ 480Y/277V AC
FSB	1.5 hp	6SL4113-0J.08-..F0	6	5 hp	3RV2011-1GA..	65
					3RV2021-1GA..	65
			14	10 hp	3RV2031-4SA..	65
					3RV2032-4SA..	65
					3RV2011-4AA..	65
					3RV2021-4AA..	65
			17	15 hp	3RV2031-4TA..	65
					3RV2032-4TA..	65
	2 hp	6SL4113-0J.10-..F0	8	5 hp	3RV2011-1HA..	65
					3RV2021-1HA..	65
			14	10 hp	3RV2031-4SA..	65
					3RV2032-4SA..	65
					3RV2011-4AA..	65
					3RV2021-4AA..	65
			17	15 hp	3RV2031-4TA..	65
					3RV2032-4TA..	65
	3 hp	6SL4113-0J.11-..F0	10	7.5 hp	3RV2011-1JA..	65
					3RV2021-1JA..	65
			14	10 hp	3RV2031-4SA..	65
					3RV2032-4SA..	65
3RV2011-4AA..					65	
3RV2021-4AA..					65	
17			15 hp	3RV2031-4TA..	65	
				3RV2032-4TA..	65	
4 hp	6SL4113-0J.12-..F0	12	7.5 hp	3RV2011-1KA..	65	

Converter			Protective device					
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Rated Power @ 480 V	Article no. <sup>1) 2) 3)</sup>	SCCR / kA @ 480V/277V AC		
			14	10 hp	3RV2021-1KA..	65		
					3RV2031-4SA..	65		
					3RV2032-4SA..	65		
			16		3RV2011-4AA..	65		
					3RV2021-4AA..	65		
					17	15 hp	3RV2031-4TA..	65
			3RV2032-4TA..	65				
			5 hp	6SL4113-0J.13-..F0		16	10 hp	3RV2011-4AA..
					3RV2021-4AA..		65	
	17	15 hp			3RV2031-4TA..	65		
		3RV2032-4TA..	65					
	7.5 hp	6SL4113-0J.15-..F0	20		15 hp	3RV2021-4BA..	65	
						3RV2031-4BA..	65	
				3RV2032-4BA..		65		
			32	20 hp	3RV2021-4EA..	50		
					25 hp	3RV2031-4EA..	65	
				3RV2032-4EA..		65		
			10 hp	6SL4113-0J.16-..F0	25	20 hp	3RV2021-4DA..	50
3RV2031-4DA..							65	
3RV2032-4DA..							65	
32	25 hp	3RV2021-4EA..			50			
		3RV2031-4EA..			65			
	3RV2032-4EA..	65						
FSC	15 hp	6SL4113-0J.17-..F0	40	30 hp	3RV2031-4UA..	65		
				3RV2032-4UA..	65			
			52	40 hp	3RV2031-4WA..	65		

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Rated Power @ 480 V	Article no. <sup>1) 2) 3)</sup>	SCCR / kA @ 480Y/277V AC
	20 hp	6SL4113-0J.18-..F0	52	40 hp	3RV2032-4WA..	65
					3RV2031-4WA..	65
					3RV2032-4WA..	65
FSD1	25 hp	6SL4113-0J.20-..F0	59	50 hp	3RV2031-4XA..	20
					3RV2032-4XA..	30
					3RV2041-4JA..	65
					3RV2042-4JA..	65
	30 hp	6SL4113-0J.21-..F0	73	60 hp	3RV2031-4KA..	20
					3RV2032-4KA..	30
					3RV2041-4KA..	65
					3RV2042-4KA..	65
	30 hp	6SL4113-0J.21-..F0	75	60 hp	3RV2031-4KA..	20
					3RV2032-4KA..	30
3RV2041-4KA..					65	
3RV2042-4KA..					65	
FSD2	40 hp	6SL4113-0J.23-..F0	93	75 hp	3RV2041-4YA..	65
					3RV2042-4YA..	65
					3RV2041-4MA..	65
	50 hp	6SL4113-0J.24-..F0	100	75 hp	3RV2042-4MA..	65
					3RV2041-4MA..	65
					3RV2042-4MA..	65
FSE	60 hp	6SL4113-0J.26-..F0			Use a circuit breaker instead.	
	75 hp	6SL4113-0J.27-..F0			Use a circuit breaker instead.	

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Rated Power @ 480 V	Article no. <sup>1) 2) 3)</sup>	SCCR / kA @ 480Y/277V AC
FSF1	100 hp	6SL4113-0J.30-..F0			Use a circuit breaker instead.	
	125 hp	6SL4113-0J.31-..F0			Use a circuit breaker instead.	
	150 hp	6SL4113-0J.33-..F0			Use a circuit breaker instead.	

<sup>1)</sup> .. stands for type of electrical connection and can be replaced by: 10 (screw terminal); 20 (spring type terminal)

<sup>2)</sup> SIEMENS Type E combination motor controllers (NKJH/7)

<sup>3)</sup> 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 3RV2938-1; 3RV204. with 3RT2946-4GA07; not necessary for CSA.

## 2.2.2.3 UL/CSA circuit breaker

UL/CSA circuit breaker for UL type 12, 3AC 200...240V with maintenance switch

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)</sup>	SCCR / kA @ 240 V
FSB	1.5 hp	6SL4112-0..08-0.F0	10	3RV	3RV2711-1JD..	5
					3RV2711-4AD..	5
			15	HEAB	3VA4195-6ED34-0AA0	5
				HEAS	3VA5195-6E#31-0AA0 <sup>4)</sup>	5
				MEAB	3VA4195-5ED34-0AA0	5
				MEAS	3VA5195-5E#31-0AA0 <sup>4)</sup>	5
				SEAB	3VA4195-4ED34-0AA0	5
				SEAS	3VA5195-4E#31-0AA0 <sup>4)</sup>	5
	2 hp	6SL4112-0..10-0.F0	12	3RV	3RV2711-1KD..	5
					3RV2711-4AD..	5
			15	HEAB	3VA4195-6ED34-0AA0	5
				HEAS	3VA5195-6E#31-0AA0 <sup>4)</sup>	5
				MEAB	3VA4195-5ED34-0AA0	5
				MEAS	3VA5195-5E#31-0AA0 <sup>4)</sup>	5
				SEAB	3VA4195-4ED34-0AA0	5
				SEAS	3VA5195-4E#31-0AA0 <sup>4)</sup>	5
	3 hp	6SL4112-0..11-0.F0	15	3RV	3RV2711-4AD..	5
				HEAB	3VA4195-6ED34-0AA0	5
				HEAS	3VA5195-6E#31-0AA0 <sup>4)</sup>	5
				MEAB	3VA4195-5ED34-0AA0	5

Converter			Protective device				
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)</sup>	SCCR / kA @ 240 V	
				MEAS	3VA5195-5E#31-0AA0 <sup>4)</sup>	5	
				SEAB	3VA4195-4ED34-0AA0	5	
				SEAS	3VA5195-4E#31-0AA0 <sup>4)</sup>	5	
	4 hp	6SL4112-0..12-0.F0		20	HEAB	3VA4120-6ED34-0AA0	5
					HEAS	3VA5120-6E#31-0AA0 <sup>4)</sup>	5
					MEAB	3VA4120-5ED34-0AA0	5
					MEAS	3VA5120-5E#31-0AA0 <sup>4)</sup>	5
					SEAB	3VA4120-4ED34-0AA0	5
					SEAS	3VA5120-4E#31-0AA0 <sup>4)</sup>	5
				35	HEAB	3VA4135-6ED34-0AA0	5
					HEAS	3VA5135-6E#31-0AA0 <sup>4)</sup>	5
					MEAB	3VA4135-5ED34-0AA0	5
					MEAS	3VA5135-5E#31-0AA0 <sup>4)</sup>	5
					SEAB	3VA4135-4ED34-0AA0	5
					SEAS	3VA5135-4E#31-0AA0 <sup>4)</sup>	5
	5 hp	6SL4112-0..13-0.F0		35	HEAB	3VA4135-6ED34-0AA0	5
					HEAS	3VA5135-6E#31-0AA0 <sup>4)</sup>	5
					MEAB	3VA4135-5ED34-0AA0	5
MEAS					3VA5135-5E#31-0AA0 <sup>4)</sup>	5	
SEAB					3VA4135-4ED34-0AA0	5	

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)</sup>	SCCR / kA @ 240 V
				SEAS	3VA5135-4E#31-0AA0 <sup>4)</sup>	5
FSD2	15 hp	6SL4112-0..17-0.F0	70	CFAS	3VA5270-7E#31-0AA0 <sup>4)</sup>	5
				HEAB	3VA4170-6ED34-0AA0	5
				HEAS	3VA5170-6E#31-0AA0 <sup>4)</sup>	5
				HFAS	3VA5270-6E#31-0AA0 <sup>4)</sup>	5
				MEAB	3VA4170-5ED34-0AA0	5
				MEAS	3VA5170-5E#31-0AA0 <sup>4)</sup>	5
				MFAS	3VA5270-5E#31-0AA0 <sup>4)</sup>	5
				SEAB	3VA4170-4ED34-0AA0	5
				SEAS	3VA5170-4E#31-0AA0 <sup>4)</sup>	5
			100	CDAE	3VA6110-7##31-0AA0	5
				CFAE	3VA6210-7##31-0AA0	5
				HDAE	3VA6110-6##31-0AA0	5
				HFAE	3VA6210-6##31-0AA0	5
				LDAE	3VA6110-8##31-0AA0	5
				LFAE	3VA6210-8##31-0AA0	5
				MDAE	3VA6110-5##31-0AA0	5
				MFAE	3VA6210-5##31-0AA0	5
			110	CFAS	3VA5211-7E#31-0AA0 <sup>4)</sup>	5
				HEAB	3VA4111-6ED34-0AA0	5
				HEAS	3VA5111-6E#31-0AA0 <sup>4)</sup>	5

Converter			Protective device				
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)</sup>	SCCR / kA @ 240 V	
				HFAS	3VA5211-6E#31-0AA0 <sup>4)</sup>	5	
				MEAB	3VA4111-5ED34-0AA0	5	
				MEAS	3VA5111-5E#31-0AA0 <sup>4)</sup>	5	
				MFAS	3VA5211-5E#31-0AA0 <sup>4)</sup>	5	
				SEAB	3VA4111-4ED34-0AA0	5	
				SEAS	3VA5111-4E#31-0AA0 <sup>4)</sup>	5	
	20 hp	6SL4112-0..18-0.F0		80	CFAS	3VA5280-7E#31-0AA0 <sup>4)</sup>	5
					HEAB	3VA4180-6ED34-0AA0	5
					HEAS	3VA5180-6E#31-0AA0 <sup>4)</sup>	5
					HFAS	3VA5280-6E#31-0AA0 <sup>4)</sup>	5
					MEAB	3VA4180-5ED34-0AA0	5
					MEAS	3VA5180-5E#31-0AA0 <sup>4)</sup>	5
					MFAS	3VA5280-5E#31-0AA0 <sup>4)</sup>	5
					SEAB	3VA4180-4ED34-0AA0	5
			100	CDAE	3VA6110-7##31-0AA0	5	
				CFAE	3VA6210-7##31-0AA0	5	
				HDAE	3VA6110-6##31-0AA0	5	
				HFAE	3VA6210-6##31-0AA0	5	
				LDAE	3VA6110-8##31-0AA0	5	

Converter			Protective device				
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)</sup>	SCCR / kA @ 240 V	
				LFAE	3VA6210-8##31-0AA0	5	
				MDAE	3VA6110-5##31-0AA0	5	
				MFAE	3VA6210-5##31-0AA0	5	
			110	CFAS	3VA5211-7E#31-0AA0 4)	5	
				HEAB	3VA4111-6ED34-0AA0	5	
				HEAS	3VA5111-6E#31-0AA0 4)	5	
				HFAS	3VA5211-6E#31-0AA0 4)	5	
				MEAB	3VA4111-5ED34-0AA0	5	
				MEAS	3VA5111-5E#31-0AA0 4)	5	
			100	MFAS	3VA5211-5E#31-0AA0 4)	5	
				SEAB	3VA4111-4ED34-0AA0	5	
				SEAS	3VA5111-4E#31-0AA0 4)	5	
			25 hp	6SL4112-0..20-0.F0		100	CDAE
	CFAE	3VA6210-7##31-0AA0					5
	HDAE	3VA6110-6##31-0AA0					5
	HFAE	3VA6210-6##31-0AA0					5
	LDAE	3VA6110-8##31-0AA0					5
	LFAE	3VA6210-8##31-0AA0					5
	MDAE	3VA6110-5##31-0AA0					5
MFAE	3VA6210-5##31-0AA0	5					
110	CFAS	3VA5211-7E#31-0AA0 4)				5	
	HEAB	3VA4111-6ED34-0AA0	5				

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)</sup>	SCCR / kA @ 240 V
				HEAS	3VA5111-6E#31-0AA0 <sup>4)</sup>	5
				HFAS	3VA5211-6E#31-0AA0 <sup>4)</sup>	5
				MEAB	3VA4111-5ED34-0AA0	5
				MEAS	3VA5111-5E#31-0AA0 <sup>4)</sup>	5
				MFAS	3VA5211-5E#31-0AA0 <sup>4)</sup>	5
				SEAB	3VA4111-4ED34-0AA0	5
				SEAS	3VA5111-4E#31-0AA0 <sup>4)</sup>	5
FSE	30 hp	6SL4112-0..21-0.F0	125	HEAB	3VA4112-6ED34-0AA0	10
				HEAS	3VA5112-6E#31-0AA0 <sup>4)</sup>	10
				MEAB	3VA4112-5ED34-0AA0	10
				MEAS	3VA5112-5E#31-0AA0 <sup>4)</sup>	10
				SEAB	3VA4112-4ED34-0AA0	10
				SEAS	3VA5112-4E#31-0AA0 <sup>4)</sup>	10
			150	CDAE	3VA6115-7##31-0AA0	10
				CFAS	3VA5215-7E#31-0AA0 <sup>4)</sup>	10
				HDAE	3VA6115-6##31-0AA0	10
				HFAS	3VA5215-6E#31-0AA0 <sup>4)</sup>	10
				LDAE	3VA6115-8##31-0AA0	10
				MDAE	3VA6115-5##31-0AA0	10
				MFAS	3VA5215-5E#31-0AA0 <sup>4)</sup>	10

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)</sup>	SCCR / kA @ 240 V
	40 hp	6SL4112-0..23-0.F0	150	CDAE	3VA6115-7##31-0AA0	10
				CFAS	3VA5215-7E#31-0AA0 <sup>4)</sup>	10
				HDAE	3VA6115-6##31-0AA0	10
				HFAS	3VA5215-6E#31-0AA0 <sup>4)</sup>	10
				LDAE	3VA6115-8##31-0AA0	10
				MDAE	3VA6115-5##31-0AA0	10
				MFAS	3VA5215-5E#31-0AA0 <sup>4)</sup>	10
FSF1	50 hp	6SL4112-0..24-0.F0	150	CDAE	3VA6115-7##31-0AA0	10
				HDAE	3VA6115-6##31-0AA0	10
				LDAE	3VA6115-8##31-0AA0	10
				MDAE	3VA6115-5##31-0AA0	10
			175	CFAS	3VA5217-7E#31-0AA0	10
				HFAS	3VA5217-6E#31-0AA0	10
				MFAS	3VA5217-5E#31-0AA0	10
			250	CFAE	3VA6225-7##31-0AA0	10
				CFAS	3VA5225-7E#31-0AA0	10
				CJAS	3VA5325-7E#31-0AA0	10
				HFAE	3VA6225-6##31-0AA0	10
				HFAS	3VA5225-6E#31-0AA0	10
				HJAS	3VA5325-6E#31-0AA0	10
				LFAE	3VA6225-8##31-0AA0	10
MFAE	3VA6225-5##31-0AA0	10				
MFAS	3VA5225-5E#31-0AA0	10				
MJAS	3VA5325-5E#31-0AA0	10				

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)</sup>	SCCR / kA @ 240 V
60 hp			400	CJAE	3VA6340-7##31-0AA0	10
				CJAS	3VA5340-7E#31-0AA0	10
				HJAE	3VA6340-6##31-0AA0	10
				HJAS	3VA5340-6E#31-0AA0	10
				LJAE	3VA6340-8##31-0AA0	10
				MJAE	3VA6340-5##31-0AA0	10
				MJAS	3VA5340-5E#31-0AA0	10
	6SL4112-0..26-0.F0	175	CFAS	3VA5217-7E#31-0AA0	10	
			HFAS	3VA5217-6E#31-0AA0	10	
			MFAS	3VA5217-5E#31-0AA0	10	
		250	CFAE	3VA6225-7##31-0AA0	10	
			CFAS	3VA5225-7E#31-0AA0	10	
			CJAS	3VA5325-7E#31-0AA0	10	
			HFAE	3VA6225-6##31-0AA0	10	
			HFAS	3VA5225-6E#31-0AA0	10	
			HJAS	3VA5325-6E#31-0AA0	10	
			LFAE	3VA6225-8##31-0AA0	10	
			MFAE	3VA6225-5##31-0AA0	10	
			MFAS	3VA5225-5E#31-0AA0	10	
			MJAS	3VA5325-5E#31-0AA0	10	
		400	CJAE	3VA6340-7##31-0AA0	10	
			CJAS	3VA5340-7E#31-0AA0	10	
			HJAE	3VA6340-6##31-0AA0	10	
			HJAS	3VA5340-6E#31-0AA0	10	
			LJAE	3VA6340-8##31-0AA0	10	
			MJAE	3VA6340-5##31-0AA0	10	

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)</sup>	SCCR / kA @ 240 V
75 hp	6SL4112-0..27-0.F0			MJAS	3VA5340-5E#31-0AA0	10
			250	CFAE	3VA6225-7##31-0AA0	10
				CFAS	3VA5225-7E#31-0AA0	10
				CJAS	3VA5325-7E#31-0AA0	10
				HFAE	3VA6225-6##31-0AA0	10
				HFAS	3VA5225-6E#31-0AA0	10
				HJAS	3VA5325-6E#31-0AA0	10
				LFAE	3VA6225-8##31-0AA0	10
				MFAE	3VA6225-5##31-0AA0	10
				MFAS	3VA5225-5E#31-0AA0	10
				MJAS	3VA5325-5E#31-0AA0	10
			400	CJAE	3VA6340-7##31-0AA0	10
				CJAS	3VA5340-7E#31-0AA0	10
				HJAE	3VA6340-6##31-0AA0	10
				HJAS	3VA5340-6E#31-0AA0	10
				LJAE	3VA6340-8##31-0AA0	10
				MJAE	3VA6340-5##31-0AA0	10
				MJAS	3VA5340-5E#31-0AA0	10

<sup>1)</sup> .. stands for type of electrical connection and can be replaced by: 10 (screw terminal); 20 (spring type terminal)

<sup>2)</sup> ## stands for type of release and can be replaced by: HL (line protection LI), HM (line protection LIG), HN (Line and generator protection LSI), JP (Line and generator protection LSI, with display), JQ (Line and generator protection LSI, with display), KP (Line and generator protection LSI, with display, with measurement function), KQ (Line and generator protection LSI, with display, with measurement function)

<sup>3)</sup> SIEMENS circuit breaker (DIVQ/7)

<sup>4)</sup> # stands for type of release and can be replaced by: C (fixed thermal adjustable magnetic trip unit), D (fixed thermal fixed magnetic trip unit) or F (adjustable thermal adjustable magnetic trip unit)

## UL/CSA circuit breaker for UL type 12, 3AC 200...240V without maintenance switch

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)</sup>	SCCR / kA @ 240 V
FSB	1.5 hp	6SL4112-0J.08-0.F0	10	3RV	3RV2711-1JD..	65
					3RV2711-4AD..	65
			15	HEAB	3VA4195-6ED34-0AA0	65
				HEAS	3VA5195-6E#31-0AA0 <sup>4)</sup>	65
				MEAB	3VA4195-5ED34-0AA0	65
				MEAS	3VA5195-5E#31-0AA0 <sup>4)</sup>	65
				SEAB	3VA4195-4ED34-0AA0	65
				SEAS	3VA5195-4E#31-0AA0 <sup>4)</sup>	65
	2 hp	6SL4112-0J.10-0.F0	12	3RV	3RV2711-1KD..	65
					3RV2711-4AD..	65
			15	HEAB	3VA4195-6ED34-0AA0	65
				HEAS	3VA5195-6E#31-0AA0 <sup>4)</sup>	65
				MEAB	3VA4195-5ED34-0AA0	65
				MEAS	3VA5195-5E#31-0AA0 <sup>4)</sup>	65
				SEAB	3VA4195-4ED34-0AA0	65
				SEAS	3VA5195-4E#31-0AA0 <sup>4)</sup>	65
	3 hp	6SL4112-0J.11-0.F0	15	3RV	3RV2711-4AD..	65
				HEAB	3VA4195-6ED34-0AA0	65
				HEAS	3VA5195-6E#31-0AA0 <sup>4)</sup>	65
				MEAB	3VA4195-5ED34-0AA0	65
				MEAS	3VA5195-5E#31-0AA0 <sup>4)</sup>	65

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)</sup>	SCCR / kA @ 240 V
				SEAB	3VA4195-4ED34-0AA0	65
				SEAS	3VA5195-4E#31-0AA0 4)	65
	4 hp	6SL4112-0J.12-0.F0	20	HEAB	3VA4120-6ED34-0AA0	65
				HEAS	3VA5120-6E#31-0AA0 4)	65
				MEAB	3VA4120-5ED34-0AA0	65
				MEAS	3VA5120-5E#31-0AA0 4)	65
				SEAB	3VA4120-4ED34-0AA0	65
				SEAS	3VA5120-4E#31-0AA0 4)	65
			35	HEAB	3VA4135-6ED34-0AA0	65
				HEAS	3VA5135-6E#31-0AA0 4)	65
				MEAB	3VA4135-5ED34-0AA0	65
				MEAS	3VA5135-5E#31-0AA0 4)	65
				SEAB	3VA4135-4ED34-0AA0	65
				SEAS	3VA5135-4E#31-0AA0 4)	65
	5 hp	6SL4112-0J.13-0.F0	35	HEAB	3VA4135-6ED34-0AA0	65
				HEAS	3VA5135-6E#31-0AA0 4)	65
				MEAB	3VA4135-5ED34-0AA0	65
				MEAS	3VA5135-5E#31-0AA0 4)	65
SEAB				3VA4135-4ED34-0AA0	65	
SEAS				3VA5135-4E#31-0AA0 4)	65	

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)</sup>	SCCR / kA @ 240 V
FSD2	15 hp	6SL4112-0J.17-0.F0	70	CFAS	3VA5270-7E#31-0AA0 <sup>4)</sup>	100
				HEAB	3VA4170-6ED34-0AA0	100
				HEAS	3VA5170-6E#31-0AA0 <sup>4)</sup>	100
				HFAS	3VA5270-6E#31-0AA0 <sup>4)</sup>	100
				MEAB	3VA4170-5ED34-0AA0	85
				MEAS	3VA5170-5E#31-0AA0 <sup>4)</sup>	85
				MFAS	3VA5270-5E#31-0AA0 <sup>4)</sup>	85
				SEAB	3VA4170-4ED34-0AA0	65
			SEAS	3VA5170-4E#31-0AA0 <sup>4)</sup>	65	
			100	CDAE	3VA6110-7##31-0AA0	100
				CFAE	3VA6210-7##31-0AA0	100
				HDAE	3VA6110-6##31-0AA0	100
				HFAE	3VA6210-6##31-0AA0	100
				LDAE	3VA6110-8##31-0AA0	100
				LFAE	3VA6210-8##31-0AA0	100
				MDAE	3VA6110-5##31-0AA0	100
				MFAE	3VA6210-5##31-0AA0	100
			110	CFAS	3VA5211-7E#31-0AA0 <sup>4)</sup>	100
				HEAB	3VA4111-6ED34-0AA0	100
				HEAS	3VA5111-6E#31-0AA0 <sup>4)</sup>	100
HFAS	3VA5211-6E#31-0AA0 <sup>4)</sup>	100				

Converter			Protective device				
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)</sup>	SCCR / kA @ 240 V	
				MEAB	3VA4111-5ED34-0AA0	85	
				MEAS	3VA5111-5E#31-0AA0 4)	85	
				MFAS	3VA5211-5E#31-0AA0 4)	85	
				SEAB	3VA4111-4ED34-0AA0	65	
				SEAS	3VA5111-4E#31-0AA0 4)	65	
	20 hp	6SL4112-0J.18-0.F0		80	CFAS	3VA5280-7E#31-0AA0 4)	100
					HEAB	3VA4180-6ED34-0AA0	100
					HEAS	3VA5180-6E#31-0AA0 4)	100
					HFAS	3VA5280-6E#31-0AA0 4)	100
					MEAB	3VA4180-5ED34-0AA0	85
					MEAS	3VA5180-5E#31-0AA0 4)	85
					MFAS	3VA5280-5E#31-0AA0 4)	85
					SEAB	3VA4180-4ED34-0AA0	65
					SEAS	3VA5180-4E#31-0AA0 4)	65
				100	CDAE	3VA6110-7##31-0AA0	100
					CFAE	3VA6210-7##31-0AA0	100
					HDAE	3VA6110-6##31-0AA0	100
					HFAE	3VA6210-6##31-0AA0	100
					LDAE	3VA6110-8##31-0AA0	100
LFAE	3VA6210-8##31-0AA0	100					
MDAE	3VA6110-5##31-0AA0	100					

Converter			Protective device				
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)</sup>	SCCR / kA @ 240 V	
			110	MFAE	3VA6210-5##31-0AA0	100	
				CFAS	3VA5211-7E#31-0AA0 4)	100	
				HEAB	3VA4111-6ED34-0AA0	100	
				HEAS	3VA5111-6E#31-0AA0 4)	100	
				HFAS	3VA5211-6E#31-0AA0 4)	100	
				MEAB	3VA4111-5ED34-0AA0	85	
				MEAS	3VA5111-5E#31-0AA0 4)	85	
				MFAS	3VA5211-5E#31-0AA0 4)	85	
				SEAB	3VA4111-4ED34-0AA0	65	
				SEAS	3VA5111-4E#31-0AA0 4)	65	
	25 hp	6SL4112-0J.20-0.FO		100	CDAE	3VA6110-7##31-0AA0	100
					CFAE	3VA6210-7##31-0AA0	100
					HDAE	3VA6110-6##31-0AA0	100
					HFAE	3VA6210-6##31-0AA0	100
					LDAE	3VA6110-8##31-0AA0	100
					LFAE	3VA6210-8##31-0AA0	100
					MDAE	3VA6110-5##31-0AA0	100
					MFAE	3VA6210-5##31-0AA0	100
				110	CFAS	3VA5211-7E#31-0AA0 4)	100
					HEAB	3VA4111-6ED34-0AA0	100
HEAS	3VA5111-6E#31-0AA0 4)	100					

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)</sup>	SCCR / kA @ 240 V
FSE				HFAS	3VA5211-6E#31-0AA0 4)	100
				MEAB	3VA4111-5ED34-0AA0	85
				MEAS	3VA5111-5E#31-0AA0 4)	85
				MFAS	3VA5211-5E#31-0AA0 4)	85
				SEAB	3VA4111-4ED34-0AA0	65
				SEAS	3VA5111-4E#31-0AA0 4)	65
	30 hp	6SL4112-0J.21-0.F0	125	HEAB	3VA4112-6ED34-0AA0	100
				HEAS	3VA5112-6E#31-0AA0 4)	100
				MEAB	3VA4112-5ED34-0AA0	85
				MEAS	3VA5112-5E#31-0AA0 4)	85
				SEAB	3VA4112-4ED34-0AA0	65
				SEAS	3VA5112-4E#31-0AA0 4)	65
150			CDAE	3VA6115-7##31-0AA0	100	
			CFAS	3VA5215-7E#31-0AA0 4)	100	
40 hp	6SL4112-0J.23-0.F0	150	HDAE	3VA6115-6##31-0AA0	100	
			HFAS	3VA5215-6E#31-0AA0 4)	100	
			LDAE	3VA6115-8##31-0AA0	100	
			MDAE	3VA6115-5##31-0AA0	100	
			MFAS	3VA5215-5E#31-0AA0 4)	85	
			CDAE	3VA6115-7##31-0AA0	100	

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)</sup>	SCCR / kA @ 240 V
				CFAS	3VA5215-7E#31-0AA0 <sup>4)</sup>	100
				HDAE	3VA6115-6##31-0AA0	100
				HFAS	3VA5215-6E#31-0AA0 <sup>4)</sup>	100
				LDAE	3VA6115-8##31-0AA0	100
				MDAE	3VA6115-5##31-0AA0	100
				MFAS	3VA5215-5E#31-0AA0 <sup>4)</sup>	85
FSF1	50 hp	6SL4112-0J.24-0.F0	150	CDAE	3VA6115-7##31-0AA0	100
				HDAE	3VA6115-6##31-0AA0	100
				LDAE	3VA6115-8##31-0AA0	100
				MDAE	3VA6115-5##31-0AA0	100
			175	CFAS	3VA5217-7E#31-0AA0	100
				HFAS	3VA5217-6E#31-0AA0	100
				MFAS	3VA5217-5E#31-0AA0	85
			250	CFAE	3VA6225-7##31-0AA0	100
				CFAS	3VA5225-7E#31-0AA0	100
				CJAS	3VA5325-7E#31-0AA0	100
				HFAE	3VA6225-6##31-0AA0	100
				HFAS	3VA5225-6E#31-0AA0	100
				HJAS	3VA5325-6E#31-0AA0	100
				LFAE	3VA6225-8##31-0AA0	100
				MFAE	3VA6225-5##31-0AA0	100
				MFAS	3VA5225-5E#31-0AA0	85
			MJAS	3VA5325-5E#31-0AA0	85	
			400	CJAE	3VA6340-7##31-0AA0	100

Converter			Protective device					
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)</sup>	SCCR / kA @ 240 V		
60 hp				CJAS	3VA5340-7E#31-0AA0	100		
				HJAE	3VA6340-6##31-0AA0	100		
				HJAS	3VA5340-6E#31-0AA0	100		
				LJAE	3VA6340-8##31-0AA0	100		
				MJAE	3VA6340-5##31-0AA0	100		
				MJAS	3VA5340-5E#31-0AA0	85		
	60 hp	6SL4112-0J.26-0.F0	175	CFAS	3VA5217-7E#31-0AA0	100		
					HFAS	3VA5217-6E#31-0AA0	100	
					MFAS	3VA5217-5E#31-0AA0	85	
				250	CFAE	3VA6225-7##31-0AA0	100	
						CFAS	3VA5225-7E#31-0AA0	100
						CJAS	3VA5325-7E#31-0AA0	100
					HFAE	3VA6225-6##31-0AA0	100	
						HFAS	3VA5225-6E#31-0AA0	100
						HJAS	3VA5325-6E#31-0AA0	100
			LFAE			3VA6225-8##31-0AA0	100	
			MFAE			3VA6225-5##31-0AA0	100	
			MFAS		3VA5225-5E#31-0AA0	85		
				MJAS	3VA5325-5E#31-0AA0	85		
				400	CJAE	3VA6340-7##31-0AA0	100	
			CJAS			3VA5340-7E#31-0AA0	100	
			HJAE		3VA6340-6##31-0AA0	100		
					HJAS	3VA5340-6E#31-0AA0	100	
			LJAE		3VA6340-8##31-0AA0	100		
			MJAE		3VA6340-5##31-0AA0	100		
			MJAS		3VA5340-5E#31-0AA0	85		

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)</sup>	SCCR / kA @ 240 V
75 hp	6SL4112-0J.27-0.F0	250	CFAE	3VA6225-7##31-0AA0	100	
			CFAS	3VA5225-7E#31-0AA0	100	
			CJAS	3VA5325-7E#31-0AA0	100	
			HFAE	3VA6225-6##31-0AA0	100	
			HFAS	3VA5225-6E#31-0AA0	100	
			HJAS	3VA5325-6E#31-0AA0	100	
			LFAE	3VA6225-8##31-0AA0	100	
			MFAE	3VA6225-5##31-0AA0	100	
			MFAS	3VA5225-5E#31-0AA0	85	
			MJAS	3VA5325-5E#31-0AA0	85	
		400	CJAE	3VA6340-7##31-0AA0	100	
			CJAS	3VA5340-7E#31-0AA0	100	
			HJAE	3VA6340-6##31-0AA0	100	
			HJAS	3VA5340-6E#31-0AA0	100	
			LJAE	3VA6340-8##31-0AA0	100	
			MJAE	3VA6340-5##31-0AA0	100	
			MJAS	3VA5340-5E#31-0AA0	85	

<sup>1)</sup> .. stands for type of electrical connection and can be replaced by: 10 (screw terminal); 20 (spring type terminal)

<sup>2)</sup> ## stands for type of release and can be replaced by: HL (line protection LI), HM (line protection LIG), HN (Line and generator protection LSI), JP (Line and generator protection LSI, with display), JQ (Line and generator protection LSI, with display), KP (Line and generator protection LSI, with display, with measurement function), KQ (Line and generator protection LSI, with display, with measurement function)

<sup>3)</sup> SIEMENS circuit breaker (DIVQ/7)

<sup>4)</sup> # stands for type of release and can be replaced by: C (fixed thermal adjustable magnetic trip unit), D (fixed thermal fixed magnetic trip unit) or F (adjustable thermal adjustable magnetic trip unit)

## UL/CSA circuit breaker for UL type 12, 3AC 380...415/440...500V with maintenance switch

Converter			Protective device				
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)4)</sup>	SCCR / kA @ 480 V	SCCR / kA @ 480Y/277V AC
FSB	1.5 hp	6SL4113-0..08-..FO	6	3RV	3RV2711-1GD..	-	5
			15			3RV2711-4AD..	-
				HEAB	3VA4195-6ED34-0AA0	5	5
				HEAS	3VA5195-6E#31-0AA0	5	5
				MEAB	3VA4195-5ED34-0AA0	5	5
				MEAS	3VA5195-5E#31-0AA0	5	5
				SEAB	3VA4195-4ED34-0AA0	5	5
			SEAS	3VA5195-4E#31-0AA0	5	5	
	2 hp	6SL4113-0..10-..FO	8	3RV	3RV2711-1HD..	-	5
			15			3RV2711-4AD..	-
				HEAB	3VA4195-6ED34-0AA0	5	5
				HEAS	3VA5195-6E#31-0AA0	5	5
				MEAB	3VA4195-5ED34-0AA0	5	5
				MEAS	3VA5195-5E#31-0AA0	5	5
				SEAB	3VA4195-4ED34-0AA0	5	5
			SEAS	3VA5195-4E#31-0AA0	5	5	
	3 hp	6SL4113-0..11-..FO	10	3RV	3RV2711-1JD..	-	5
			15			3RV2711-4AD..	-
				HEAB	3VA4195-6ED34-0AA0	5	5
			HEAS	3VA5195-6E#31-0AA0	5	5	

Converter			Protective device					
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)4)</sup>	SCCR / kA @ 480 V	SCCR / kA @ 480Y/277V AC	
				MEAB	3VA4195-5ED34-0AA0	5	5	
				MEAS	3VA5195-5E#31-0AA0	5	5	
				SEAB	3VA4195-4ED34-0AA0	5	5	
				SEAS	3VA5195-4E#31-0AA0	5	5	
	4 hp	6SL4113-0..12-..F0		12	3RV	3RV2711-1KD..	-	5
				15		3RV2711-4AD..	-	5
					HEAB	3VA4195-6ED34-0AA0	5	5
					HEAS	3VA5195-6E#31-0AA0	5	5
					MEAB	3VA4195-5ED34-0AA0	5	5
					MEAS	3VA5195-5E#31-0AA0	5	5
					SEAB	3VA4195-4ED34-0AA0	5	5
				SEAS	3VA5195-4E#31-0AA0	5	5	
	5 hp	6SL4113-0..13-..F0		15	3RV	3RV2711-4AD..	-	5
					HEAB	3VA4195-6ED34-0AA0	5	5
					HEAS	3VA5195-6E#31-0AA0	5	5
					MEAB	3VA4195-5ED34-0AA0	5	5
					MEAS	3VA5195-5E#31-0AA0	5	5
					SEAS	3VA5195-4E#31-0AA0	5	5
	7.5 hp	6SL4113-0..15-..F0		20	HEAB	3VA4120-6ED34-0AA0	5	5
					HEAS	3VA5120-6E#31-0AA0	5	5

Converter			Protective device					
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)4)</sup>	SCCR / kA @ 480 V	SCCR / kA @ 480Y/277V AC	
				MEAB	3VA4120-5ED34-0AA0	5	5	
				MEAS	3VA5120-5E#31-0AA0	5	5	
				SEAB	3VA4120-4ED34-0AA0	5	5	
				SEAS	3VA5120-4E#31-0AA0	5	5	
				HEAB	3VA4135-6ED34-0AA0	5	5	
				HEAS	3VA5135-6E#31-0AA0	5	5	
				MEAB	3VA4135-5ED34-0AA0	5	5	
				MEAS	3VA5135-5E#31-0AA0	5	5	
			35	SEAB	3VA4135-4ED34-0AA0	5	5	
				SEAS	3VA5135-4E#31-0AA0	5	5	
				35	HEAB	3VA4135-6ED34-0AA0	5	5
					HEAS	3VA5135-6E#31-0AA0	5	5
					MEAB	3VA4135-5ED34-0AA0	5	5
					MEAS	3VA5135-5E#31-0AA0	5	5
SEAB	3VA4135-4ED34-0AA0	5	5					
SEAS	3VA5135-4E#31-0AA0	5	5					
10 hp	6SL4113-0..16-..F0	35	HEAB	3VA4135-6ED34-0AA0	5	5		
			HEAS	3VA5135-6E#31-0AA0	5	5		
			MEAB	3VA4135-5ED34-0AA0	5	5		
			MEAS	3VA5135-5E#31-0AA0	5	5		
			SEAB	3VA4135-4ED34-0AA0	5	5		
			SEAS	3VA5135-4E#31-0AA0	5	5		
FSD1	25 hp	6SL4113-0..20-..F0	60	3RV	3RV2742-5LD..	-	5	
				CFAS	3VA5260-7E#31-0AA0	5	5	
				HEAB	3VA4160-6ED34-0AA0	5	5	
				HEAS	3VA5160-6E#31-0AA0	5	5	
				HFAS	3VA5260-6E#31-0AA0	5	5	

Converter			Protective device				
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)4)</sup>	SCCR / kA @ 480 V	SCCR / kA @ 480Y/277V AC
			70	MEAB	3VA4160-5ED34-0AA0	5	5
				MEAS	3VA5160-5E#31-0AA0	5	5
				MFAS	3VA5260-5E#31-0AA0	5	5
				SEAB	3VA4160-4ED34-0AA0	5	5
				SEAS	3VA5160-4E#31-0AA0	5	5
			70	3RV	3RV2742-5QD..	-	5
				CFAS	3VA5270-7E#31-0AA0	5	5
				HEAB	3VA4170-6ED34-0AA0	5	5
				HEAS	3VA5170-6E#31-0AA0	5	5
				HFAS	3VA5270-6E#31-0AA0	5	5
	30 hp	6SL4113-0..21-..F0	70	3RV	3RV2742-5QD..	-	5
				CFAS	3VA5270-7E#31-0AA0	5	5
				HEAB	3VA4170-6ED34-0AA0	5	5
				HEAS	3VA5170-6E#31-0AA0	5	5
				HFAS	3VA5270-6E#31-0AA0	5	5
				MEAB	3VA4170-5ED34-0AA0	5	5
				MEAS	3VA5170-5E#31-0AA0	5	5

Converter			Protective device				
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)4)</sup>	SCCR / kA @ 480 V	SCCR / kA @ 480Y/277V AC
				MFAS	3VA5270-5E#31-0AA0	5	5
				SEAB	3VA4170-4ED34-0AA0	5	5
				SEAS	3VA5170-4E#31-0AA0	5	5
FSD2	40 hp	6SL4113-0..23-..F0	80	CFAS	3VA5280-7E#31-0AA0	5	5
				HEAB	3VA4180-6ED34-0AA0	5	5
				HEAS	3VA5180-6E#31-0AA0	5	5
				HFAS	3VA5280-6E#31-0AA0	5	5
				MEAB	3VA4180-5ED34-0AA0	5	5
				MEAS	3VA5180-5E#31-0AA0	5	5
				MFAS	3VA5280-5E#31-0AA0	5	5
				SEAB	3VA4180-4ED34-0AA0	5	5
				SEAS	3VA5180-4E#31-0AA0	5	5
			100	CDAE	3VA6110-7##31-0AA0	5	5
				CFAE	3VA6210-7##31-0AA0	5	5
				EDAE	3VA6110-0##31-0AA0	5	5
				HDAE	3VA6110-6##31-0AA0	5	5
				HFAE	3VA6210-6##31-0AA0	5	5
				LDAE	3VA6110-8##31-0AA0	5	5
LFAE	3VA6210-8##31-0AA0	5	5				

Converter			Protective device				
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)4)</sup>	SCCR / kA @ 480 V	SCCR / kA @ 480Y/277V AC
				MDAE	3VA6110-5##31-0AA0	5	5
				MFAE	3VA6210-5##31-0AA0	5	5
			110	CFAS	3VA5211-7E#31-0AA0	5	5
				HEAB	3VA4111-6ED34-0AA0	5	5
				HEAS	3VA5111-6E#31-0AA0	5	5
				HFAS	3VA5211-6E#31-0AA0	5	5
				MEAB	3VA4111-5ED34-0AA0	5	5
				MEAS	3VA5111-5E#31-0AA0	5	5
				MFAS	3VA5211-5E#31-0AA0	5	5
				SEAB	3VA4111-4ED34-0AA0	5	5
	SEAS	3VA5111-4E#31-0AA0	5	5			
	50 hp	6SL4113-0..24-..F0	100	CDAE	3VA6110-7##31-0AA0	5	5
				CFAE	3VA6210-7##31-0AA0	5	5
				EDAE	3VA6110-0##31-0AA0	5	5
				HDAE	3VA6110-6##31-0AA0	5	5
				HFAE	3VA6210-6##31-0AA0	5	5
				LDAE	3VA6110-8##31-0AA0	5	5
				LFAE	3VA6210-8##31-0AA0	5	5

Converter			Protective device							
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)4)</sup>	SCCR / kA @ 480 V	SCCR / kA @ 480Y/277V AC			
				MDAE	3VA6110-5##31-0AA0	5	5			
				MFAE	3VA6210-5##31-0AA0	5	5			
			110	CFAS	3VA5211-7E#31-0AA0	5	5			
				HEAB	3VA4111-6ED34-0AA0	5	5			
				HEAS	3VA5111-6E#31-0AA0	5	5			
				HFAS	3VA5211-6E#31-0AA0	5	5			
				MEAB	3VA4111-5ED34-0AA0	5	5			
				MEAS	3VA5111-5E#31-0AA0	5	5			
				MFAS	3VA5211-5E#31-0AA0	5	5			
				SEAB	3VA4111-4ED34-0AA0	5	5			
			SEAS	3VA5111-4E#31-0AA0	5	5				
			FSE	60 hp	6SL4113-0..26-..F0	125	HEAB	3VA4112-6ED34-0AA0	10	10
							HEAS	3VA5112-6E#31-0AA0	10	10
							MEAB	3VA4112-5ED34-0AA0	10	10
MEAS	3VA5112-5E#31-0AA0	10					10			
SEAB	3VA4112-4ED34-0AA0	10					10			
SEAS	3VA5112-4E#31-0AA0	10					10			
150	CDAE	3VA6115-7##31-0AA0				10	10			
	CFAS	3VA5215-7E#31-0AA0				10	10			
	EDAE	3VA6115-0##31-0AA0				10	10			

Converter			Protective device				
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)4)</sup>	SCCR / kA @ 480 V	SCCR / kA @ 480Y/277V AC
				HDAE	3VA6115-6##31-0AA0	10	10
				HFAS	3VA5215-6E#31-0AA0	10	10
				LDAE	3VA6115-8##31-0AA0	10	10
				MDAE	3VA6115-5##31-0AA0	10	10
				MFAS	3VA5215-5E#31-0AA0	10	10
	75 hp	6SL4113-0..27-..F0	150	CDAE	3VA6115-7##31-0AA0	10	10
				CFAS	3VA5215-7E#31-0AA0	10	10
				EDAE	3VA6115-0##31-0AA0	10	10
				HDAE	3VA6115-6##31-0AA0	10	10
				HFAS	3VA5215-6E#31-0AA0	10	10
				LDAE	3VA6115-8##31-0AA0	10	10
				MDAE	3VA6115-5##31-0AA0	10	10
				MFAS	3VA5215-5E#31-0AA0	10	10
				FSF1	100 hp	6SL4113-0..30-..F0	150
EDAE	3VA6115-0##31-0AA0	10	10				
HDAE	3VA6115-6##31-0AA0	10	10				
LDAE	3VA6115-8##31-0AA0	10	10				
MDAE	3VA6115-5##31-0AA0	10	10				

Converter			Protective device				
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)4)</sup>	SCCR / kA @ 480 V	SCCR / kA @ 480Y/277V AC
			175	CFAS	3VA5217-7E#31-0AA0	10	10
				HFAS	3VA5217-6E#31-0AA0	10	10
				MFAS	3VA5217-5E#31-0AA0	10	10
			250	CFAE	3VA6225-7##31-0AA0	10	10
				CFAS	3VA5225-7E#31-0AA0	10	10
				CJAS	3VA5325-7E#31-0AA0	10	10
				EFAE	3VA6225-0##31-0AA0	10	10
				HFAE	3VA6225-6##31-0AA0	10	10
				HFAS	3VA5225-6E#31-0AA0	10	10
				HJAS	3VA5325-6E#31-0AA0	10	10
				LFAE	3VA6225-8##31-0AA0	10	10
				MFAE	3VA6225-5##31-0AA0	10	10
				MFAS	3VA5225-5E#31-0AA0	10	10
				MJAS	3VA5325-5E#31-0AA0	10	10
			400	CJAE	3VA6340-7##31-0AA0	10	10
				CJAS	3VA5340-7E#31-0AA0	10	10
				EJAE	3VA6340-0##31-0AA0	10	10
				HJAE	3VA6340-6##31-0AA0	10	10
				HJAS	3VA5340-6E#31-0AA0	10	10
				LJAE	3VA6340-8##31-0AA0	10	10

Converter			Protective device					
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)4)</sup>	SCCR / kA @ 480 V	SCCR / kA @ 480Y/277V AC	
				MJAE	3VA6340-5##31-0AA0	10	10	
				MJAS	3VA5340-5E#31-0AA0	10	10	
	125 hp	6SL4113-0..31-..F0	175	CFAS	3VA5217-7E#31-0AA0	10	10	
				HFAS	3VA5217-6E#31-0AA0	10	10	
				MFAS	3VA5217-5E#31-0AA0	10	10	
				250	CFAE	3VA6225-7##31-0AA0	10	10
					CFAS	3VA5225-7E#31-0AA0	10	10
					CJAS	3VA5325-7E#31-0AA0	10	10
			EFAE		3VA6225-0##31-0AA0	10	10	
			HFAE		3VA6225-6##31-0AA0	10	10	
			HFAS		3VA5225-6E#31-0AA0	10	10	
			400	HJAS	3VA5325-6E#31-0AA0	10	10	
				LFAE	3VA6225-8##31-0AA0	10	10	
				MFAE	3VA6225-5##31-0AA0	10	10	
				MFAS	3VA5225-5E#31-0AA0	10	10	
				MJAS	3VA5325-5E#31-0AA0	10	10	
				CJAE	3VA6340-7##31-0AA0	10	10	
			400	CJAS	3VA5340-7E#31-0AA0	10	10	
				EJAE	3VA6340-0##31-0AA0	10	10	
				HJAE	3VA6340-6##31-0AA0	10	10	
HJAS	3VA5340-6E#31-0AA0	10		10				

Converter			Protective device					
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)4)</sup>	SCCR / kA @ 480 V	SCCR / kA @ 480Y/277V AC	
				LJAE	3VA6340-8##31-0AA0	10	10	
				MJAE	3VA6340-5##31-0AA0	10	10	
				MJAS	3VA5340-5E#31-0AA0	10	10	
	150 hp	6SL4113-0..33-..F0		250	CFAE	3VA6225-7##31-0AA0	10	10
					CFAS	3VA5225-7E#31-0AA0	10	10
					CJAS	3VA5325-7E#31-0AA0	10	10
					EFAE	3VA6225-0##31-0AA0	10	10
					HFAE	3VA6225-6##31-0AA0	10	10
					HFAS	3VA5225-6E#31-0AA0	10	10
					HJAS	3VA5325-6E#31-0AA0	10	10
					LFAE	3VA6225-8##31-0AA0	10	10
					MFAE	3VA6225-5##31-0AA0	10	10
				MFAS	3VA5225-5E#31-0AA0	10	10	
				MJAS	3VA5325-5E#31-0AA0	10	10	
				400	CJAE	3VA6340-7##31-0AA0	10	10
					CJAS	3VA5340-7E#31-0AA0	10	10
					EJAE	3VA6340-0##31-0AA0	10	10
					HJAE	3VA6340-6##31-0AA0	10	10
					HJAS	3VA5340-6E#31-0AA0	10	10
					LJAE	3VA6340-8##31-0AA0	10	10

Converter			Protective device				
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)4)</sup>	SCCR / kA @ 480 V	SCCR / kA @ 480Y/277V AC
				MJAE	3VA6340-5##31-0AA0	10	10
				MJAS	3VA5340-5E#31-0AA0	10	10

<sup>1)</sup> .. stands for type of electrical connection and can be replaced by: 10 (screw terminal); 20 (spring type terminal)

<sup>2)</sup> ## stands for type of release and can be replaced by: HL (line protection LI), HM (line protection LIG), HN (Line and generator protection LSI), JP (Line and generator protection LSI, with display), JQ (Line and generator protection LSI, with display), KP (Line and generator protection LSI, with display, with measurement function), KQ (Line and generator protection LSI, with display, with measurement function)

<sup>3)</sup> SIEMENS circuit breaker (DIVQ/7)

<sup>4)</sup> # stands for type of release and can be replaced by: C (fixed thermal adjustable magnetic trip unit), D (fixed thermal fixed magnetic trip unit) or F (adjustable thermal adjustable magnetic trip unit)

#### UL/CSA circuit breaker for UL type 12, 3AC 380...415/440...500V without maintenance switch

Converter			Protective device				
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)</sup>	SCCR / kA @ 480 V	SCCR / kA @ 480Y/277V AC
FSB	1.5 hp	6SL4113-0J.08-..FO	6	3RV	3RV2711-1GD..	-	65
					3RV2711-4AD..	-	65
			15	HEAB	3VA4195-6ED34-0AA0	65	65
				HEAS	3VA5195-6E#31-0AA0 <sup>4)</sup>	65	65
				MEAB	3VA4195-5ED34-0AA0	35	35
				MEAS	3VA5195-5E#31-0AA0 <sup>4)</sup>	35	35
				SEAB	3VA4195-4ED34-0AA0	25	25
				SEAS	3VA5195-4E#31-0AA0 <sup>4)</sup>	25	25
	2 hp	6SL4113-0J.10-..FO	8	3RV	3RV2711-1HD..	-	65
					3RV2711-4AD..	-	65
15			HEAB	3VA4195-6ED34-0AA0	65	65	

Converter			Protective device					
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)</sup>	SCCR / kA @ 480 V	SCCR / kA @ 480Y/277V AC	
				HEAS	3VA5195-6E#31-0AA0 <sup>4)</sup>	65	65	
				MEAB	3VA4195-5ED34-0AA0	35	35	
				MEAS	3VA5195-5E#31-0AA0 <sup>4)</sup>	35	35	
				SEAB	3VA4195-4ED34-0AA0	25	25	
				SEAS	3VA5195-4E#31-0AA0 <sup>4)</sup>	25	25	
	3 hp	6SL4113-0J.11-..FO		10	3RV	3RV2711-1JD..	-	65
				15		3RV2711-4AD..	-	65
					HEAB	3VA4195-6ED34-0AA0	65	65
					HEAS	3VA5195-6E#31-0AA0 <sup>4)</sup>	65	65
					MEAB	3VA4195-5ED34-0AA0	35	35
					MEAS	3VA5195-5E#31-0AA0 <sup>4)</sup>	35	35
					SEAB	3VA4195-4ED34-0AA0	25	25
				SEAS	3VA5195-4E#31-0AA0 <sup>4)</sup>	25	25	
	4 hp	6SL4113-0J.12-..FO		12	3RV	3RV2711-1KD..	-	65
				15		3RV2711-4AD..	-	65
					HEAB	3VA4195-6ED34-0AA0	65	65
					HEAS	3VA5195-6E#31-0AA0 <sup>4)</sup>	65	65
					MEAB	3VA4195-5ED34-0AA0	35	35
					MEAS	3VA5195-5E#31-0AA0 <sup>4)</sup>	35	35
					SEAB	3VA4195-4ED34-0AA0	25	25
				SEAS	3VA5195-4E#31-0AA0 <sup>4)</sup>	25	25	

Converter			Protective device				
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)</sup>	SCCR / kA @ 480 V	SCCR / kA @ 480Y/277V AC
	5 hp	6SL4113-0J.13-..F0	15	3RV	3RV2711-4AD..	-	65
				HEAB	3VA4195-6ED34-0AA0	65	65
				HEAS	3VA5195-6E#31-0AA0 <sup>4)</sup>	65	65
				MEAB	3VA4195-5ED34-0AA0	35	35
				MEAS	3VA5195-5E#31-0AA0 <sup>4)</sup>	35	35
				SEAB	3VA4195-4ED34-0AA0	25	25
				SEAS	3VA5195-4E#31-0AA0 <sup>4)</sup>	25	25
	7.5 hp	6SL4113-0J.15-..F0	20	HEAB	3VA4120-6ED34-0AA0	65	65
				HEAS	3VA5120-6E#31-0AA0 <sup>4)</sup>	65	65
				MEAB	3VA4120-5ED34-0AA0	35	35
				MEAS	3VA5120-5E#31-0AA0 <sup>4)</sup>	35	35
				SEAB	3VA4120-4ED34-0AA0	25	25
				SEAS	3VA5120-4E#31-0AA0 <sup>4)</sup>	25	25
			35	HEAB	3VA4135-6ED34-0AA0	65	65
				HEAS	3VA5135-6E#31-0AA0 <sup>4)</sup>	65	65
				MEAB	3VA4135-5ED34-0AA0	35	35
				MEAS	3VA5135-5E#31-0AA0 <sup>4)</sup>	35	35
				SEAB	3VA4135-4ED34-0AA0	25	25
				SEAS	3VA5135-4E#31-0AA0 <sup>4)</sup>	25	25
10 hp		35	HEAB	3VA4135-6ED34-0AA0	65	65	

Converter			Protective device				
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)</sup>	SCCR / kA @ 480 V	SCCR / kA @ 480Y/277V AC
		6SL4113-0J.16-..F0		HEAS	3VA5135-6E#31-0AA0 <sup>4)</sup>	65	65
				MEAB	3VA4135-5ED34-0AA0	35	35
				MEAS	3VA5135-5E#31-0AA0 <sup>4)</sup>	35	35
				SEAB	3VA4135-4ED34-0AA0	25	25
				SEAS	3VA5135-4E#31-0AA0 <sup>4)</sup>	25	25
FSD1	25 hp	6SL4113-0J.20-..F0	60	3RV	3RV2742-5LD..	-	65
				CFAS	3VA5260-7E#31-0AA0 <sup>4)</sup>	100	100
				HEAB	3VA4160-6ED34-0AA0	65	65
				HEAS	3VA5160-6E#31-0AA0 <sup>4)</sup>	65	65
				HFAS	3VA5260-6E#31-0AA0 <sup>4)</sup>	65	65
				MEAB	3VA4160-5ED34-0AA0	35	35
				MEAS	3VA5160-5E#31-0AA0 <sup>4)</sup>	35	35
				MFAS	3VA5260-5E#31-0AA0 <sup>4)</sup>	35	35
				SEAB	3VA4160-4ED34-0AA0	25	25
			SEAS	3VA5160-4E#31-0AA0 <sup>4)</sup>	25	25	
			70	3RV	3RV2742-5QD..	-	65
				CFAS	3VA5270-7E#31-0AA0 <sup>4)</sup>	100	100
				HEAB	3VA4170-6ED34-0AA0	65	65
HEAS	3VA5170-6E#31-0AA0 <sup>4)</sup>	65		65			

Converter			Protective device								
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)</sup>	SCCR / kA @ 480 V	SCCR / kA @ 480Y/277V AC				
				HFAS	3VA5270-6E#31-0AA0 <sup>4)</sup>	65	65				
				MEAB	3VA4170-5ED34-0AA0	35	35				
				MEAS	3VA5170-5E#31-0AA0 <sup>4)</sup>	35	35				
				MFAS	3VA5270-5E#31-0AA0 <sup>4)</sup>	35	35				
				SEAB	3VA4170-4ED34-0AA0	25	25				
				SEAS	3VA5170-4E#31-0AA0 <sup>4)</sup>	25	25				
	30 hp	6SL4113-0J.21-..F0	70	3RV	3RV2742-5QD..	-	65				
				CFAS	3VA5270-7E#31-0AA0 <sup>4)</sup>	100	100				
				HEAB	3VA4170-6ED34-0AA0	65	65				
				HEAS	3VA5170-6E#31-0AA0 <sup>4)</sup>	65	65				
				HFAS	3VA5270-6E#31-0AA0 <sup>4)</sup>	65	65				
				MEAB	3VA4170-5ED34-0AA0	35	35				
				MEAS	3VA5170-5E#31-0AA0 <sup>4)</sup>	35	35				
				MFAS	3VA5270-5E#31-0AA0 <sup>4)</sup>	35	35				
				SEAB	3VA4170-4ED34-0AA0	25	25				
				SEAS	3VA5170-4E#31-0AA0 <sup>4)</sup>	25	25				
				FSD2	40 hp	6SL4113-0J.23-..F0	80	CFAS	3VA5280-7E#31-0AA0 <sup>4)</sup>	100	100
								HEAB	3VA4180-6ED34-0AA0	65	65
HEAS	3VA5180-6E#31-0AA0 <sup>4)</sup>	65	65								

Converter			Protective device				
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)</sup>	SCCR / kA @ 480 V	SCCR / kA @ 480Y/277V AC
				HFAS	3VA5280-6E#31-0AA0 <sup>4)</sup>	65	65
				MEAB	3VA4180-5ED34-0AA0	35	35
				MEAS	3VA5180-5E#31-0AA0 <sup>4)</sup>	35	35
				MFAS	3VA5280-5E#31-0AA0 <sup>4)</sup>	35	35
				SEAB	3VA4180-4ED34-0AA0	25	25
				SEAS	3VA5180-4E#31-0AA0 <sup>4)</sup>	25	25
			100	CDAE	3VA6110-7##31-0AA0	100	100
				CFAE	3VA6210-7##31-0AA0	100	100
				EDAE	3VA6110-0##31-0AA0	100	100
				HDAE	3VA6110-6##31-0AA0	65	65
				HFAE	3VA6210-6##31-0AA0	65	65
				LDAE	3VA6110-8##31-0AA0	100	100
				LFAE	3VA6210-8##31-0AA0	100	100
				MDAE	3VA6110-5##31-0AA0	35	35
			MFAE	3VA6210-5##31-0AA0	35	35	
			110	CFAS	3VA5211-7E#31-0AA0 <sup>4)</sup>	100	100
				HEAB	3VA4111-6ED34-0AA0	65	65
				HEAS	3VA5111-6E#31-0AA0 <sup>4)</sup>	65	65
				HFAS	3VA5211-6E#31-0AA0 <sup>4)</sup>	65	65
				MEAB	3VA4111-5ED34-0AA0	35	35
				MEAS	3VA5111-5E#31-0AA0 <sup>4)</sup>	35	35

Converter			Protective device					
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)</sup>	SCCR / kA @ 480 V	SCCR / kA @ 480Y/277V AC	
				MFAS	3VA5211-5E#31-0AA0 <sup>4)</sup>	35	35	
				SEAB	3VA4111-4ED34-0AA0	25	25	
				SEAS	3VA5111-4E#31-0AA0 <sup>4)</sup>	25	25	
	50 hp	6SL4113-0J.24-..FO		100	CDAE	3VA6110-7##31-0AA0	100	100
					CFAE	3VA6210-7##31-0AA0	100	100
					EDAE	3VA6110-0##31-0AA0	100	100
					HDAE	3VA6110-6##31-0AA0	65	65
					HFAE	3VA6210-6##31-0AA0	65	65
					LDAE	3VA6110-8##31-0AA0	100	100
					LFAE	3VA6210-8##31-0AA0	100	100
					MDAE	3VA6110-5##31-0AA0	35	35
					MFAE	3VA6210-5##31-0AA0	35	35
				110	CFAS	3VA5211-7E#31-0AA0 <sup>4)</sup>	100	100
					HEAB	3VA4111-6ED34-0AA0	65	65
					HEAS	3VA5111-6E#31-0AA0 <sup>4)</sup>	65	65
					HFAS	3VA5211-6E#31-0AA0 <sup>4)</sup>	65	65
					MEAB	3VA4111-5ED34-0AA0	35	35
					MEAS	3VA5111-5E#31-0AA0 <sup>4)</sup>	35	35
					MFAS	3VA5211-5E#31-0AA0 <sup>4)</sup>	35	35
					SEAS	3VA5111-4E#31-0AA0 <sup>4)</sup>	25	25

Converter			Protective device				
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)</sup>	SCCR / kA @ 480 V	SCCR / kA @ 480Y/277V AC
FSE	60 hp	6SL4113-0J.26-..F0	125	HEAB	3VA4112-6ED34-0AA0	65	65
				HEAS	3VA5112-6E#31-0AA0 <sup>4)</sup>	65	65
				MEAB	3VA4112-5ED34-0AA0	35	35
				MEAS	3VA5112-5E#31-0AA0 <sup>4)</sup>	35	35
				SEAB	3VA4112-4ED34-0AA0	25	25
				SEAS	3VA5112-4E#31-0AA0 <sup>4)</sup>	25	25
	75 hp	6SL4113-0J.27-..F0	150	CDAE	3VA6115-7##31-0AA0	100	100
				CFAS	3VA5215-7E#31-0AA0 <sup>4)</sup>	100	100
				EDAE	3VA6115-0##31-0AA0	100	100
				HDAE	3VA6115-6##31-0AA0	65	65
				HFAS	3VA5215-6E#31-0AA0 <sup>4)</sup>	65	65
				LDAE	3VA6115-8##31-0AA0	100	100
				MDAE	3VA6115-5##31-0AA0	35	35
				MFAS	3VA5215-5E#31-0AA0 <sup>4)</sup>	35	35
75 hp	6SL4113-0J.27-..F0	150	CDAE	3VA6115-7##31-0AA0	100	100	
			CFAS	3VA5215-7E#31-0AA0 <sup>4)</sup>	100	100	
			EDAE	3VA6115-0##31-0AA0	100	100	
			HDAE	3VA6115-6##31-0AA0	65	65	
			HFAS	3VA5215-6E#31-0AA0 <sup>4)</sup>	65	65	
			LDAE	3VA6115-8##31-0AA0	100	100	
				MDAE	3VA6115-5##31-0AA0	35	35

Converter			Protective device				
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)</sup>	SCCR / kA @ 480 V	SCCR / kA @ 480Y/277V AC
				MFAS	3VA5215-5E#31-0AA0 <sup>4)</sup>	35	35
FSF1	100 hp	6SL4113-0J.30- ..FO	150	CDAE	3VA6115-7##31-0AA0	100	100
				EDAE	3VA6115-0##31-0AA0	100	100
				HDAE	3VA6115-6##31-0AA0	65	65
				LDAE	3VA6115-8##31-0AA0	100	100
				MDAE	3VA6115-5##31-0AA0	35	35
			175	CFAS	3VA5217-7E#31-0AA0	100	100
				HFAS	3VA5217-6E#31-0AA0	65	65
				MFAS	3VA5217-5E#31-0AA0	35	35
			250	CFAE	3VA6225-7##31-0AA0	100	100
				CFAS	3VA5225-7E#31-0AA0	100	100
				CJAS	3VA5325-7E#31-0AA0	100	100
				EFAE	3VA6225-0##31-0AA0	100	100
				HFAE	3VA6225-6##31-0AA0	65	65
				HFAS	3VA5225-6E#31-0AA0	65	65
				HJAS	3VA5325-6E#31-0AA0	65	65
				LFAE	3VA6225-8##31-0AA0	100	100
				MFAE	3VA6225-5##31-0AA0	35	35
				MFAS	3VA5225-5E#31-0AA0	35	35
			400	MJAS	3VA5325-5E#31-0AA0	35	35
				CJAE	3VA6340-7##31-0AA0	100	100
CJAS	3VA5340-7E#31-0AA0	100		100			
EJAE	3VA6340-0##31-0AA0	100		100			
HJAE	3VA6340-6##31-0AA0	65		65			
HJAS	3VA5340-6E#31-0AA0	65	65				

Converter			Protective device					
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)</sup>	SCCR / kA @ 480 V	SCCR / kA @ 480Y/277V AC	
				LJAE	3VA6340-8##31-0AA0	100	100	
				MJAE	3VA6340-5##31-0AA0	35	35	
				MJAS	3VA5340-5E#31-0AA0	35	35	
	125 hp	6SL4113-0J.31-..FO		175	CFAS	3VA5217-7E#31-0AA0	100	100
					HFAS	3VA5217-6E#31-0AA0	65	65
					MFAS	3VA5217-5E#31-0AA0	35	35
				250	CFAE	3VA6225-7##31-0AA0	100	100
					CFAS	3VA5225-7E#31-0AA0	100	100
					CJAS	3VA5325-7E#31-0AA0	100	100
					EFAE	3VA6225-0##31-0AA0	100	100
					HFAE	3VA6225-6##31-0AA0	65	65
					HFAS	3VA5225-6E#31-0AA0	65	65
					HJAS	3VA5325-6E#31-0AA0	65	65
					LFAE	3VA6225-8##31-0AA0	100	100
					MFAE	3VA6225-5##31-0AA0	35	35
				MFAS	3VA5225-5E#31-0AA0	35	35	
				MJAS	3VA5325-5E#31-0AA0	35	35	
				400	CJAE	3VA6340-7##31-0AA0	100	100
					CJAS	3VA5340-7E#31-0AA0	100	100
					EJAE	3VA6340-0##31-0AA0	100	100
					HJAE	3VA6340-6##31-0AA0	65	65
HJAS	3VA5340-6E#31-0AA0	65	65					
LJAE	3VA6340-8##31-0AA0	100	100					
MJAE	3VA6340-5##31-0AA0	35	35					
MJAS	3VA5340-5E#31-0AA0	35	35					
150 hp			250	CFAE	3VA6225-7##31-0AA0	100	100	

Converter			Protective device				
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)</sup>	SCCR / kA @ 480 V	SCCR / kA @ 480Y/277V AC
		6SL4113-0J.33-..F0		CFAS	3VA5225-7E#31-0AA0	100	100
				CJAS	3VA5325-7E#31-0AA0	100	100
				EFAE	3VA6225-0##31-0AA0	100	100
				HFAE	3VA6225-6##31-0AA0	65	65
				HFAS	3VA5225-6E#31-0AA0	65	65
				HJAS	3VA5325-6E#31-0AA0	65	65
				LFAE	3VA6225-8##31-0AA0	100	100
				MFAE	3VA6225-5##31-0AA0	35	35
				MFAS	3VA5225-5E#31-0AA0	35	35
			MJAS	3VA5325-5E#31-0AA0	35	35	
			400	CJAE	3VA6340-7##31-0AA0	100	100
				CJAS	3VA5340-7E#31-0AA0	100	100
				EJAE	3VA6340-0##31-0AA0	100	100
				HJAE	3VA6340-6##31-0AA0	65	65
				HJAS	3VA5340-6E#31-0AA0	65	65
				LJAE	3VA6340-8##31-0AA0	100	100
				MJAE	3VA6340-5##31-0AA0	35	35
				MJAS	3VA5340-5E#31-0AA0	35	35

<sup>1)</sup> .. stands for type of electrical connection and can be replaced by: 10 (screw terminal); 20 (spring type terminal)

<sup>2)</sup> ## stands for type of release and can be replaced by: HL (line protection LI), HM (line protection LIG), HN (Line and generator protection LSI), JP (Line and generator protection LSI, with display), JQ (Line and generator protection LSI, with display), KP (Line and generator protection LSI, with display, with measurement function), KQ (Line and generator protection LSI, with display, with measurement function)

<sup>3)</sup> SIEMENS circuit breaker (DIVQ/7)

<sup>4)</sup> # stands for type of release and can be replaced by: C (fixed thermal adjustable magnetic trip unit), D (fixed thermal fixed magnetic trip unit) or F (adjustable thermal adjustable magnetic trip unit)

## 2.3 SINAMICS G220 Clean Power

### 2.3.1 UL open type

#### 2.3.1.1 UL/CSA non-semiconductor fuses

UL/CSA non-semiconductor fuses for UL open type, 3AC 380...415/440...500V

Converter			Protective device		Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A <sup>1)</sup>	SCCR / kA @ 480 V	Metric	Imperial
FSD1	10 hp	6SL4113-2.A16-2.F0	30	100	0.16 m <sup>3</sup>	5.65 ft <sup>3</sup>
			50	100		
	15 hp	6SL4113-2.A17-2.F0	40	100		
			50	100		
	20 hp	6SL4113-2.A18-2.F0	50	100		
	25 hp	6SL4113-2.A20-2.F0	60	100		
70			100			
FSD2	40 hp	6SL4113-2.A23-2.F0	90	100	0.36 m <sup>3</sup>	12.71 ft <sup>3</sup>
			110	100		
	50 hp	6SL4113-2.A24-2.F0	110	100		
FSE	60 hp	6SL4113-2.A26-2.F0	125	100	0.384 m <sup>3</sup>	13.56 ft <sup>3</sup>
			150	100		
	75 hp	6SL4113-2.A27-2.F0	150	100		
FSF1	100 hp	6SL4113-2.A30-2.F0	150	100	0.48 m <sup>3</sup>	16.95 ft <sup>3</sup>
			250	100		
	125 hp	6SL4113-2.A31-2.F0	175	100		
			250	100		
	150 hp	6SL4113-2.A33-2.F0	225	100		
			250	100		

Converter			Protective device		Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A <sup>1)</sup>	SCCR / kA @ 480 V	Metric	Imperial
FSF2	175 hp	6SL4113-2.A35-2.F0	250	100	0.54 m <sup>3</sup>	19.07 ft <sup>3</sup>
			300	100		
	200 hp	6SL4113-2.A36-2.F0	300	100		
			350	100		

<sup>1)</sup> 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

## 2.3.1.2 UL/CSA semiconductor fuses

UL/CSA semiconductor fuses for UL open type, 3AC 380...415/440...500V

Converter			Protective device			Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Article no. <sup>1) 2)</sup>	SCCR / kA @ 480 V	Metric	Imperial
FSD1	10 hp	6SL4113-2.A16-2.F0	25	3NE1815-0	100	0.16 m <sup>3</sup>	5.65 ft <sup>3</sup>
			50	3NE1817-0	100		
	15 hp	6SL4113-2.A17-2.F0	40	3NE1802-0	100		
			50	3NE1817-0	100		
	20 hp	6SL4113-2.A18-2.F0	50	3NE1817-0	100		
	25 hp	6SL4113-2.A20-2.F0	63	3NE1818-0	100		
80			3NE1820-0	100			
30 hp	6SL4113-2.A21-2.F0	80	3NE1820-0	100			
FSD2	40 hp	6SL4113-2.A23-2.F0	100	3NE1021-0	100	0.36 m <sup>3</sup>	12.71 ft <sup>3</sup>
			125	3NE1022-0	100		
	50 hp	6SL4113-2.A24-2.F0	100	3NE1021-0	100		
			125	3NE1022-0	100		
FSE	60 hp	6SL4113-2.A26-2.F0	125	3NE1022-0	100	0.384 m <sup>3</sup>	13.56 ft <sup>3</sup>
			160	3NE1224-0	100		
	75 hp	6SL4113-2.A27-2.F0	160	3NE1224-0	100		
FSF1	100 hp	6SL4113-2.A30-2.F0	160	3NE1224-0	100	0.48 m <sup>3</sup>	16.95 ft <sup>3</sup>
			250	3NE1227-0	100		
	125 hp	6SL4113-2.A31-2.F0	200	3NE1225-0	100		
			250	3NE1227-0	100		
	150 hp	6SL4113-2.A33-2.F0	200	3NE1225-0	100		
			250	3NE1227-0	100		
FSF2	175 hp	6SL4113-2.A35-2.F0	250	3NE1227-0	100	0.54 m <sup>3</sup>	19.07 ft <sup>3</sup>
			315	3NE1230-0	100		
			350	3NE1331-0	100		

Converter			Protective device			Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Article no. <sup>1) 2)</sup>	SCCR / kA @ 480 V	Metric	Imperial
	200 hp	6SL4113-2.A36-2.F0	315	3NE1230-0	100		
			350	3NE1331-0	100		
			400	3NE1332-0	100		
			450	3NE1333-0	100		
			500	3NE1334-0	100		

<sup>1)</sup> Semiconductor fuses must be installed in the same overall assembly as the converter.

<sup>2)</sup> Recognized semiconductor fuses (JFHR2/8) made by SIEMENS

2.3.1.3 UL/CSA type E combination motor controllers

UL/CSA type E combination motor controllers for UL open type, 3AC 380...415/440...500V

Converter			Protective device				Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	Rated Power @ 480 V	Article no. 1) 2) 3)	SCCR / kA @ 480Y/277V AC	Metric	Imperial
FSD1	10 hp	6SL4113-2.A16-2.F0	25	20 hp	3RV2021-4DA..	65	0.16 m <sup>3</sup>	5.65 ft <sup>3</sup>
					3RV2031-4DA..	65		
					3RV2032-4DA..	65		
			50	40 hp	3RV2041-4HA..	65		
					3RV2042-4HA..	65		
					3RV2031-4WA..	65		
					3RV2032-4WA..	65		
			52					
	15 hp	6SL4113-2.A17-2.F0	40	30 hp	3RV2031-4UA..	65		
					3RV2032-4UA..	65		
					3RV2041-4FA..	65		
					3RV2042-4FA..	65		
			50	40 hp	3RV2041-4HA..	65		
					3RV2042-4HA..	65		
					3RV2031-4WA..	65		
					3RV2032-4WA..	65		
	52							
	20 hp	6SL4113-2.A18-2.F0	50	40 hp	3RV2041-4HA..	65		
3RV2042-4HA..					65			
52			3RV2031-4WA..		65			
			3RV2032-4WA..		65			
25 hp	6SL4113-2.A20-2.F0	59	50 hp	3RV2031-4XA..	20			
				3RV2032-4XA..	30			
		63	3RV2041-4JA..	65				
			3RV2042-4JA..	65				
		73	60 hp	3RV2031-4KA..	20			

Converter			Protective device				Min. enclosure volume		
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Rated Power @ 480 V	Article no. 1) 2) 3)	SCCR / kA @ 480Y/277V AC	Metric	Imperial	
			75		3RV2032-4KA..	30	0.36 m <sup>3</sup>	12.71 ft <sup>3</sup>	
					3RV2041-4KA..	65			
					3RV2042-4KA..	65			
			73		3RV2031-4KA..	20			
	30 hp	6SL4113-2.A21-2.F0		75	60 hp	3RV2032-4KA..			30
						3RV2041-4KA..			65
						3RV2042-4KA..			65
						93			3RV2041-4YA..
FSD2	40 hp	6SL4113-2.A23-2.F0	100	75 hp	3RV2042-4YA..	65			
					3RV2041-4MA..	65			
			100		3RV2042-4MA..	65			
					75 hp	3RV2041-4MA..	65		
50 hp	6SL4113-2.A24-2.F0	100	75 hp	3RV2042-4MA..	65				
				3RV2041-4MA..	65				
FSE	60 hp	6SL4113-2.A26-2.F0			Use a circuit breaker instead.		0.36 m <sup>3</sup>	12.71 ft <sup>3</sup>	
	75 hp	6SL4113-2.A27-2.F0			Use a circuit breaker instead.				
FSF1	100 hp	6SL4113-2.A30-2.F0			Use a circuit breaker instead.				
	125 hp	6SL4113-2.A31-2.F0			Use a circuit breaker instead.				
	150 hp	6SL4113-2.A33-2.F0			Use a circuit breaker instead.				
FSF2	175 hp	6SL4113-2.A35-2.F0			Use a circuit breaker instead.				
	200 hp	6SL4113-2.A36-2.F0			Use a circuit breaker instead.				

1) .. stands for type of electrical connection and can be replaced by: 10 (screw terminal); 20 (spring type terminal)

<sup>2)</sup> SIEMENS Type E combination motor controllers (NKJH/7)

<sup>3)</sup> 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 3RV2938-1; 3RV204. with 3RT2946-4GA07; not necessary for CSA.

## 2.3.1.4 UL/CSA circuit breaker

UL/CSA circuit breaker for UL open type, 3AC 380...415/440...500V

Converter			Protective device					Min. enclosure volume		
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)</sup>	SCCR / kA @ 480 V	SCCR / kA @ 480Y/277V AC	Metric	Imperial	
FSD1	10 hp	6SL4113-2.A16-2.F0	35	3RV	3RV2742-5FD..	-	65	0.16 m <sup>3</sup>	5.65 ft <sup>3</sup>	
				HEAB	3VA4135-6ED34-0AA0	65	65			
				HEAS	3VA5135-6E#31-0AA0 <sup>4)</sup>	65	65			
				MEAB	3VA4135-5ED34-0AA0	35	35			
				MEAS	3VA5135-5E#31-0AA0 <sup>4)</sup>	35	35			
				SEAB	3VA4135-4ED34-0AA0	25	25			
				SEAS	3VA5135-4E#31-0AA0 <sup>4)</sup>	25	25			
	15 hp	6SL4113-2.A17-2.F0	35	50	3RV	3RV2742-5JD..	-			65
					HEAB	3VA4150-6ED34-0AA0	65			65
					HEAS	3VA5150-6E#31-0AA0 <sup>4)</sup>	65			65
					MEAB	3VA4150-5ED34-0AA0	35			35
					MEAS	3VA5150-5E#31-0AA0 <sup>4)</sup>	35			35
					SEAB	3VA4150-4ED34-0AA0	25			25
					SEAS	3VA5150-4E#31-0AA0 <sup>4)</sup>	25			25
15 hp	6SL4113-2.A17-2.F0	35	35	HEAB	3VA4135-6ED34-0AA0	65	65			
				HEAS	3VA5135-6E#31-0AA0 <sup>4)</sup>	65	65			
				MEAB	3VA4135-5ED34-0AA0	35	35			
				MEAS	3VA5135-5E#31-0AA0 <sup>4)</sup>	35	35			
				SEAB	3VA4135-4ED34-0AA0	25	25			

Converter			Protective device					Min. enclosure volume		
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)</sup>	SCCR / kA @ 480 V	SCCR / kA @ 480Y/277V AC	Metric	Imperial	
				SEAS	3VA5135-4E#31-0AA0 <sup>4)</sup>	25	25			
				40	3RV	3RV2742-5GD..	-			65
			50				3RV2742-5JD..			-
				HEAB	3VA4150-6ED34-0AA0	65	65			
				HEAS	3VA5150-6E#31-0AA0 <sup>4)</sup>	65	65			
				MEAB	3VA4150-5ED34-0AA0	35	35			
				MEAS	3VA5150-5E#31-0AA0 <sup>4)</sup>	35	35			
				SEAB	3VA4150-4ED34-0AA0	25	25			
				SEAS	3VA5150-4E#31-0AA0 <sup>4)</sup>	25	25			
				20 hp	6SL4113-2.A18-2.F0	50	3RV			3RV2742-5JD..
	HEAB	3VA4150-6ED34-0AA0	65				65			
	HEAS	3VA5150-6E#31-0AA0 <sup>4)</sup>	65				65			
	MEAB	3VA4150-5ED34-0AA0	35				35			
	MEAS	3VA5150-5E#31-0AA0 <sup>4)</sup>	35				35			
	SEAB	3VA4150-4ED34-0AA0	25				25			
	SEAS	3VA5150-4E#31-0AA0 <sup>4)</sup>	25				25			
	25 hp	6SL4113-2.A20-2.F0	60	3RV	3RV2742-5LD..	-	65			
				CFAS	3VA5260-7E#31-0AA0 <sup>4)</sup>	100	100			
				HEAB	3VA4160-6ED34-0AA0	65	65			
HEAS				3VA5160-6E#31-0AA0 <sup>4)</sup>	65	65				

Converter			Protective device					Min. enclosure volume		
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)</sup>	SCCR / kA @ 480 V	SCCR / kA @ 480Y/277V AC	Metric	Imperial	
				HFAS	3VA5260-6E#31-0AA0 <sup>4)</sup>	65	65			
				MEAB	3VA4160-5ED34-0AA0	35	35			
				MEAS	3VA5160-5E#31-0AA0 <sup>4)</sup>	35	35			
				MFAS	3VA5260-5E#31-0AA0 <sup>4)</sup>	35	35			
				SEAB	3VA4160-4ED34-0AA0	25	25			
				SEAS	3VA5160-4E#31-0AA0 <sup>4)</sup>	25	25			
			70	3RV	3RV2742-5QD..	-	65			
				CFAS	3VA5270-7E#31-0AA0 <sup>4)</sup>	100	100			
				HEAB	3VA4170-6ED34-0AA0	65	65			
				HEAS	3VA5170-6E#31-0AA0 <sup>4)</sup>	65	65			
				HFAS	3VA5270-6E#31-0AA0 <sup>4)</sup>	65	65			
				MEAB	3VA4170-5ED34-0AA0	35	35			
	70	MEAS	3VA5170-5E#31-0AA0 <sup>4)</sup>	35	35					
		MFAS	3VA5270-5E#31-0AA0 <sup>4)</sup>	35	35					
		SEAB	3VA4170-4ED34-0AA0	25	25					
		SEAS	3VA5170-4E#31-0AA0 <sup>4)</sup>	25	25					
		30 hp	6SL4113-2.A21-2.F0	70	3RV	3RV2742-5QD..	-			65
					CFAS	3VA5270-7E#31-0AA0 <sup>4)</sup>	100			100
HEAB	3VA4170-6ED34-0AA0				65	65				

Converter			Protective device					Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)</sup>	SCCR / kA @ 480 V	SCCR / kA @ 480Y/277V AC	Metric	Imperial
				HEAS	3VA5170-6E#31-0AA0 <sup>4)</sup>	65	65		
				HFAS	3VA5270-6E#31-0AA0 <sup>4)</sup>	65	65		
				MEAB	3VA4170-5ED34-0AA0	35	35		
				MEAS	3VA5170-5E#31-0AA0 <sup>4)</sup>	35	35		
				MFAS	3VA5270-5E#31-0AA0 <sup>4)</sup>	35	35		
				SEAB	3VA4170-4ED34-0AA0	25	25		
				SEAS	3VA5170-4E#31-0AA0 <sup>4)</sup>	25	25		
FSD2	40 hp	6SL4113-2.A23-2.F0	80	CFAS	3VA5280-7E#31-0AA0 <sup>4)</sup>	100	100	0.36 m <sup>3</sup>	12.71 ft <sup>3</sup>
				HEAB	3VA4180-6ED34-0AA0	65	65		
				HEAS	3VA5180-6E#31-0AA0 <sup>4)</sup>	65	65		
				HFAS	3VA5280-6E#31-0AA0 <sup>4)</sup>	65	65		
				MEAB	3VA4180-5ED34-0AA0	35	35		
				MEAS	3VA5180-5E#31-0AA0 <sup>4)</sup>	35	35		
				MFAS	3VA5280-5E#31-0AA0 <sup>4)</sup>	35	35		
				SEAB	3VA4180-4ED34-0AA0	25	25		
				SEAS	3VA5180-4E#31-0AA0 <sup>4)</sup>	25	25		
			100	CDAE	3VA6110-7##31-0AA0	100	100		
				CFAE	3VA6210-7##31-0AA0	100	100		
				EDAE	3VA6110-0##31-0AA0	100	100		

Converter			Protective device					Min. enclosure volume		
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)</sup>	SCCR / kA @ 480 V	SCCR / kA @ 480Y/277V AC	Metric	Imperial	
				HDAE	3VA6110-6##31-0AA0	65	65			
				HFAE	3VA6210-6##31-0AA0	65	65			
				LDAE	3VA6110-8##31-0AA0	100	100			
				LFAE	3VA6210-8##31-0AA0	100	100			
				MDAE	3VA6110-5##31-0AA0	35	35			
				MFAE	3VA6210-5##31-0AA0	35	35			
			110	CFAS	3VA5211-7E#31-0AA0 <sup>4)</sup>	100	100			
				HEAB	3VA4111-6ED34-0AA0	65	65			
				HEAS	3VA5111-6E#31-0AA0 <sup>4)</sup>	65	65			
				HFAS	3VA5211-6E#31-0AA0 <sup>4)</sup>	65	65			
				MEAB	3VA4111-5ED34-0AA0	35	35			
				MEAS	3VA5111-5E#31-0AA0 <sup>4)</sup>	35	35			
				MFAS	3VA5211-5E#31-0AA0 <sup>4)</sup>	35	35			
				SEAB	3VA4111-4ED34-0AA0	25	25			
				SEAS	3VA5111-4E#31-0AA0 <sup>4)</sup>	25	25			
				100	CDAE	3VA6110-7##31-0AA0	100			100
					CFAE	3VA6210-7##31-0AA0	100			100
					EDAE	3VA6110-0##31-0AA0	100			100
HDAE	3VA6110-6##31-0AA0	65	65							
HFAE	3VA6210-6##31-0AA0	65	65							
LDAE	3VA6110-8##31-0AA0	100	100							
LFAE	3VA6210-8##31-0AA0	100	100							
50 hp	6SL4113-2.A24-2.F0									

Converter			Protective device					Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)</sup>	SCCR / kA @ 480 V	SCCR / kA @ 480Y/277V AC	Metric	Imperial
				MDAE	3VA6110-5##31-0AA0	35	35		
				MFAE	3VA6210-5##31-0AA0	35	35		
			110	CFAS	3VA5211-7E#31-0AA0 <sup>4)</sup>	100	100		
				HEAB	3VA4111-6ED34-0AA0	65	65		
				HEAS	3VA5111-6E#31-0AA0 <sup>4)</sup>	65	65		
				HFAS	3VA5211-6E#31-0AA0 <sup>4)</sup>	65	65		
				MEAB	3VA4111-5ED34-0AA0	35	35		
				MEAS	3VA5111-5E#31-0AA0 <sup>4)</sup>	35	35		
				MFAS	3VA5211-5E#31-0AA0 <sup>4)</sup>	35	35		
				SEAB	3VA4111-4ED34-0AA0	25	25		
SEAS	3VA5111-4E#31-0AA0 <sup>4)</sup>	25	25						
FSE	60 hp	6SL4113-2.A26-2.F0	125	HEAB	3VA4112-6ED34-0AA0	65	65	0.384 m <sup>3</sup>	13.56 ft <sup>3</sup>
				HEAS	3VA5112-6E#31-0AA0 <sup>4)</sup>	65	65		
				MEAB	3VA4112-5ED34-0AA0	35	35		
				MEAS	3VA5112-5E#31-0AA0 <sup>4)</sup>	35	35		
				SEAB	3VA4112-4ED34-0AA0	25	25		
				SEAS	3VA5112-4E#31-0AA0 <sup>4)</sup>	25	25		
			150	CDAE	3VA6115-7##31-0AA0	100	100		
				CFAS	3VA5215-7E#31-0AA0 <sup>4)</sup>	100	100		

Converter			Protective device					Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)</sup>	SCCR / kA @ 480 V	SCCR / kA @ 480Y/277V AC	Metric	Imperial
				EDAE	3VA6115-0##31-0AA0	100	100		
				HDAE	3VA6115-6##31-0AA0	65	65		
				HFAS	3VA5215-6E#31-0AA0 <sup>4)</sup>	65	65		
				LDAE	3VA6115-8##31-0AA0	100	100		
				MDAE	3VA6115-5##31-0AA0	35	35		
				MFAS	3VA5215-5E#31-0AA0 <sup>4)</sup>	35	35		
	75 hp	6SL4113-2.A27-2.F0	150	CDAE	3VA6115-7##31-0AA0	100	100		
				CFAS	3VA5215-7E#31-0AA0 <sup>4)</sup>	100	100		
				EDAE	3VA6115-0##31-0AA0	100	100		
				HDAE	3VA6115-6##31-0AA0	65	65		
				HFAS	3VA5215-6E#31-0AA0 <sup>4)</sup>	65	65		
				LDAE	3VA6115-8##31-0AA0	100	100		
				MDAE	3VA6115-5##31-0AA0	35	35		
				MFAS	3VA5215-5E#31-0AA0 <sup>4)</sup>	35	35		
FSF1	100 hp	6SL4113-2.A30-2.F0	150	CDAE	3VA6115-7##31-0AA0	100	100	0.48 m <sup>3</sup>	16.95 ft <sup>3</sup>
				CFAS	3VA5215-7E#31-0AA0	100	100		
				EDAE	3VA6115-0##31-0AA0	100	100		
				HDAE	3VA6115-6##31-0AA0	65	65		
				HFAS	3VA5215-6E#31-0AA0	65	65		
				LDAE	3VA6115-8##31-0AA0	100	100		
				MDAE	3VA6115-5##31-0AA0	35	35		
				MFAS	3VA5215-5E#31-0AA0	35	35		

Converter			Protective device					Min. enclosure volume		
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)</sup>	SCCR / kA @ 480 V	SCCR / kA @ 480Y/277V AC	Metric	Imperial	
			250	CFAE	3VA6225-7##31-0AA0	100	100			
				CFAS	3VA5225-7E#31-0AA0	100	100			
				CJAS	3VA5325-7E#31-0AA0	100	100			
				EFAE	3VA6225-0##31-0AA0	100	100			
				HFAE	3VA6225-6##31-0AA0	65	65			
				HFAS	3VA5225-6E#31-0AA0	65	65			
				HJAS	3VA5325-6E#31-0AA0	65	65			
				LFAE	3VA6225-8##31-0AA0	100	100			
				MFAE	3VA6225-5##31-0AA0	35	35			
				MFAS	3VA5225-5E#31-0AA0	35	35			
				MJAS	3VA5325-5E#31-0AA0	35	35			
	125 hp	6SL4113-2.A31-2.F0		175	CFAS	3VA5217-7E#31-0AA0	100	100		
					HFAS	3VA5217-6E#31-0AA0	65	65		
					MFAS	3VA5217-5E#31-0AA0	35	35		
				250	CFAE	3VA6225-7##31-0AA0	100	100		
					CFAS	3VA5225-7E#31-0AA0	100	100		
					CJAS	3VA5325-7E#31-0AA0	100	100		
					EFAE	3VA6225-0##31-0AA0	100	100		
					HFAE	3VA6225-6##31-0AA0	65	65		
					HFAS	3VA5225-6E#31-0AA0	65	65		
					HJAS	3VA5325-6E#31-0AA0	65	65		
					LFAE	3VA6225-8##31-0AA0	100	100		
MFAE	3VA6225-5##31-0AA0	35	35							
MFAS	3VA5225-5E#31-0AA0	35	35							
MJAS	3VA5325-5E#31-0AA0	35	35							

Converter			Protective device					Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)</sup>	SCCR / kA @ 480 V	SCCR / kA @ 480Y/277V AC	Metric	Imperial
150 hp	6SL4113-2.A33-2.F0	200	CFAS	3VA5220-7E#31-0AA0	100	100	0.54 m <sup>3</sup>	19.07 ft <sup>3</sup>	
			HFAS	3VA5220-6E#31-0AA0	65	65			
			MFAS	3VA5220-5E#31-0AA0	35	35			
		250	CFAE	3VA6225-7##31-0AA0	100	100			
			CFAS	3VA5225-7E#31-0AA0	100	100			
			CJAS	3VA5325-7E#31-0AA0	100	100			
			EFAE	3VA6225-0##31-0AA0	100	100			
			HFAE	3VA6225-6##31-0AA0	65	65			
			HFAS	3VA5225-6E#31-0AA0	65	65			
			HJAS	3VA5325-6E#31-0AA0	65	65			
			LFAE	3VA6225-8##31-0AA0	100	100			
			MFAE	3VA6225-5##31-0AA0	35	35			
			MFAS	3VA5225-5E#31-0AA0	35	35			
MJAS	3VA5325-5E#31-0AA0	35	35						
FSF2	175 hp	6SL4113-2.A35-2.F0	250	CFAE	3VA6225-7##31-0AA0	100	100	0.54 m <sup>3</sup>	19.07 ft <sup>3</sup>
				CFAS	3VA5225-7E#31-0AA0	100	100		
				CJAE	3VA6325-7##31-0AA0	100	100		
				CJAS	3VA5325-7E#31-0AA0	100	100		
				EFAE	3VA6225-0##31-0AA0	100	100		
				EJAE	3VA6325-0##31-0AA0	100	100		
				HFAE	3VA6225-6##31-0AA0	65	65		
				HFAS	3VA5225-6E#31-0AA0	65	65		
				HJAE	3VA6325-6##31-0AA0	65	65		
				HJAS	3VA5325-6E#31-0AA0	65	65		
				LFAE	3VA6225-8##31-0AA0	100	100		

Converter			Protective device					Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)</sup>	SCCR / kA @ 480 V	SCCR / kA @ 480Y/277V AC	Metric	Imperial
				LJAE	3VA6325-8##31-0AA0	100	100		
				MFAE	3VA6225-5##31-0AA0	35	35		
				MFAS	3VA5225-5E#31-0AA0	35	35		
				MJAE	3VA6325-5##31-0AA0	35	35		
				MJAS	3VA5325-5E#31-0AA0	35	35		
			300	CJAS	3VA5330-7E#31-0AA0	100	100		
				HJAS	3VA5330-6E#31-0AA0	65	65		
				MJAS	3VA5330-5E#31-0AA0	35	35		
			350	CJAS	3VA5335-7E#31-0AA0	100	100		
				HJAS	3VA5335-6E#31-0AA0	65	65		
				MJAS	3VA5335-5E#31-0AA0	35	35		
			400	CJAE	3VA6340-7##31-0AA0	100	100		
				EJAE	3VA6340-0##31-0AA0	100	100		
				HJAE	3VA6340-6##31-0AA0	65	65		
				LJAE	3VA6340-8##31-0AA0	100	100		
				MJAE	3VA6340-5##31-0AA0	35	35		
			300	CJAS	3VA5330-7E#31-0AA0	100	100		
				HJAS	3VA5330-6E#31-0AA0	65	65		
				MJAS	3VA5330-5E#31-0AA0	35	35		
			350	CJAS	3VA5335-7E#31-0AA0	100	100		
				HJAS	3VA5335-6E#31-0AA0	65	65		
				MJAS	3VA5335-5E#31-0AA0	35	35		
			400	CJAE	3VA6340-7##31-0AA0	100	100		
				CLAE	3VA6440-7##31-0AA0	100	100		
EJAE	3VA6340-0##31-0AA0	100		100					

Converter			Protective device					Min. enclosure volume	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)</sup>	SCCR / kA @ 480 V	SCCR / kA @ 480Y/277V AC	Metric	Imperial
				ELAE	3VA6440-0##31-0AA0	100	100		
				HJAE	3VA6340-6##31-0AA0	65	65		
				HLAE	3VA6440-6##31-0AA0	65	65		
				LJAE	3VA6340-8##31-0AA0	100	100		
				LLAE	3VA6440-8##31-0AA0	100	100		
				MJAE	3VA6340-5##31-0AA0	35	35		
				MLAE	3VA6440-5##31-0AA0	35	35		

<sup>1)</sup> .. stands for type of electrical connection and can be replaced by: 10 (screw terminal); 20 (spring type terminal)

<sup>2)</sup> ## stands for type of release and can be replaced by: HL (line protection LI), HM (line protection LIG), HN (Line and generator protection LSI), JP (Line and generator protection LSI, with display), JQ (Line and generator protection LSI, with display), KP (Line and generator protection LSI, with display, with measurement function), KQ (Line and generator protection LSI, with display, with measurement function)

<sup>3)</sup> SIEMENS circuit breaker (DIVQ/7)

<sup>4)</sup> # stands for type of release and can be replaced by: C (fixed thermal adjustable magnetic trip unit), D (fixed thermal fixed magnetic trip unit) or F (adjustable thermal adjustable magnetic trip unit)

## 2.3.2 UL type 12

### 2.3.2.1 UL/CSA non-semiconductor fuses

UL/CSA non-semiconductor fuses for UL type 12, 3AC 380...415/440...500V with maintenance switch

Converter			Protective device	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A <sup>1)</sup>	SCCR / kA @ 480 V
FSD1	10 hp	6SL4113-2..16-2.F0	30	5
			50	5
	15 hp	6SL4113-2..17-2.F0	40	5
			50	5
	20 hp	6SL4113-2..18-2.F0	50	5
	25 hp	6SL4113-2..20-2.F0	60	5
70			5	
30 hp	6SL4113-2..21-2.F0	70	5	
FSD2	40 hp	6SL4113-2..23-2.F0	90	5
			110	5
	50 hp	6SL4113-2..24-2.F0	110	5
FSE	60 hp	6SL4113-2..26-2.F0	125	10
			150	10
	75 hp	6SL4113-2..27-2.F0	150	10
FSF1	100 hp	6SL4113-2..30-2.F0	150	10
			250	10
	125 hp	6SL4113-2..31-2.F0	175	10
			250	10
	150 hp	6SL4113-2..33-2.F0	225	10
			250	10

<sup>1)</sup> 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

UL/CSA non-semiconductor fuses for UL type 12, 3AC 380...415/440...500V without maintenance switch

Converter			Protective device	
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A <sup>1)</sup>	SCCR / kA @ 480 V
FSD1	10 hp	6SL4113-2..16-2.F0	30	100
			50	100
	15 hp	6SL4113-2..17-2.F0	40	100
			50	100
	20 hp	6SL4113-2..18-2.F0	50	100
	25 hp	6SL4113-2..20-2.F0	60	100
70			100	
30 hp	6SL4113-2..21-2.F0	70	100	
FSD2	40 hp	6SL4113-2..23-2.F0	90	100
			110	100
	50 hp	6SL4113-2..24-2.F0	110	100
FSE	60 hp	6SL4113-2..26-2.F0	125	100
			150	100
	75 hp	6SL4113-2..27-2.F0	150	100
FSF1	100 hp	6SL4113-2..30-2.F0	150	100
			250	100
	125 hp	6SL4113-2..31-2.F0	175	100
			250	100
	150 hp	6SL4113-2..33-2.F0	225	100
			250	100

<sup>1)</sup> 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

## 2.3.2.2 UL/CSA type E combination motor controllers

UL/CSA type E combination motor controllers for UL type 12, 3AC 380...415/440...500V with maintenance switch

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Rated Power @ 480 V	Article no. <sup>1) 2) 3)</sup>	SCCR / kA @ 480Y/277V AC
FSD1	10 hp	6SL4113-2..16-2.F0	25	20 hp	3RV2021-4DA..	5
					3RV2031-4DA..	5
					3RV2032-4DA..	5
			50	40 hp	3RV2041-4HA..	5
					3RV2042-4HA..	5
					3RV2031-4WA..	5
					3RV2032-4WA..	5
			52	40 hp	3RV2041-4HA..	5
	3RV2042-4HA..	5				
	3RV2031-4WA..	5				
	3RV2032-4WA..	5				
	15 hp	6SL4113-2..17-2.F0	40	30 hp	3RV2031-4UA..	5
					3RV2032-4UA..	5
					3RV2041-4FA..	5
					3RV2042-4FA..	5
			50	40 hp	3RV2041-4HA..	5
					3RV2042-4HA..	5
					3RV2031-4WA..	5
					3RV2032-4WA..	5
	52	40 hp	3RV2041-4HA..	5		
3RV2042-4HA..			5			
3RV2031-4WA..			5			
3RV2032-4WA..			5			
20 hp	6SL4113-2..18-2.F0	50	40 hp	3RV2041-4HA..	5	
				3RV2042-4HA..	5	
		52		3RV2031-4WA..	5	
				3RV2032-4WA..	5	
25 hp	6SL4113-2..20-2.F0	59	50 hp	3RV2031-4XA..	5	
				3RV2032-4XA..	5	
		63	3RV2041-4JA..	5		
			3RV2042-4JA..	5		
		73	60 hp	3RV2031-4KA..	5	

Converter			Protective device				
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Rated Power @ 480 V	Article no. <sup>1) 2) 3)</sup>	SCCR / kA @ 480Y/277V AC	
			75		3RV2032-4KA..	5	
					3RV2041-4KA..	5	
					3RV2042-4KA..	5	
	30 hp	6SL4113-2..21-2.F0		73	60 hp	3RV2031-4KA..	5
						3RV2032-4KA..	5
						3RV2041-4KA..	5
						3RV2042-4KA..	5
FSD2	40 hp	6SL4113-2..23-2.F0	93	75 hp	3RV2041-4YA..	5	
					3RV2042-4YA..	5	
			100		3RV2041-4MA..	5	
					3RV2042-4MA..	5	
	50 hp	6SL4113-2..24-2.F0	100	75 hp	3RV2041-4MA..	5	
					3RV2042-4MA..	5	
FSE	60 hp	6SL4113-2..26-2.F0			Use a circuit breaker instead.		
FSF1	100 hp	6SL4113-2..30-2.F0			Use a circuit breaker instead.		
	150 hp	6SL4113-2..33-2.F0			Use a circuit breaker instead.		

<sup>1)</sup> .. stands for type of electrical connection and can be replaced by: 10 (screw terminal); 20 (spring type terminal)

<sup>2)</sup> SIEMENS Type E combination motor controllers (NKJH/7)

<sup>3)</sup> 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 3RV2938-1; 3RV204. with 3RT2946-4GA07; not necessary for CSA.

UL/CSA type E combination motor controllers for UL type 12, 3AC 380...415/440...500V without maintenance switch

Converter			Protective device			
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Rated Power @ 480 V	Article no. <sup>1) 2) 3)</sup>	SCCR / kA @ 480Y/277V AC
FSD1	10 hp	6SL4113-2..16-2.F0	25	20 hp	3RV2021-4DA..	65
					3RV2031-4DA..	65
					3RV2032-4DA..	65
			50	40 hp	3RV2041-4HA..	65
					3RV2042-4HA..	65
					3RV2031-4WA..	65
					3RV2032-4WA..	65
			52	40 hp	3RV2031-4WA..	65
	3RV2032-4WA..	65				
	3RV2041-4HA..	65				
	3RV2042-4HA..	65				
	15 hp	6SL4113-2..17-2.F0	40	30 hp	3RV2031-4UA..	65
					3RV2032-4UA..	65
					3RV2041-4FA..	65
					3RV2042-4FA..	65
			50	40 hp	3RV2041-4HA..	65
					3RV2042-4HA..	65
					3RV2031-4WA..	65
					3RV2032-4WA..	65
	52	40 hp	3RV2041-4HA..	65		
3RV2042-4HA..			65			
3RV2031-4WA..			65			
3RV2032-4WA..			65			
20 hp	6SL4113-2..18-2.F0	50	40 hp	3RV2041-4HA..	65	
				3RV2042-4HA..	65	
		52		3RV2031-4WA..	65	
				3RV2032-4WA..	65	
25 hp	6SL4113-2..20-2.F0	59	50 hp	3RV2031-4XA..	20	
				3RV2032-4XA..	30	
		63	3RV2041-4JA..	65		
			3RV2042-4JA..	65		
		73	60 hp	3RV2031-4KA..	20	
				3RV2032-4KA..	30	

Converter			Protective device				
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	Rated Power @ 480 V	Article no. <sup>1) 2) 3)</sup>	SCCR / kA @ 480V/277V AC	
	30 hp	6SL4113-2..21-2.F0	75	60 hp	3RV2041-4KA..	65	
					3RV2042-4KA..	65	
			73		3RV2031-4KA..	20	
					3RV2032-4KA..	30	
			75		3RV2041-4KA..	65	
					3RV2042-4KA..	65	
FSD2	40 hp	6SL4113-2..23-2.F0	93	75 hp	3RV2041-4YA..	65	
					3RV2042-4YA..	65	
			100		3RV2041-4MA..	65	
					3RV2042-4MA..	65	
	50 hp	6SL4113-2..24-2.F0	100		75 hp	3RV2041-4MA..	65
						3RV2042-4MA..	65
FSE	60 hp	6SL4113-2..26-2.F0			Use a circuit breaker instead.		
	75 hp	6SL4113-2..27-2.F0			Use a circuit breaker instead.		
FSF1	100 hp	6SL4113-2..30-2.F0			Use a circuit breaker instead.		
	125 hp	6SL4113-2..31-2.F0			Use a circuit breaker instead.		
	150 hp	6SL4113-2..33-2.F0			Use a circuit breaker instead.		

<sup>1)</sup> .. stands for type of electrical connection and can be replaced by: 10 (screw terminal); 20 (spring type terminal)

<sup>2)</sup> SIEMENS Type E combination motor controllers (NKJH/7)

<sup>3)</sup> 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 3RV2938-1; 3RV204. with 3RT2946-4GA07; not necessary for CSA.

## 2.3.2.3 UL/CSA circuit breaker

UL/CSA circuit breaker for UL type 12, 3AC 380...415/440...500V with maintenance switch

Converter			Protective device				
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> /A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)</sup>	SCCR / kA @ 480 V	SCCR / kA @ 480Y/277V AC
FSD1	10 hp	6SL4113-2..16-2.F0	35	3RV	3RV2742-5FD..	-	5
				HEAB	3VA4135-6ED34-0AA0	5	5
				HEAS	3VA5135-6E#31-0AA0	5	5
				MEAB	3VA4135-5ED34-0AA0	5	5
				MEAS	3VA5135-5E#31-0AA0	5	5
				SEAB	3VA4135-4ED34-0AA0	5	5
				SEAS	3VA5135-4E#31-0AA0	5	5
			50	3RV	3RV2742-5JD..	-	5
				HEAB	3VA4150-6ED34-0AA0	5	5
				HEAS	3VA5150-6E#31-0AA0	5	5
				MEAB	3VA4150-5ED34-0AA0	5	5
				MEAS	3VA5150-5E#31-0AA0	5	5
				SEAB	3VA4150-4ED34-0AA0	5	5
				SEAS	3VA5150-4E#31-0AA0	5	5
	15 hp	6SL4113-2..17-2.F0	35	HEAB	3VA4135-6ED34-0AA0	5	5
				HEAS	3VA5135-6E#31-0AA0	5	5
				MEAB	3VA4135-5ED34-0AA0	5	5
				MEAS	3VA5135-5E#31-0AA0	5	5
				SEAB	3VA4135-4ED34-0AA0	5	5
				SEAS	3VA5135-4E#31-0AA0	5	5
			40	3RV	3RV2742-5GD..	-	5
50			3RV2742-5JD..		-	5	
50			HEAB	3VA4150-6ED34-0AA0	5	5	
			HEAS	3VA5150-6E#31-0AA0	5	5	

Converter			Protective device							
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)</sup>	SCCR / kA @ 480 V	SCCR / kA @ 480Y/277V AC			
				MEAB	3VA4150-5ED34-0AA0	5	5			
				MEAS	3VA5150-5E#31-0AA0	5	5			
				SEAB	3VA4150-4ED34-0AA0	5	5			
				SEAS	3VA5150-4E#31-0AA0	5	5			
				20 hp	6SL4113-2..18-2.FO	50	3RV	3RV2742-5JD..	-	5
							HEAB	3VA4150-6ED34-0AA0	5	5
							HEAS	3VA5150-6E#31-0AA0	5	5
							MEAB	3VA4150-5ED34-0AA0	5	5
	MEAS	3VA5150-5E#31-0AA0	5				5			
	SEAB	3VA4150-4ED34-0AA0	5				5			
	25 hp	6SL4113-2..20-2.FO	60	3RV	3RV2742-5LD..	-	5			
				CFAS	3VA5260-7E#31-0AA0	5	5			
				HEAB	3VA4160-6ED34-0AA0	5	5			
				HEAS	3VA5160-6E#31-0AA0	5	5			
				HFAS	3VA5260-6E#31-0AA0	5	5			
				MEAB	3VA4160-5ED34-0AA0	5	5			
				MEAS	3VA5160-5E#31-0AA0	5	5			
				MFAS	3VA5260-5E#31-0AA0	5	5			
				SEAB	3VA4160-4ED34-0AA0	5	5			
				SEAS	3VA5160-4E#31-0AA0	5	5			
			70			3RV	3RV2742-5QD..	-	5	
						CFAS	3VA5270-7E#31-0AA0	5	5	
						HEAB	3VA4170-6ED34-0AA0	5	5	
						HEAS	3VA5170-6E#31-0AA0	5	5	
HFAS						3VA5270-6E#31-0AA0	5	5		

Converter			Protective device				
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)</sup>	SCCR / kA @ 480 V	SCCR / kA @ 480Y/277V AC
FSD2	30 hp	6SL4113-2..21-2.F0	70	MEAB	3VA4170-5ED34-0AA0	5	5
				MEAS	3VA5170-5E#31-0AA0	5	5
				MFAS	3VA5270-5E#31-0AA0	5	5
				SEAB	3VA4170-4ED34-0AA0	5	5
				SEAS	3VA5170-4E#31-0AA0	5	5
			80	3RV	3RV2742-5QD..	-	5
				CFAS	3VA5270-7E#31-0AA0	5	5
				HEAB	3VA4170-6ED34-0AA0	5	5
				HEAS	3VA5170-6E#31-0AA0	5	5
				HFAS	3VA5270-6E#31-0AA0	5	5
	MEAB	3VA4170-5ED34-0AA0		5	5		
	MEAS	3VA5170-5E#31-0AA0		5	5		
	MFAS	3VA5270-5E#31-0AA0		5	5		
	SEAB	3VA4170-4ED34-0AA0		5	5		
	SEAS	3VA5170-4E#31-0AA0	5	5			
	40 hp	6SL4113-2..23-2.F0	80	CFAS	3VA5280-7E#31-0AA0	5	5
				HEAB	3VA4180-6ED34-0AA0	5	5
				HEAS	3VA5180-6E#31-0AA0	5	5
				HFAS	3VA5280-6E#31-0AA0	5	5
MEAB				3VA4180-5ED34-0AA0	5	5	
MEAS				3VA5180-5E#31-0AA0	5	5	
MFAS				3VA5280-5E#31-0AA0	5	5	
SEAB				3VA4180-4ED34-0AA0	5	5	
SEAS				3VA5180-4E#31-0AA0	5	5	
100			CDAE	3VA6110-7##31-0AA0	5	5	
CFAE	3VA6210-7##31-0AA0	5	5				

Converter			Protective device				
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)</sup>	SCCR / kA @ 480 V	SCCR / kA @ 480Y/277V AC
				EDAE	3VA6110-0##31-0AA0	5	5
				HDAE	3VA6110-6##31-0AA0	5	5
				HFAE	3VA6210-6##31-0AA0	5	5
				LDAE	3VA6110-8##31-0AA0	5	5
				LFAE	3VA6210-8##31-0AA0	5	5
				MDAE	3VA6110-5##31-0AA0	5	5
				MFAE	3VA6210-5##31-0AA0	5	5
			110	CFAS	3VA5211-7E#31-0AA0	5	5
				HEAB	3VA4111-6ED34-0AA0	5	5
				HEAS	3VA5111-6E#31-0AA0	5	5
				HFAS	3VA5211-6E#31-0AA0	5	5
				MEAB	3VA4111-5ED34-0AA0	5	5
				MEAS	3VA5111-5E#31-0AA0	5	5
				MFAS	3VA5211-5E#31-0AA0	5	5
	100			CDAE	3VA6110-7##31-0AA0	5	5
				CFAE	3VA6210-7##31-0AA0	5	5
				EDAE	3VA6110-0##31-0AA0	5	5
				HDAE	3VA6110-6##31-0AA0	5	5
				HFAE	3VA6210-6##31-0AA0	5	5
				LDAE	3VA6110-8##31-0AA0	5	5
				LFAE	3VA6210-8##31-0AA0	5	5
MDAE				3VA6110-5##31-0AA0	5	5	
MFAE		3VA6210-5##31-0AA0	5	5			
110			CFAS	3VA5211-7E#31-0AA0	5	5	
50 hp		6SL4113-2..24-2.F0					

Converter			Protective device				
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)</sup>	SCCR / kA @ 480 V	SCCR / kA @ 480Y/277V AC
FSE				HEAB	3VA4111-6ED34-0AA0	5	5
				HEAS	3VA5111-6E#31-0AA0	5	5
				HFAS	3VA5211-6E#31-0AA0	5	5
				MEAB	3VA4111-5ED34-0AA0	5	5
				MEAS	3VA5111-5E#31-0AA0	5	5
				MFAS	3VA5211-5E#31-0AA0	5	5
				SEAB	3VA4111-4ED34-0AA0	5	5
				SEAS	3VA5111-4E#31-0AA0	5	5
	60 hp	6SL4113-2..26-2.F0	125	HEAB	3VA4112-6ED34-0AA0	10	10
				HEAS	3VA5112-6E#31-0AA0	10	10
				MEAB	3VA4112-5ED34-0AA0	10	10
				MEAS	3VA5112-5E#31-0AA0	10	10
				SEAB	3VA4112-4ED34-0AA0	10	10
				SEAS	3VA5112-4E#31-0AA0	10	10
150			CDAE	3VA6115-7##31-0AA0	10	10	
			CFAS	3VA5215-7E#31-0AA0	10	10	
			EDAE	3VA6115-0##31-0AA0	10	10	
			HDAE	3VA6115-6##31-0AA0	10	10	
			HFAS	3VA5215-6E#31-0AA0	10	10	
			LDAE	3VA6115-8##31-0AA0	10	10	
75 hp	6SL4113-2..27-2.F0	150	CDAE	3VA6115-7##31-0AA0	10	10	
			CFAS	3VA5215-7E#31-0AA0	10	10	
			EDAE	3VA6115-0##31-0AA0	10	10	
			HDAE	3VA6115-6##31-0AA0	10	10	

Converter			Protective device					
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)</sup>	SCCR / kA @ 480 V	SCCR / kA @ 480Y/277V AC	
FSF1	100 hp	6SL4113-2..30-2.F0	150	HFAS	3VA5215-6E#31-0AA0	10	10	
				LDAE	3VA6115-8##31-0AA0	10	10	
				MDAE	3VA6115-5##31-0AA0	10	10	
				MFAS	3VA5215-5E#31-0AA0	10	10	
				CDAE	3VA6115-7##31-0AA0	10	10	
				CFAS	3VA5215-7E#31-0AA0	10	10	
				EDAE	3VA6115-0##31-0AA0	10	10	
				HDAE	3VA6115-6##31-0AA0	10	10	
	125 hp	6SL4113-2..31-2.F0	175	250	CFAS	3VA5217-7E#31-0AA0	10	10
					HFAS	3VA5217-6E#31-0AA0	10	10
					MFAS	3VA5217-5E#31-0AA0	10	10
					CFAE	3VA6225-7##31-0AA0	10	10
					CFAS	3VA5225-7E#31-0AA0	10	10
					CJAS	3VA5325-7E#31-0AA0	10	10
					EFAE	3VA6225-0##31-0AA0	10	10
					HFAE	3VA6225-6##31-0AA0	10	10
HFAS					3VA5225-6E#31-0AA0	10	10	
HJAS					3VA5325-6E#31-0AA0	10	10	
LFAE	3VA6225-8##31-0AA0	10	10					
MFAE	3VA6225-5##31-0AA0	10	10					
MFAS	3VA5225-5E#31-0AA0	10	10					
MJAS	3VA5325-5E#31-0AA0	10	10					

Converter			Protective device				
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)</sup>	SCCR / kA @ 480 V	SCCR / kA @ 480Y/277V AC
			250	CFAE	3VA6225-7##31-0AA0	10	10
				CFAS	3VA5225-7E#31-0AA0	10	10
				CJAS	3VA5325-7E#31-0AA0	10	10
				EFAE	3VA6225-0##31-0AA0	10	10
				HFAE	3VA6225-6##31-0AA0	10	10
				HFAS	3VA5225-6E#31-0AA0	10	10
				HJAS	3VA5325-6E#31-0AA0	10	10
				LFAE	3VA6225-8##31-0AA0	10	10
				MFAE	3VA6225-5##31-0AA0	10	10
				MFAS	3VA5225-5E#31-0AA0	10	10
	MJAS	3VA5325-5E#31-0AA0	10	10			
	150 hp	6SL4113-2..33-2.F0	200	CFAS	3VA5220-7E#31-0AA0	10	10
				HFAS	3VA5220-6E#31-0AA0	10	10
				MFAS	3VA5220-5E#31-0AA0	10	10
			250	CFAE	3VA6225-7##31-0AA0	10	10
				CFAS	3VA5225-7E#31-0AA0	10	10
				CJAS	3VA5325-7E#31-0AA0	10	10
				EFAE	3VA6225-0##31-0AA0	10	10
				HFAE	3VA6225-6##31-0AA0	10	10
				HFAS	3VA5225-6E#31-0AA0	10	10
HJAS				3VA5325-6E#31-0AA0	10	10	
LFAE	3VA6225-8##31-0AA0	10	10				
MFAE	3VA6225-5##31-0AA0	10	10				
MFAS	3VA5225-5E#31-0AA0	10	10				
MJAS	3VA5325-5E#31-0AA0	10	10				

1) .. stands for type of electrical connection and can be replaced by: 10 (screw terminal); 20 (spring type terminal)

2) ## stands for type of release and can be replaced by: HL (line protection LI), HM (line protection LIG), HN (Line and generator protection LSI), JP (Line and generator protection LSI, with display), JQ (Line and generator protection LSI, with display), KP (Line and generator protection LSI, with display, with measurement function), KQ (Line and generator protection LSI, with display, with measurement function)

3) SIEMENS circuit breaker (DIVQ/7)

*UL/CSA circuit breaker for UL type 12, 3AC 380...415/440...500V without maintenance switch*

Converter			Protective device					
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)</sup>	SCCR / kA @ 480 V	SCCR / kA @ 480Y/277V AC	
FSD1	10 hp	6SL4113-2..16-2.F0	35	3RV	3RV2742-5FD..	-	65	
				HEAB	3VA4135-6ED34-0AA0	65	65	
				HEAS	3VA5135-6E#31-0AA0 <sup>4)</sup>	65	65	
				MEAB	3VA4135-5ED34-0AA0	35	35	
				MEAS	3VA5135-5E#31-0AA0 <sup>4)</sup>	35	35	
				SEAB	3VA4135-4ED34-0AA0	25	25	
				SEAS	3VA5135-4E#31-0AA0 <sup>4)</sup>	25	25	
	15 hp	6SL4113-2..17-2.F0	35	50	3RV	3RV2742-5JD..	-	65
					HEAB	3VA4150-6ED34-0AA0	65	65
					HEAS	3VA5150-6E#31-0AA0 <sup>4)</sup>	65	65
					MEAB	3VA4150-5ED34-0AA0	35	35
					MEAS	3VA5150-5E#31-0AA0 <sup>4)</sup>	35	35
					SEAB	3VA4150-4ED34-0AA0	25	25
					SEAS	3VA5150-4E#31-0AA0 <sup>4)</sup>	25	25
15 hp	6SL4113-2..17-2.F0	35	35	HEAB	3VA4135-6ED34-0AA0	65	65	
				HEAS	3VA5135-6E#31-0AA0 <sup>4)</sup>	65	65	

Converter			Protective device					
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)</sup>	SCCR / kA @ 480 V	SCCR / kA @ 480Y/277V AC	
				MEAB	3VA4135-5ED34-0AA0	35	35	
				MEAS	3VA5135-5E#31-0AA0 <sup>4)</sup>	35	35	
				SEAB	3VA4135-4ED34-0AA0	25	25	
				SEAS	3VA5135-4E#31-0AA0 <sup>4)</sup>	25	25	
			40		3RV	3RV2742-5GD..	-	65
			3RV2742-5JD..			-	65	
			HEAB		3VA4150-6ED34-0AA0	65	65	
			HEAS		3VA5150-6E#31-0AA0 <sup>4)</sup>	65	65	
	MEAB	3VA4150-5ED34-0AA0	35		35			
	MEAS	3VA5150-5E#31-0AA0 <sup>4)</sup>	35		35			
	SEAB	3VA4150-4ED34-0AA0	25		25			
	SEAS	3VA5150-4E#31-0AA0 <sup>4)</sup>	25		25			
	20 hp	6SL4113-2..18-2.F0	50	3RV	3RV2742-5JD..	-	65	
				HEAB	3VA4150-6ED34-0AA0	65	65	
				HEAS	3VA5150-6E#31-0AA0 <sup>4)</sup>	65	65	
				MEAB	3VA4150-5ED34-0AA0	35	35	
MEAS				3VA5150-5E#31-0AA0 <sup>4)</sup>	35	35		
SEAB				3VA4150-4ED34-0AA0	25	25		
SEAS				3VA5150-4E#31-0AA0 <sup>4)</sup>	25	25		
25 hp	6SL4113-2..20-2.F0	60	3RV	3RV2742-5LD..	-	65		
			CFAS	3VA5260-7E#31-0AA0 <sup>4)</sup>	100	100		

Converter			Protective device				
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)</sup>	SCCR / kA @ 480 V	SCCR / kA @ 480Y/277V AC
				HEAB	3VA4160-6ED34-0AA0	65	65
				HEAS	3VA5160-6E#31-0AA0 <sup>4)</sup>	65	65
				HFAS	3VA5260-6E#31-0AA0 <sup>4)</sup>	65	65
				MEAB	3VA4160-5ED34-0AA0	35	35
				MEAS	3VA5160-5E#31-0AA0 <sup>4)</sup>	35	35
				MFAS	3VA5260-5E#31-0AA0 <sup>4)</sup>	35	35
				SEAB	3VA4160-4ED34-0AA0	25	25
				SEAS	3VA5160-4E#31-0AA0 <sup>4)</sup>	25	25
				3RV	3RV2742-5QD..	-	65
				CFAS	3VA5270-7E#31-0AA0 <sup>4)</sup>	100	100
				HEAB	3VA4170-6ED34-0AA0	65	65
				HEAS	3VA5170-6E#31-0AA0 <sup>4)</sup>	65	65
				HFAS	3VA5270-6E#31-0AA0 <sup>4)</sup>	65	65
				MEAB	3VA4170-5ED34-0AA0	35	35
			MEAS	3VA5170-5E#31-0AA0 <sup>4)</sup>	35	35	
			MFAS	3VA5270-5E#31-0AA0 <sup>4)</sup>	35	35	
			SEAB	3VA4170-4ED34-0AA0	25	25	
			SEAS	3VA5170-4E#31-0AA0 <sup>4)</sup>	25	25	
				30 hp	6SL4113-2..21-2.F0	70	3RV

Converter			Protective device				
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)</sup>	SCCR / kA @ 480 V	SCCR / kA @ 480Y/277V AC
				CFAS	3VA5270-7E#31-0AA0 <sup>4)</sup>	100	100
				HEAB	3VA4170-6ED34-0AA0	65	65
				HEAS	3VA5170-6E#31-0AA0 <sup>4)</sup>	65	65
				HFAS	3VA5270-6E#31-0AA0 <sup>4)</sup>	65	65
				MEAB	3VA4170-5ED34-0AA0	35	35
				MEAS	3VA5170-5E#31-0AA0 <sup>4)</sup>	35	35
				MFAS	3VA5270-5E#31-0AA0 <sup>4)</sup>	35	35
				SEAB	3VA4170-4ED34-0AA0	25	25
				SEAS	3VA5170-4E#31-0AA0 <sup>4)</sup>	25	25
FSD2	40 hp	6SL4113-2..23-2.F0	80	CFAS	3VA5280-7E#31-0AA0 <sup>4)</sup>	100	100
				HEAB	3VA4180-6ED34-0AA0	65	65
				HEAS	3VA5180-6E#31-0AA0 <sup>4)</sup>	65	65
				HFAS	3VA5280-6E#31-0AA0 <sup>4)</sup>	65	65
				MEAB	3VA4180-5ED34-0AA0	35	35
				MEAS	3VA5180-5E#31-0AA0 <sup>4)</sup>	35	35
				MFAS	3VA5280-5E#31-0AA0 <sup>4)</sup>	35	35
				SEAB	3VA4180-4ED34-0AA0	25	25
				SEAS	3VA5180-4E#31-0AA0 <sup>4)</sup>	25	25
			100	CDAE	3VA6110-7##31-0AA0	100	100

Converter			Protective device				
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)</sup>	SCCR / kA @ 480 V	SCCR / kA @ 480Y/277V AC
				CFAE	3VA6210-7##31-0AA0	100	100
				EDAE	3VA6110-0##31-0AA0	100	100
				HDAE	3VA6110-6##31-0AA0	65	65
				HFAE	3VA6210-6##31-0AA0	65	65
				LDAE	3VA6110-8##31-0AA0	100	100
				LFAE	3VA6210-8##31-0AA0	100	100
				MDAE	3VA6110-5##31-0AA0	35	35
				MFAE	3VA6210-5##31-0AA0	35	35
			110	CFAS	3VA5211-7E#31-0AA0 <sup>4)</sup>	100	100
				HEAB	3VA4111-6ED34-0AA0	65	65
				HEAS	3VA5111-6E#31-0AA0 <sup>4)</sup>	65	65
				HFAS	3VA5211-6E#31-0AA0 <sup>4)</sup>	65	65
				MEAB	3VA4111-5ED34-0AA0	35	35
				MEAS	3VA5111-5E#31-0AA0 <sup>4)</sup>	35	35
				MFAS	3VA5211-5E#31-0AA0 <sup>4)</sup>	35	35
				SEAB	3VA4111-4ED34-0AA0	25	25
			SEAS	3VA5111-4E#31-0AA0 <sup>4)</sup>	25	25	
			50 hp	6SL4113-2..24-2.F0	100	CDAE	3VA6110-7##31-0AA0
CFAE	3VA6210-7##31-0AA0	100				100	
EDAE	3VA6110-0##31-0AA0	100				100	
HDAE	3VA6110-6##31-0AA0	65				65	
HFAE	3VA6210-6##31-0AA0	65				65	

Converter			Protective device				
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)</sup>	SCCR / kA @ 480 V	SCCR / kA @ 480Y/277V AC
				LDAE	3VA6110-8##31-0AA0	100	100
				LFAE	3VA6210-8##31-0AA0	100	100
				MDAE	3VA6110-5##31-0AA0	35	35
				MFAE	3VA6210-5##31-0AA0	35	35
			110	CFAS	3VA5211-7E#31-0AA0 <sup>4)</sup>	100	100
				HEAB	3VA4111-6ED34-0AA0	65	65
				HEAS	3VA5111-6E#31-0AA0 <sup>4)</sup>	65	65
				HFAS	3VA5211-6E#31-0AA0 <sup>4)</sup>	65	65
				MEAB	3VA4111-5ED34-0AA0	35	35
				MEAS	3VA5111-5E#31-0AA0 <sup>4)</sup>	35	35
				MFAS	3VA5211-5E#31-0AA0 <sup>4)</sup>	35	35
				SEAB	3VA4111-4ED34-0AA0	25	25
				SEAS	3VA5111-4E#31-0AA0 <sup>4)</sup>	25	25
				FSE	60 hp	6SL4113-2..26-2.F0	125
HEAS	3VA5112-6E#31-0AA0 <sup>4)</sup>	65	65				
MEAB	3VA4112-5ED34-0AA0	35	35				
MEAS	3VA5112-5E#31-0AA0 <sup>4)</sup>	35	35				
SEAB	3VA4112-4ED34-0AA0	25	25				
SEAS	3VA5112-4E#31-0AA0 <sup>4)</sup>	25	25				
150	CDAE	3VA6115-7##31-0AA0	100				100

Converter			Protective device				
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)</sup>	SCCR / kA @ 480 V	SCCR / kA @ 480Y/277V AC
				CFAS	3VA5215-7E#31-0AA0 <sup>4)</sup>	100	100
				EDAE	3VA6115-0##31-0AA0	100	100
				HDAE	3VA6115-6##31-0AA0	65	65
				HFAS	3VA5215-6E#31-0AA0 <sup>4)</sup>	65	65
				LDAE	3VA6115-8##31-0AA0	100	100
				MDAE	3VA6115-5##31-0AA0	35	35
				MFAS	3VA5215-5E#31-0AA0 <sup>4)</sup>	35	35
	75 hp	6SL4113-2..27-2.F0	150	CDAE	3VA6115-7##31-0AA0	100	100
				CFAS	3VA5215-7E#31-0AA0 <sup>4)</sup>	100	100
				EDAE	3VA6115-0##31-0AA0	100	100
				HDAE	3VA6115-6##31-0AA0	65	65
				HFAS	3VA5215-6E#31-0AA0 <sup>4)</sup>	65	65
				LDAE	3VA6115-8##31-0AA0	100	100
				MDAE	3VA6115-5##31-0AA0	35	35
FSF1	100 hp	6SL4113-2..30-2.F0	150	CDAE	3VA6115-7##31-0AA0	100	100
				CFAS	3VA5215-7E#31-0AA0	100	100
				EDAE	3VA6115-0##31-0AA0	100	100
				HDAE	3VA6115-6##31-0AA0	65	65
				HFAS	3VA5215-6E#31-0AA0	65	65
				LDAE	3VA6115-8##31-0AA0	100	100
				MDAE	3VA6115-5##31-0AA0	35	35

Converter			Protective device				
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)</sup>	SCCR / kA @ 480 V	SCCR / kA @ 480Y/277V AC
			250	MFAS	3VA5215-5E#31-0AA0	35	35
				CFAE	3VA6225-7##31-0AA0	100	100
				CFAS	3VA5225-7E#31-0AA0	100	100
				CJAS	3VA5325-7E#31-0AA0	100	100
				EFAE	3VA6225-0##31-0AA0	100	100
				HFAE	3VA6225-6##31-0AA0	65	65
				HFAS	3VA5225-6E#31-0AA0	65	65
				HJAS	3VA5325-6E#31-0AA0	65	65
				LFAE	3VA6225-8##31-0AA0	100	100
				MFAE	3VA6225-5##31-0AA0	35	35
				MFAS	3VA5225-5E#31-0AA0	35	35
				MJAS	3VA5325-5E#31-0AA0	35	35
	125 hp	6SL4113-2..31-2.F0	175	CFAS	3VA5217-7E#31-0AA0	100	100
				HFAS	3VA5217-6E#31-0AA0	65	65
				MFAS	3VA5217-5E#31-0AA0	35	35
			250	CFAE	3VA6225-7##31-0AA0	100	100
				CFAS	3VA5225-7E#31-0AA0	100	100
				CJAS	3VA5325-7E#31-0AA0	100	100
				EFAE	3VA6225-0##31-0AA0	100	100
				HFAE	3VA6225-6##31-0AA0	65	65
				HFAS	3VA5225-6E#31-0AA0	65	65
				HJAS	3VA5325-6E#31-0AA0	65	65
				LFAE	3VA6225-8##31-0AA0	100	100
				MFAE	3VA6225-5##31-0AA0	35	35
MFAS	3VA5225-5E#31-0AA0	35	35				
MJAS	3VA5325-5E#31-0AA0	35	35				

Converter			Protective device				
Frame size	P <sub>rated</sub> (LO)	Article no.	I <sub>rated</sub> / A	UL/CSA type	Article no. Example (European) <sup>1) 2) 3)</sup>	SCCR / kA @ 480 V	SCCR / kA @ 480Y/277V AC
	150 hp	6SL4113-2..33-2.F0	200	CFAS	3VA5220-7E#31-0AA0	100	100
				HFAS	3VA5220-6E#31-0AA0	65	65
				MFAS	3VA5220-5E#31-0AA0	35	35
			250	CFAE	3VA6225-7##31-0AA0	100	100
				CFAS	3VA5225-7E#31-0AA0	100	100
				CJAS	3VA5325-7E#31-0AA0	100	100
				EFAE	3VA6225-0##31-0AA0	100	100
				HFAE	3VA6225-6##31-0AA0	65	65
				HFAS	3VA5225-6E#31-0AA0	65	65
				HJAS	3VA5325-6E#31-0AA0	65	65
				LFAE	3VA6225-8##31-0AA0	100	100
				MFAE	3VA6225-5##31-0AA0	35	35
				MFAS	3VA5225-5E#31-0AA0	35	35
				MJAS	3VA5325-5E#31-0AA0	35	35

<sup>1)</sup> .. stands for type of electrical connection and can be replaced by: 10 (screw terminal); 20 (spring type terminal)

<sup>2)</sup> ## stands for type of release and can be replaced by: HL (line protection LI), HM (line protection LIG), HN (Line and generator protection LSI), JP (Line and generator protection LSI, with display), JQ (Line and generator protection LSI, with display), KP (Line and generator protection LSI, with display, with measurement function), KQ (Line and generator protection LSI, with display, with measurement function)

<sup>3)</sup> SIEMENS circuit breaker (DIVQ/7)

<sup>4)</sup> # stands for type of release and can be replaced by: C (fixed thermal adjustable magnetic trip unit), D (fixed thermal fixed magnetic trip unit) or F (adjustable thermal adjustable magnetic trip unit)

## 3 Further Information

Further information is available on the internet:

SENTRON Fuse Systems, configuration manual

<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>

SIRIUS 3RV Motor Starter Protectors

<https://support.industry.siemens.com/cs/ww/en/view/60279172>

3VA molded case circuit breakers with IEC certificate

<https://support.industry.siemens.com/cs/us/en/view/90318775>

3VA UL / IEC molded case circuit breakers

<https://support.industry.siemens.com/cs/us/en/view/109758561>

UL Molded Case Circuit Breakers, SENTRON & VL series, see Siemens SPEEDFAX Product Catalog, Section 7

<https://digitalcontentcenter.compas.siemens-info.com/SF-17-Sect-07-ALL-web.pdf>