

SIMOREG 6RA70 DC MASTER

Technical Data



Converters for single-quadrant operation

3-ph. AC 830 V, 900 A to 1900 A, 1Q and 3-ph. AC 950 V, 2200 A, 1Q

Type	6RA70□□-6LS22-0	6RA70□□-4LS22-0		6RA70□□-4MS22-0
Rated supply voltage armature ¹⁾	V	88		96
		3-ph. AC 830 (+10% / -20%)		3 AC 950 (+15%/-20%)
Rated input current armature ²⁾	A	746	1244	1575
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 (±10%) 50 Hz 3-ph. AC 460 (±10%) 60 Hz		3-ph. AC 400 (±10%) 50 Hz 3-ph. AC 460 (±10%) 60 Hz
Nominal fan current	A	1.0 ⁸⁾	1.25 ⁸⁾	1.0 ⁸⁾
Air flow rate	m ³ /h	1300	1300	2400
Fan noise level	dBA	83	87	87
Rated supply voltage field ¹⁾	V	2-ph. AC 460 (+15 % / -20 %)		
Rated frequency	Hz	45 to 65 ⁹⁾		
Rated DC voltage ¹⁾	V	1000		1140
Rated DC current	A	900	1500	1900
			2200	
Overload capability ⁵⁾		Max. 1.8 times rated DC current		
Rated output	kW	900	1500	1900
Power loss at rated DC current (approx.)	W	4638	6778	8700
Rated DC voltage field ¹⁾	V	Max. 375		
Rated DC current field	A	30	40	85
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	780 x 410 x 362	880 x 450 x 500	
See dimension drawing on Page		9/4	9/5	9/6
Weight (approx.)	kg	80	125	

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.

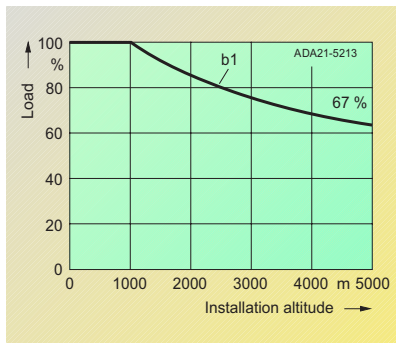
3) Load factor K1 (DC current) as a function of the coolant temperature (see P077 Operating Instructions, Section 11).
K1 > 1 only permissible where $K1 * K2 \leq 1.2$.
overall reduction factor $K = K1 * K2$
(for K2 see Footnote 4).

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.

- 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 rated supply voltages:

Installation-altitude	Rated supply voltage	
	830 V	950 V
up to 4000 m	max. 830 V	950 V
up to 4500 m	max. 795 V	933 V
up to 5000 m	max. 727 V	881 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.