

Order No.	6RA22...-8DD21-				6RA22...-8DD21-			
	03	11	16	21	03	11	16	21

Converters for single-phase connection and single-quadrant operation (B2HK)									
Rated supply voltage ³⁾	V	2-ph. 230 (+10%/-10%)				2-ph. 400 (+10%/-10%)			
Rated frequency		Automatic adaptation 45 to 65 Hz							
Rated DC voltage	V	180				315			
Rated direct current	A	5	12	22	40	5	12	22	40
Rated output	kW	0.9	2.2	4.0	7.2	1.6	3.8	6.9	12.6
Power loss at rated direct current (approx.)	W	30	50	80	135	30	50	80	135
Rated supply voltage, field	V	max. 2-ph. 400 V (+10%) at U2-V2							
Rated DC voltage, field	V	340							
Rated current, field	A	1.5	1.5	5.0	5.0	1.5	1.5	5.0	5.0
Ambient in-service temperature ⁵⁾	° C	0 to 45° at rated DC							
Temperature during storage and transportation	° C	-30 to +85							
Site altitude above sea level ⁶⁾	m	≤ 1 000 at rated DC							
Control stability ⁴⁾		0.1% of rated speed							
Humidity rating DIN 40 040, SN 26 556		F							
Degree of protection DIN 40 050, IEC 144		IP 00							
Dimensions		See dimension drawings							
Weight (approx.) ¹⁾	kg	2.2	2.2	2.8	4.4	2.2	2.2	2.8	4.4
Weight (approx.) ²⁾	kg	1.25	1.25	1.6	3.6	1.25	1.25	1.6	3.6
Mounting width (basic grid dimension) ²⁾		22	22	36	50	22	22	36	50

1) For converters with enclosure: 6RA22...-8DD21-1

2) For draw-out converters: 6RA22...-8DD21-0

3) The rated output voltage for the armature and field circuits is reached at 5% undervoltage in the line-side supply. If the rated input voltage value is present, the output voltage value will be 5% higher. If the undervoltage is more than 5%, the output voltage must be reduced linearly.

4) Conditions:

The control stability is referred to the rated motor speed and applies to SIMOREG K units at operating temperature.

The following conditions apply:

- Temperature fluctuations of $\pm 10^\circ \text{ K}$
- Line voltage fluctuations of +10% -5% of rated supply voltage
- Load fluctuations of up to 100% of maximum torque
- Temperature coefficient of temperature-compensated tachogenerator 0.15% per 10° K
- Constant setpoint

5) Load values as a function of coolant temperature

Ambient or coolant temperature	Derating in units with natural air cooling
+35° C	
+40° C	
+45° C	0 %
+50° C	-6 %
+55° C	-11 %
+60° C	-18 %

6) Load values as a function of site altitude

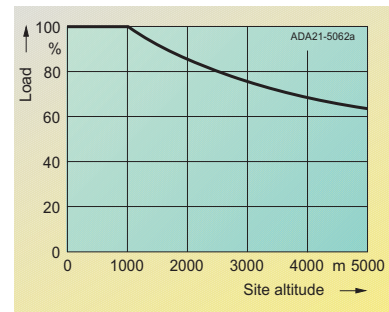


Fig. 1/6

Order No.	6RA22...8DK27-..				6RA22...8DK27-..			
	03	11	16	21	03	11	16	21

Converters for single-phase connection and four-quadrant operation (B2)/A(B2)/C									
Rated supply voltage ³⁾	V	2-ph. 230 (+10%/-10%)				2-ph. 400 (+10%/-10%)			
Rated frequency		Automatic adaptation 45 to 65 Hz							
Rated DC voltage	V	150				260			
Rated direct current	A	5	12	22	40	5	12	22	40
Rated output	kW	0.75	1.8	3.3	6	1.3	3.1	5.7	10.4
Power loss at rated direct current (approx.)	W	35	60	85	140	35	60	85	140
Current input, terminals U2-V2	mA	80							
Ambient in-service temperature ⁵⁾	° C	0 to 45							
Temperature during storage and transportation	° C	-30 to +85							
Site altitude above sea level ⁶⁾	m	≤ 1 000 at rated DC							
Control stability ⁴⁾		0.1% of rated speed							
Humidity rating DIN 40 040, SN 26 556		F							
Degree of protection DIN 40 050, IEC 144		IP 00							
Dimensions		See dimension drawings							
Weight (approx.) ¹⁾	kg	2.8	2.8	3.1	5.4	2.8	2.8	3.1	5.4
Weight (approx.) ²⁾	kg	1.8	1.8	2.1	4.1	1.8	1.8	2.1	4.1
Number of required slots ²⁾		22	22	52	66	22	22	52	66

1) For converters with enclosure: 6RA22...8DK27-1

2) For draw-out converters: 6RA22...8DK27-0

3) The rated output voltage for the armature and field circuits is reached at 5% undervoltage in the line-side supply. If the rated input voltage value is present, the output voltage value will be 5% higher. If the undervoltage is more than 5%, the output voltage must be reduced linearly.

4) Conditions:
The control stability is referred to the rated motor speed and applies to SIMOREG K units at operating temperature.

The following conditions apply:

- Temperature fluctuations of $\pm 10^\circ \text{ K}$
- Line voltage fluctuations of +10% -5% of rated supply voltage
- Load fluctuations of up to 100% of maximum torque
- Temperature coefficient of temperature-compensated tachogenerator 0.15% per 10° K
- Constant setpoint

5) Load values as a function of coolant temperature

Ambient or coolant temperature	Derating in units with natural air cooling
+35° C	
+40° C	
+45° C	0 %
+50° C	-6 %
+55° C	-11 %
+60° C	-18 %

6) Load values as a function of site altitude

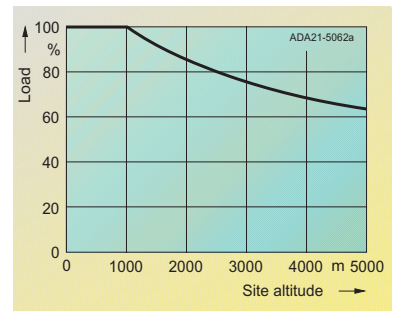


Fig. 1/7

Order No.	6RA22...-8DS31									
	20	23	26	30	32	33	76	80	83	
Converters for three-phase connection and single-quadrant operation (B6C)										
Rated supply voltage Power 1)	V	3-ph. 400 (+10%/-15%)								
Rated supply voltage Electronics power supply	V	3-ph. 400 (+35%/-20%), 40 mA								
Rated supply voltage Fan	V						2-ph. 230 (+10% / -10%) 0.12 A Air flow rate 160 m³/h	2-ph. 230 (+10%/ -10%) 0.24 A 320 m³/h		
Rated supply voltage, field	V	2-ph. max. 400 (+35%)								
Rated frequency	Hz	Automatic adaptation 45 to 65								
Rated DC voltage	V	485								
Rated direct current	A	35	50	70	110	130	160	240	350	500
Rated output	kW	17	24	34	53	63	78	116	170	242
Power loss at rated direct current (approx.)	W	130	170	230	350	410	500	760	1 100	1 580
Rated DC voltage, field	V	340								
Rated direct current, field	A	8	8	8	8	8	8	15	15	15
Ambient in-service temperature 3)	° C	0 to 45 at rated DC, natural air cooling					0 to 35 at rated DC, forced-air cooling			
Temperature during storage and transportation	° C	-30 to +85								
Site altitude above sea level 4)	m	≤ 1 000 at rated DC								
Control stability 2)		Δn = 0.1% of rated speed								
Humidity rating DIN 40 040, SN 26 556		F								
Degree of protection DIN 40 050, IEC 144		IP 00								
Dimensions		See dimension drawings								
Weight (approx.)	kg	4.4	4.4	6.5	10.3	10.8	12.4	22.2	24	30

1) The rated output voltage for the armature and field circuits is reached at 5% undervoltage in the line-side supply. If the rated input voltage value is present, the output voltage value will be 5% higher. If the undervoltage is more than 5%, the output voltage must be reduced linearly.

2) Conditions:
The control stability is referred to the rated motor speed and applies to SIMOREG K units at operating temperature.

The following conditions apply:

- Temperature fluctuations of $\pm 10^\circ \text{K}$
- Line voltage fluctuations of +10% -5% of rated supply voltage
- Load fluctuations of up to 100% of maximum torque
- Temperature coefficient of temperature-compensated tachogenerator 0.15% per 10°K
- Constant setpoint

3) Load values as a function of coolant temperature

Ambient or coolant temperature	Derating in units with natural air cooling	Derating in units with forced – air cooling
+35° C		0%
+40° C		-6%
+45° C	0%	-12%
+50° C	-6%	-17%
+55° C	-11%	
+60° C	-18%	

4) Load values as a function of site altitude

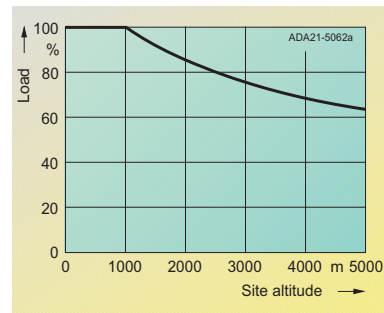


Fig. 1/8

Order No.	6RA22...-8DV71									
	20	23	26	30	32	33	76	80	83	
Converters for three-phase connection and four-quadrant operation (B6)A(B6)C										
Rated supply voltage Power ¹⁾	V	3-ph. 400 (+15%/-10%)								
Rated supply voltage Electronics power supply	V	3-ph. 400 (+35%/-20%), 40 mA								
Rated supply voltage Fan	V						2-ph. 230 (+10%/-10%) 0.24 A Air flow rate 320 m³/h			
Rated supply voltage, field	V	2-ph. max. 400 (+35%)								
Rated frequency	Hz	Automatic adaptation 45 to 65								
Rated DC voltage	V	420								
Rated direct current	A	35	50	70	110	130	160	240	350	500
Rated output	kW	14.7	21	29	46	55	67	100	147	210
Power loss at rated direct current (approx.)	W	130	170	230	350	410	500	780	1 130	1 580
Rated DC voltage, field	V	340								
Rated direct current, field	A	8	8	8	8	8	8	15	15	15
Ambient in-service temperature ³⁾	° C	0 to 45 at rated DC, natural air cooling					0 to 35 at rated DC, forced-air cooling			
Temperature during storage and transportation	° C	-30 to +85								
Site altitude above sea level ⁴⁾	m	≤ 1 000 at rated DC								
Control stability ²⁾		Δn = 0.1 % of rated speed								
Humidity rating DIN 40 040, SN 26 556		F								
Degree of protection DIN 40 050, IEC 144		IP 00								
Dimensions		See dimension drawings								
Weight (approx.)	kg	5.4	5.4	7.3	15.4	15.9	17.5	22.2	24	30

- 1) The rated output voltage for the armature and field circuits is reached at 5% undervoltage in the line-side supply. If the rated input voltage value is present, the output voltage value will be 5% higher. If the undervoltage is more than 5%, the output voltage must be reduced linearly.
- 2) Conditions:
The control stability is referred to the rated motor speed and applies to SIMOREG K units at operating temperature.
- The following conditions apply:
- Temperature fluctuations of $\pm 10^\circ \text{K}$
 - Line voltage fluctuations of +10% -5% of rated supply voltage
 - Load fluctuations of up to 100% of maximum torque
 - Temperature coefficient of temperature-compensated tachogenerator 0.15% per 10°K
 - Constant setpoint

- 3) Load values as a function of coolant temperature

Ambient or coolant temperature	Derating in units with natural air cooling	Derating in units with forced-air cooling
+35° C		0%
+40° C		-6%
+45° C	0%	-12%
+50° C	-6%	(-17%)
+55° C	-11%	
+60° C	-18%	

- 4) Load values as a function of site altitude

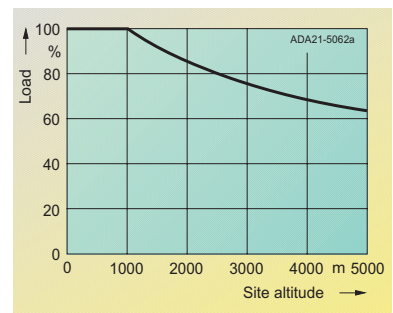


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