

Technical data

MICROMASTER 430 inverter

Mains voltage and Power ranges	3 AC 380 V to 480 V \pm 10 %	7.5 kW to 250 kW (variable torque)		
Power frequency	47 Hz to 63 Hz			
Output frequency	7.5 kW to 90 kW 110 kW to 250 kW	0 Hz to 650 Hz 0 Hz to 267 Hz		
Power factor	\geq 0.95			
Inverter efficiency	7.5 kW to 90 kW 110 kW to 250 kW	96 % to 97 % 97 % to 98 % (Further information is available on the Internet at: http://support.automation.siemens.com/WW/view/en/22978972)		
Overload capability	7.5 kW to 90 kW 110 kW to 250 kW	Overload current 1.4 x rated output current (i.e. +140 % overload capability) for 3 s, and 1.1 x rated output current (i.e. 110 % overload capability) for 60 s, cycle time 300 s Overload current 1.5 x rated output current (i.e. 150 % overload capability) for 1 s and 1.1 x rated output current (i.e. 110 % overload capability) for 60 s, cycle time 300 s		
Inrush current	Less than rated input current			
Control method	Linear V/f characteristic; quadratic V/f characteristic; multipoint characteristic (programmable V/f characteristic); flux current control (FCC), energy saving mode			
Pulse frequency	7.5 kW to 90 kW 110 kW to 250 kW	4 kHz (standard) 2 kHz to 16 kHz (in 2 kHz steps) 2 kHz (standard) 2 kHz to 4 kHz (in 2 kHz steps)		
Fixed frequencies	15, programmable			
Skip frequency ranges	4, programmable			
Setpoint resolution	0.01 Hz digital; 0.01 Hz serial; 10 bit analog			
Digital inputs	6 fully programmable isolated digital inputs; switchable PNP/NPN			
Analog inputs	2 programmable analog inputs • 0 V to 10 V, 0 mA to 20 mA and -10 V to +10 V (AIN1) • 0 V to 10 V and 0 mA to 20 mA (AIN2) • both can be used as 7th/8th digital input			
Relay outputs	3, programmable, 30 V DC/5 A (resistive load); 250 V AC/2A (inductive load)			
Analog outputs	2, programmable (0/4 mA to 20 mA)			
Serial interfaces	RS-485, optional RS-232			
Motor cable length	7.5 kW to 90 kW without output choke with output choke 110 kW to 250 kW without output choke with output choke	max. 50 m (shielded); max. 100 m (unshielded) see variant dependent options max. 200 m (shielded); max. 300 m (unshielded) see variant dependent options		
Electromagnetic compatibility	7.5 kW to 90 kW For inverters without filter 7.5 kW to 15 kW 18.5 kW to 90 kW 110 kW to 250 kW	Inverter with internal filter Class A available EMC filter, Class B to EN 55 011 available as an option EMC filter, Class B from Schaffner available as an option EMC filter, Class A available as an option		
Braking	DC braking, compound braking			
Degree of protection	IP20			
Operating temperature range	7.5 kW to 90 kW 110 kW to 250 kW	-10 °C to +40 °C (+14 °F to +104 °F) 0 °C to +40 °C (+32 °F to +104 °F)		
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)			
Relative humidity	95 % (non-condensing)			
Installation altitude	7.5 kW to 90 kW 110 kW to 250 kW	Up to 1000 m above sea level without derating Up to 2000 m above sea level without derating		
Standard SCCR (Short Circuit Current Rating) ¹⁾	FSC: 10 kA FSD, FSE, FSF, FSFX, FSGX: 42 kA			
Protection features for	undervoltage, overvoltage, overload, earth faults, short-circuits, stall prevention, locked motor protection, motor overtemperature, inverter overtemperature, parameter change protection			
Conformity with standards	7.5 kW to 90 kW 110 kW to 250 kW	Ⓜ, cⓂ, CE, c-tick Ⓜ available soon, cⓂ available soon, CE		
CE marking	Conformity with low-voltage directive 73/23/EEC			
Cooling-air volumetric flow required, dimensions and weights (without options)	Frame size (FS)	Cooling-air volumetric flow required (l/s)/(CFM)	H x W x D (mm)	Weight, approx. (kg)
	C	54.9/116.3	245 x 185 x 195	5.7
	D	2 x 54.9/2 x 116.3	520 x 275 x 245	17
	E	2 x 54.9/2 x 116.3	650 x 275 x 245	22
	F without filter	150/317.79	850 x 350 x 320	56
	F with filter	150/317.79	1150 x 350 x 320	75
	FX	225/478.13	1400 x 326 x 356	116
	GX	440/935	1533 x 326 x 545	174

1) For footnote, see page 3/7.

CFM: Cubic Feet per Minute

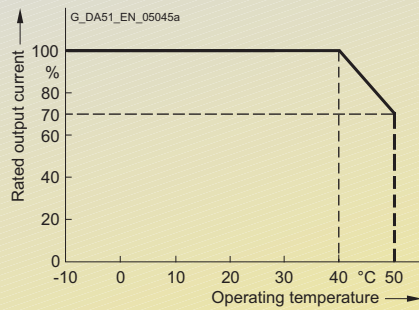
Derating data

Pulse frequency

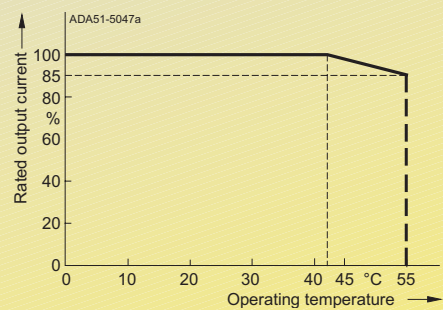
Output (for 3 AC 400 V) kW	Rated output current in A for a pulse frequency of							
	2 kHz	4 kHz	6 kHz	8 kHz	10 kHz	12 kHz	14 kHz	16 kHz
7.5	19.0	19.0	17.1	15.2	13.3	11.4	9.5	7.6
11.0	26.0	26.0	24.7	23.4	20.8	18.2	15.6	13.0
15.0	32.0	32.0	28.8	25.6	22.4	19.2	16.0	12.8
18.5	38.0	38.0	36.1	34.2	30.4	26.6	22.8	19.0
22	45.0	45.0	40.5	36.0	31.5	27.0	22.5	18.0
30	62.0	62.0	55.8	49.6	43.4	37.2	31.0	24.8
37	75.0	75.0	71.3	67.5	60.0	52.5	45.0	37.5
45	90.0	90.0	81.0	72.0	63.0	54.0	45.0	36.0
55	110.0	110.0	93.5	77.0	63.3	49.5	41.3	33.0
75	145.0	145.0	123.3	101.5	83.4	65.3	54.4	43.5
90	178.0	178.0	138.0	97.9	84.6	71.2	62.3	53.4
110	205.0	180.4	–	–	–	–	–	–
132	250.0	220.0	–	–	–	–	–	–
160	302.0	265.8	–	–	–	–	–	–
200	370.0	325.6	–	–	–	–	–	–
250	477.0	419.8	–	–	–	–	–	–

Operating temperature

Inverter 7.5 kW to 90 kW



Inverter 110 kW to 250 kW



1) Applies to industrial control cabinet installations to NEC article 409/UL 508A.

For further information, visit us on the Internet at:

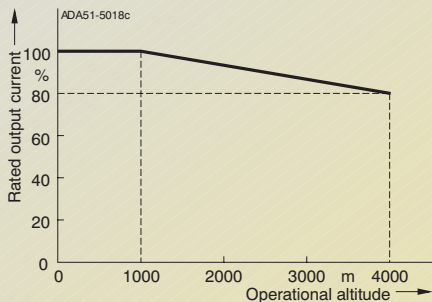
<http://support.automation.siemens.com/WW/view/en/23995621>

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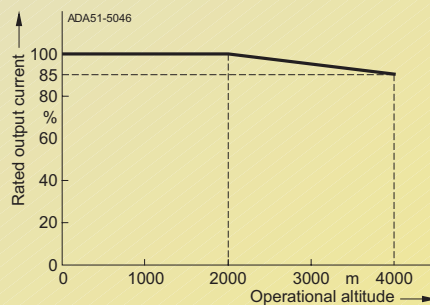
Derating data (continued)

Installation altitude above sea level

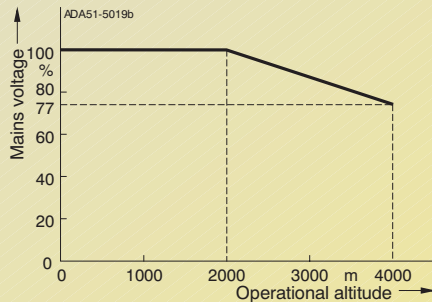
Permissible output current
in % of the rated output current
Inverter 7.5 kW to 90 kW



Inverter 110 kW to 250 kW



Permissible mains voltage
in % of the max. possible mains voltage
Inverter 7.5 kW to 90 kW



Inverter 110 kW to 250 kW

