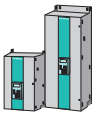
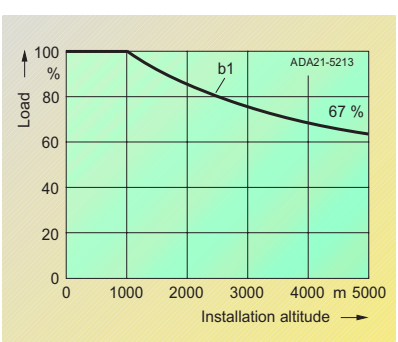


3-ph. AC 400 V, 15 A to 125 A, 4Q

Type		6RA70□□-6DV62-0				
		13	18	25	28	31
Rated supply voltage armature [1]	V	3-ph. AC 400 (+15 % / –20 %)				
Rated input current armature [2]	A	13	25	50	75	104
Rated supply voltage electronics supply	V	2-ph. AC 380 (–25 %) to 460 (+15 %); I_n = 1 A or 1-ph. AC 190 (–25 %) to 230 (+15 %); I_n = 2 A (–35 % for 1 min)				
Rated supply voltage field [1]	V	2-ph. AC 400 (+15 % / –20%) [6]				
Rated frequency	Hz	45 to 65 [9]				
Rated DC voltage [1]	V	420				
Rated DC current	A	**15**	**30**	**60**	**90**	**125**
Overload capability [5]		Max. 1.8 times rated DC current				
Rated output	kW	6.3	12.6	25	38	52.5
Power loss at rated DC current (approx.)	W	117	163	240	312	400
Rated DC voltage field [1]	V	Max. 325				
Rated DC current field	A	**3**	**5**	**10**		
Operational ambient temperature	°C	0 to 45 at I_{rated} [3] self-cooled				
Storage and transport temperature	°C	–25 to +70				
Installation altitude above sea level		≤ 1000 m at rated DC current [4]				
Dimensions (H x W x D)	mm	385 x 265 x 239		385 x 265 x 283		
See dimension drawing on Page		8/6				
Weight (approx.)	kg	11	11	14	14	16

4) Load values K2 as a function of installation altitude (see P077 Operating Instructions, Section 11);
Overall reduction factor K = K1 * K2
(for K1 see Footnote 3).



Curve b1: Reduction factor of load values (DC current) at installation altitudes above 1000 m.

Installation altitude m	1000	2000	3000	4000	5000
Reduction factor K2	1.0	0.835	0.74	0.71	0.67

The supply voltages for all electric circuits are possible for site altitudes up to 5000 m with basic insulation,
with the exception of converters for 830 V rated supply voltage:
up to 4000 m 830 V
up to 4500 m 795 V
up to 5000 m 727 V

5) See Section 5.

6) 2-ph. AC 460 (+15% / –20%) is also permissible.

8) For UL systems, a Siemens motor protection circuit-breaker Type 3RV1011-0KA1 or 3RV1011-1AA1, adjusted to 1.25 A for the fan motor Type RH28M-2DK.3F.1R must be installed in 6RA7090, 6RA7091, 6RA7093 and 6RA7095 converters with a rated voltage of 400 V or 575 V.

9) Operation in the extended frequency range of 23 Hz to 110 Hz is possible on request.

Technical Data

Converters for four-quadrant operation

3-ph. AC 400 V, 210 A to 600 A, 4Q

Type		6RA70□□-6DV62-0			
		75	78	81	85
Rated supply voltage armature [1]	V	3-ph. AC 400 (+15 % / –20 %)			
Rated input current armature [2]	A	175	233	332	498
Rated supply voltage electronics supply	V	2-ph. AC 380 (–25%) to 460 (+15%); I_n=1 A or 1-ph. AC 190 (–25%) to 230 (+15%); I_n=2 A (–35% for 1 min)			
Rated supply voltage fan	V	24 V DC internal		3-ph. AC 400 (±15%) 50 Hz 3-ph. AC 460 (±10%) 60 Hz	
Nominal fan current	A			0.3 [7]	
Air flow rate	m³/h	100		570	
Fan noise level	dBA	40		73	
Rated supply voltage field [1]	V	2-ph. AC 400 (+15 % / –20%) [6]			
Rated frequency	Hz	45 to 65 [9]			
Rated DC voltage [1]	V	420			
Rated DC current	A	**210**	**280**	**400**	**600**
Overload capability [5]		Max. 1.8 times rated DC current			
Rated output	kW	88	118	168	252
Power loss at rated DC current (approx.)	W	676	800	1328	1800
Rated DC voltage field [1]	V	Max. 325			
Rated DC current field	A	**15**		**25**	
Operational ambient temperature	°C	0 to 40 at I_{rated} [3] separately cooled			
Storage and transport temperature	°C	–25 to +70			
Installation altitude above sea level		≤ 1000 m at rated DC current [4]			
Dimensions (H x W x D)	mm	385 x 265 x 283		625 x 268 x 318	
See dimension drawing on Page		8/6		8/7	
Weight (approx.)	kg	16	17	30	

1) The armature/field supply voltage can be less than the rated supply voltage armature/field (set with Parameter P078; for converters with 400 V rated voltage, input voltages of up to 85 V are permissible). The output voltage is reduced accordingly. The specified output DC voltage can be guaranteed up to undervoltages 5 % below the supply voltage (rated supply voltage armature/field).

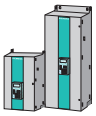
2) Values apply to output rated DC current.

3) Load factor K1 (DC current) as a function of the coolant temperature (see P077 Operating Instructions, Section 11).
K1 > 1 only permissible where K1 * K2 ≤ 1st. overall reduction factor K = K1 * K2
(for K2 see Footnote 4).

Ambient or coolant temperature	Load factor K1	
	In devices with self-cooling	In devices with enhanced cooling
≤ +30 °C	1.18	1.10
+35 °C	1.12	1.05
+40 °C	1.06	1.00
+45 °C	1.00	0.95
+50 °C	0.94	0.90 [a]
+55 °C	0.88	
+60 °C	0.82 [b]	

a) In spite of derating, converters of ≥ 400 A with enhanced cooling may be operated at an ambient or coolant temperature of 50 °C only if the rated supply voltage of the converter fan is safely within the limited tolerance range of 400 V +10% –15%.

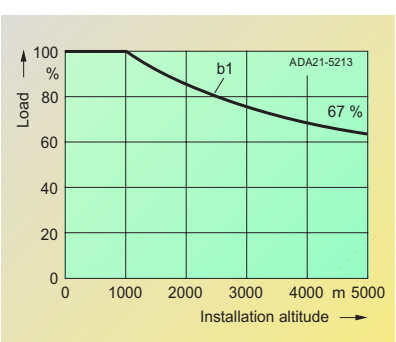
b) Not permissible when T400 or OP1S are used.



3-ph. AC 400 V, 850 A to 2000 A, 4Q

Type		6RA70□□-6DV62-0			6RA70□□-4DV62-0	
		87	91		93	95
Rated supply voltage armature [1]	V	3-ph. AC 400 (+15 % / –20 %)				
Rated input current armature [2]	A	705	995		1326	1658
Rated supply voltage electronics supply	V	2-ph. AC 380 (–25%) to 460 (+15%); I_n=1 A or 1-ph. AC 190 (–25%) to 230 (+15%); I_n=2 A (–35% for 1 min)				
Rated supply voltage fan	V	3-ph. AC 400 (±15%) 50 Hz 3-ph. AC 460 (±10%) 60 Hz	3-ph. AC 400 (±10%) 50 Hz 3-ph. AC 460 (±10%) 60 Hz		3-ph. AC 400 (±10%) 50 Hz 3-ph. AC 460 (±10%) 60 Hz	
			50 Hz	60 Hz	50 Hz	60 Hz
Nominal fan current	A	0.3 [7]	1.0 [8]	1.25 [8]	1.0 [8]	1.25 [8]
Air flow rate	m^3/h	570	1300	1300	2400	2400
Fan noise level	dBA	73	83	87	83	87
Rated supply voltage field [1]	V	2-ph. AC 400 (+15 % / –0%) [6]				
Rated frequency	Hz	45 to 65 [9]				
Rated DC voltage [1]	V	420				
Rated DC current	A	**850**	**1200**		**1600**	**2000**
Overload capability [5]		Max. 1.8 times rated DC current				
Rated output	kW	357	504		672	840
Power loss at rated DC current (approx.)	W	2420	4525		5708	6810
Rated DC voltage field [1]	V	Max. 325				
Rated DC current field	A	**30**			**40**	
Operational ambient temperature	°C	0 to 40 at I_{rated} [3] separately cooled				
Storage and transport temperature	°C	–25 to +70				
Installation altitude above sea level		≤ 1000 m at rated DC current [4]				
Dimensions (H x W x D)	mm	700 x 268 x 362	780 x 410 x 362		880 x 450 x 500	
See dimension drawing on Page		8/7	8/8			
Weight (approx.)	kg	45	85		145	

4) Load values K2 as a function of the installation altitude (see P077 Operating Instructions, Section 11);
Overall reduction factor K = K1 * K2
(for K1 see Footnote 3).



Curve b1: Reduction factor of load values (DC current) at installation altitudes above 1000 m.

Installation altitude m	1000	2000	3000	4000	5000
Reduction factor K2	1.0	0.835	0.74	0.71	0.67

The supply voltages for all electric circuits are possible for site altitudes up to 5000 m with basic insulation,
with the exception of converters for 830 V rated supply voltage:
up to 4000 m 830 V
up to 4500 m 795 V
up to 5000 m 727 V

5) See Section 5.

6) 2-ph. AC 460 (+15% / –20%) is also permissible.

7) For UL systems, a Siemens motor protection circuit-breaker Type 3RV1011-0DA1 or 3RV1011-0EA1, adjusted to 0.3 A for the fan motor Type R2D220-AB02-19 must be installed in 6RA7081, 6RA7085 and 6RA7087 converters with a rated voltage of 400 V or 575 V.

8) For UL systems, a Siemens motor protection circuit-breaker Type 3RV1011-0KA1 or 3RV1011-1AA1, adjusted to 1.25 A for the fan motor Type RH28M-2DK.3F.1R must be installed in 6RA7090, 6RA7091, 6RA7093 and 6RA7095 converters with a rated voltage of 400 V or 575 V.

9) Operation in the extended frequency range of 23 Hz to 110 Hz is possible on request.