Inverter
MICROMASTER 440

4/2 Description
4/4 Circuit diagrams
4/6 Technical data
4/9 Selection and ordering data
4/12 Options
4/26 Dimension drawings

4

Description

Application

The MICROMASTER 440 inverter is suitable for a variety of variable-speed drive applications. Its flexibility provides for a wide spectrum of applications. These also include cranes and hoisting gear, high-bay warehouses, production machines for food, beverages and tobacco, packaging machines etc.; i.e. applications which require the frequency inverter to have a higher functionality and dynamic response than usual.

The inverter is especially characterized by its customer-oriented performance and ease-of-use. Its large mains voltage range enables it to be used all over the world.

Design

The MICROMASTER 440 inverter has a modular design. The operator panels and modules can be easily exchanged.

International standards

- The MICROMASTER 440 inverter complies with the requirements of the EU low-voltage guideline
- The MICROMASTER 440 inverter has the CE marking
- acc. to UL and cUL certified
- c-tick

Note:

- See Appendix for standards.

Main characteristics

- Easy, guided start-up
- Modular construction allows maximum configuration flexibility
- Six programmable isolated digital inputs
- Two scaleable analog inputs (0 V to 10 V, 0 mA to 20 mA) can also be used as a 7th/8th digital input
- Two programmable analog outputs (0 mA to 20 mA)
- Three programmable relay outputs (30 V DC/5 A resistive load; 250 V AC/2A inductive load)
- Low-noise motor operation thanks to high pulse frequencies, adjustable (observe derating if necessary)
- Complete protection for motor and inverter.

Options (overview)

- EMC filter, Class A/B
- LC filter and sinusoidal filter
- Line commutating chokes
- Output chokes
- Gland plates
- Basic Operator Panel (BOP) for parameterizing the inverter
- Plain text Advanced Operator Panel (AOP) with multi-language display
- Plain text Asian Advanced Operator Panel (AAOP) with Chinese and English display
- Plain text Cyrillic Advanced Operator Panel (CAOP) with Cyrillic, German and English display
- Communication modules
  – PROFIBUS
  – DeviceNet
  – CANopen
- Pulse encoder evaluation module
- PC connection kits
- Mounting kits for installing the operator panels in the control cabinet doors
- PC start-up tools executable under Windows 98 and NT/2000/ME/ XP Professional
- TIA integration with Drive ES.

Mechanical features

- Modular design
- Operating temperature
  0.12 kW to 75 kW:
  –10 °C to +50 °C
  (+14 °F to +122 °F)
  90 kW to 200 kW:
  0 °C to +40 °C
  (+32 °F to +104 °F)
- Compact housing as a result of high power density
- Easy cable connection, mains and motor connections are separated for optimum electromagnetic compatibility
- Detachable operator panels
- Screwless control terminals on detachable I/O board.

Performance features

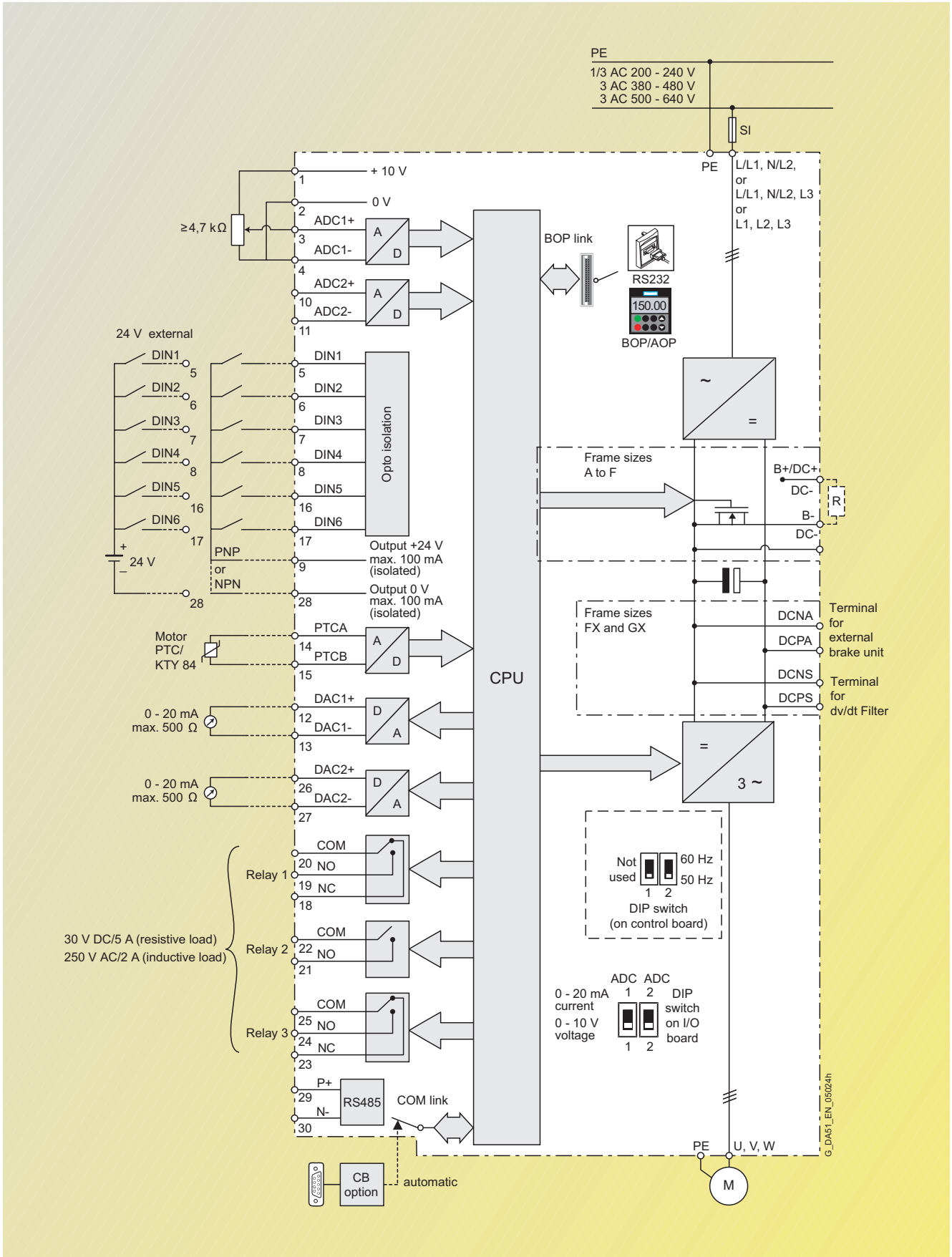
- Latest IGBT technology
- Digital microprocessor control
- High-quality Vector Control system
- Flux Current Control (FCC) for improved dynamic response and optimized motor control
- Linear *V/f* characteristic
- Quadratic *V/f* characteristic
- Multipoint characteristic (programmable *V/f* characteristic)
- Torque control
- Flying restart
- Slip compensation
- Automatic restart following mains failure or fault
- User-definable function blocks for logic and arithmetic operations
- Kinetic buffering
- Positioning ramp down
- High-grade PID controller for simple internal process control (autotuning)
- Programmable acceleration/deceleration, 0 s to 650 s
- Ramp smoothing
- Fast Current Limit (FCL) for trip-free operation
- Fast, repeatable digital input response time
- Fine adjustment using two high-resolution 10-bit analog inputs
- Compound braking for controlled rapid braking
- Integrated brake chopper (for 0.12 kW to 75 kW inverters)
- Four skip frequencies
- Removable “Y” capacitor for use on IT systems (with non-grounded mains supplies, the “Y” capacitor must be removed and an output choke installed).

Protection features

- Overload capability
  - **CT mode**
    0.12 kW to 75 kW:
    Overload current 1.5 x rated output current (i.e. 150 % overload capability) for 60 s, cycle time 300 s, and 2 x rated output current (i.e. 200 % overload capability) for 3 s, cycle time 300 s
    90 kW to 200 kW:
    Overload current 1.36 x rated output current (i.e. 136 % overload capability) for 57 s, cycle time 300 s, and 1.6 x rated output current (i.e. 160 % overload capability) for 3 s, cycle time 300 s
  - **VT mode**
    5.5 kW to 90 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
    110 kW to 250 kW:
    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 59 s, cycle time 300 s
- Overvoltage/undervoltage protection
- Inverter overtemperature protection
- Special direct connection for PTC or KTY to protect the motor
- Earth fault protection
- Short-circuit protection
- I^2t motor thermal protection
- Locked motor protection
- Stall prevention
- Parameter interlock.

Circuit diagrams

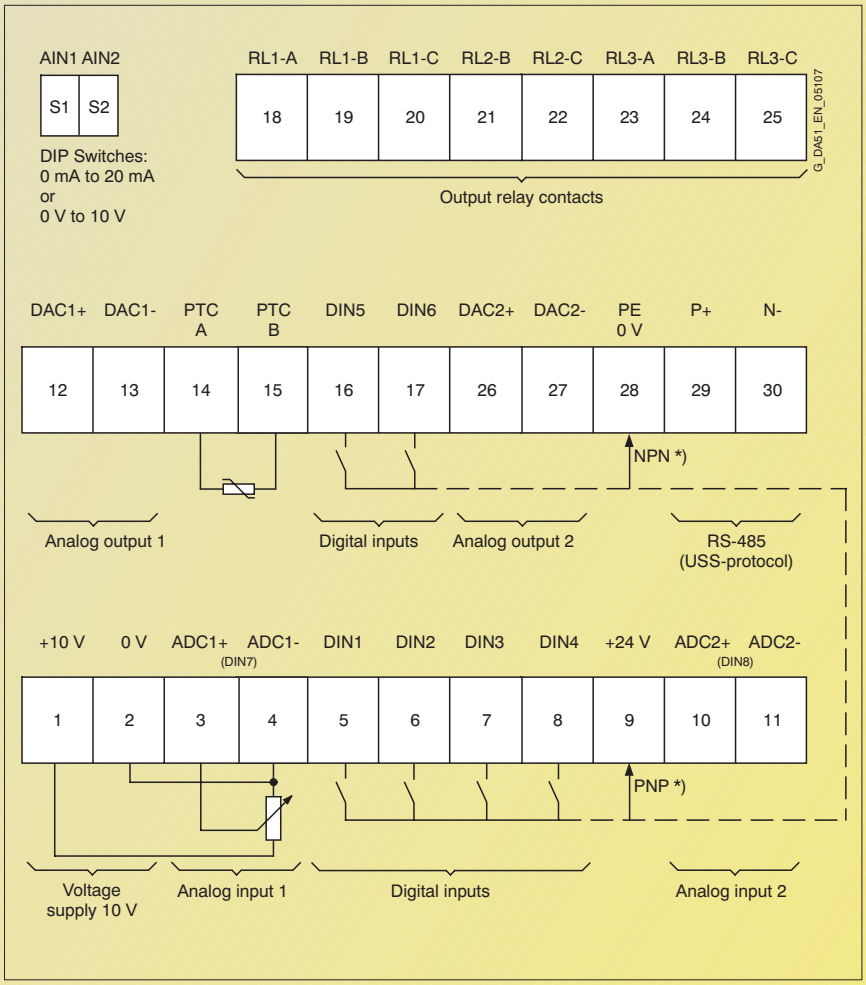
General circuit diagram



Terminal connection diagram

Example, frame size FX

View A



*) PNP or NPN possible

Technical data

MICROMASTER 440 inverter

Mains voltage and power ranges		**CT** (constant torque)	**VT** (variable torque)
	1 AC 200 V to 240 V ± 10 %	0.12 kW to 3 kW	–
	3 AC 200 V to 240 V ± 10 %	0.12 kW to 45 kW	5.5 kW to 55 kW
	3 AC 380 V to 480 V ± 10 %	0.37 kW to 200 kW	7.5 kW to 250 kW
	3 AC 500 V to 600 V ± 10 %	0.75 kW to 75 kW	1.5 kW to 90 kW
Input frequency		47 Hz to 63 Hz	
Output frequency	0.12 kW to 75 kW	0 Hz to 650 Hz (in *V/f* mode)	0 Hz to 200 Hz (in vector mode)
	90 kW to 200 kW	0 Hz to 267 Hz (in *V/f* mode)	0 Hz to 200 Hz (in vector mode)
Power factor		≥ 0.95	
Inverter efficiency		0.12 kW to 75 kW: 96 % to 97 %; 90 kW to 200 kW: 97 % to 98 % (Further information is available on the Internet at: http://support.automation.siemens.com/WW/view/en/22978972)	
Overload capability			
– CT mode	0.12 kW to 75 kW	Overload current 1.5 x rated output current (i.e. 150 % overload capability) for 60 s, cycle time 300 s and 2 x rated output current (i.e. 200 % overload capability) for 3 s, cycle time 300 s	
	90 kW to 200 kW	Overload current 1.36 x rated output current (i.e. 136 % overload capability) for 57 s, cycle time 300 s and 1.6 x rated output current (i.e. 160 % overload capability) for 3 s, cycle time 300 s	
– VT mode	5.5 kW to 90 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	
	110 kW to 250 kW	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 59 s, cycle time 300 s	
Inrush current		not higher than rated input current	
Control method		Vector control, torque control, linear *V/f* characteristic; quadratic *V/f* characteristic; Multipoint characteristic (programmable *V/f* characteristic); flux current control (FCC)	
Pulse frequency	0.12 kW to 75 kW	4 kHz (standard); 16 kHz (standard with 230 V inverters 0.12 kW to 5.5 kW) 2 kHz to 16 kHz (in 2 kHz steps)	
	90 kW to 200 kW	2 kHz (standard with VT mode); 4 kHz (standard with CT mode) 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 lengths	without output choke	0.12 – 75 kW: max. 50 m (shielded), max. 100 m (unshielded) 90 – 250 kW: max. 200 m (shielded), max. 300 m (unshielded)	
	with output choke	see variant dependent options	
Electromagnetic compatibility (see Selection and Ordering Data)		EMC filter, Class A or Class B to EN 55 011 available as an option Inverter with internal filter Class A available	
Braking		Resistance braking with DC braking, compound braking, integrated brake chopper (integrated brake chopper only with 0.12 kW to 75 kW inverters)	
Degree of protection		IP20	
Operating temperature (without derating)	0.12 kW to 75 kW	CT: –10 °C to +50 °C (+14 °F to +122 °F) VT: –10 °C to +40 °C (+14 °F to +104 °F)	
	90 kW to 200 kW	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	0.12 kW to 75 kW	up to 1000 m above sea level without derating	
	90 kW to 200 kW	up to 2000 m above sea level without derating	
Standard SCCR (Short Circuit Current Rating) [1]		FSA, FSB, 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 over-temperature, inverter overtemperature, parameter change protection	
Compliance with standards		UL, cUL, CE, c-tick	
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, max. (mm)	Weight, approx. (kg)
A	4.8/10.2	173 x 73 x 149	1.3
B	24/51	202 x 149 x 172	3.4
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 4/7.

CFM: Cubic Feet per Minute

Derating data

Pulse frequency

Output	**Rated output current in A** for a pulse frequency of						
kW	4 kHz	6 kHz	8 kHz	10 kHz	12 kHz	14 kHz	16 kHz
Mains voltage 1/3 AC 200 V							
0.12 to 5.5	Values correspond to the 4 kHz standard values. No derating, since 16 kHz standard.						
7.5	28.0	26.6	25.2	22.4	19.6	16.8	14.0
11	42.0	37.8	33.6	29.4	25.2	21.0	16.8
15	54.0	48.6	43.2	37.8	32.4	27.0	21.6
18.5	68.0	64.6	61.2	54.4	47.6	40.8	34.0
22	80.0	72.0	64.0	56.0	48.0	40.0	32.0
30	104.0	91.0	78.0	70.2	62.4	57.2	52.0
37	130.0	113.8	97.5	87.8	78.0	71.5	65.0
45	154.0	134.8	115.5	104.0	92.4	84.7	77.0
Mains operating voltage 3 AC 400 V							
0.37	1.3	1.3	1.3	1.3	1.3	1.2	1.0
0.55	1.7	1.7	1.7	1.6	1.5	1.4	1.2
0.75	2.2	2.2	2.2	2.0	1.8	1.5	1.3
1.1	3.1	2.9	2.8	2.5	2.2	1.9	1.6
1.5	4.1	3.7	3.3	2.9	2.5	2.1	1.6
2.2	5.9	5.6	5.3	4.7	4.1	3.5	3.0
3.0	7.7	6.9	6.2	5.4	4.6	3.9	3.1
4.0	10.2	9.2	8.2	7.1	6.1	5.1	4.1
5.5	13.2	11.9	10.6	9.2	7.9	6.6	5.3
7.5	19.0	18.1	17.1	15.2	13.3	11.4	9.5
11.0	26.0	23.4	20.8	18.2	15.6	13.0	10.4
15.0	32.0	30.4	28.8	25.6	22.4	19.2	16.0
18.5	38.0	34.2	30.4	26.6	22.8	19.0	15.2
22	45.0	40.5	36.0	31.5	27.0	22.5	18.0
30	62.0	58.9	55.8	49.6	43.4	37.2	31.0
37	75.0	67.5	60.0	52.5	45.0	37.5	30.0
45	90.0	76.5	63.0	51.8	40.5	33.8	27.0
55	110.0	93.5	77.0	63.3	49.5	41.3	33.0
75	145.0	112.4	79.8	68.9	58.0	50.8	43.5
90	178.0	–	–	–	–	–	–
110	205.0	–	–	–	–	–	–
132	250.0	–	–	–	–	–	–
160	302.0	–	–	–	–	–	–
200	370.0	–	–	–	–	–	–
Mains operating voltage 3 AC 500 V							
0.75	1.4	1.2	1.0	0.8	0.7	0.6	0.6
1.5	2.7	2.2	1.6	1.4	1.1	0.9	0.8
2.2	3.9	2.9	2.0	1.6	1.2	1.0	0.8
4.0	6.1	4.6	3.1	2.4	1.8	1.5	1.2
5.5	9.0	6.8	4.5	3.6	2.7	2.3	1.8
7.5	11.0	8.8	6.6	5.5	4.4	3.9	3.3
11.0	17.0	12.8	8.5	6.8	5.1	4.3	3.4
15.0	22.0	17.6	13.2	11.0	8.8	7.7	6.6
18.5	27.0	20.3	13.5	10.8	8.1	6.8	5.4
22	32.0	24.0	16.0	12.8	9.6	8.0	6.4
30	41.0	32.8	24.6	20.5	16.4	14.4	12.3
37	52.0	39.0	26.0	20.8	15.6	13.0	10.4
45	62.0	52.7	43.4	40.3	37.2	32.6	27.9
55	77.0	67.4	57.8	52.0	46.2	42.4	38.5
75	99.0	84.2	69.3	64.4	59.4	52.0	44.6

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

For further information, visit us on the Internet at:

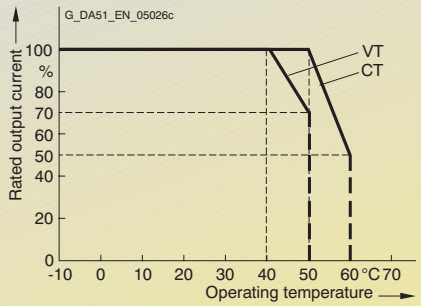
http://support.automation.siemens.com/WW/view/en/23995621

Technical data

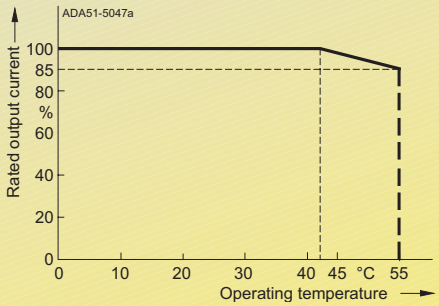
Derating data (continued)

Operating temperature

Inverter 0.12 kW to 75 kW



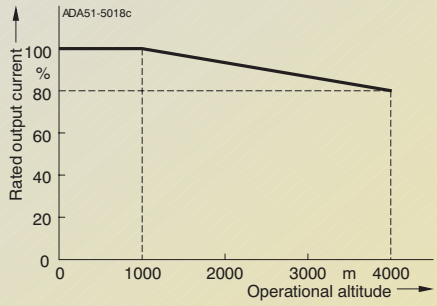
Inverter 90 kW to 200 kW



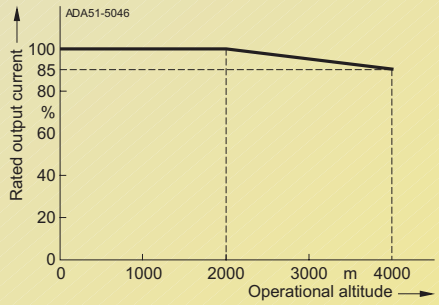
Installation altitude above sea level

Permissible output current
in % of the rated output current

Inverter 0.12 kW to 75 kW

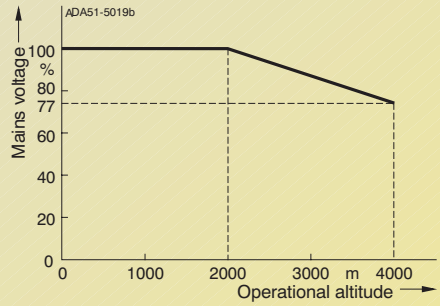


Inverter 90 kW to 200 kW

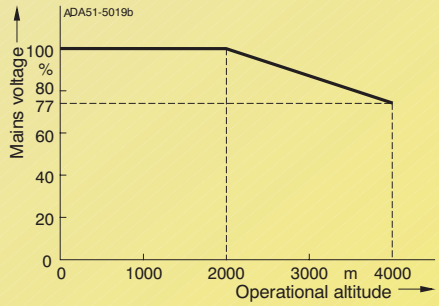


Permissible mains voltage
in % of the max. possible mains voltage

Inverter 0.12 kW to 75 kW



Inverter 90 kW to 200 kW



4

MICROMASTER 440 inverter without filter [2])

CT (constant torque)				VT (variable torque)				MICROMASTER 440 without filter [2])		
Output		Rated input current [1])	Rated output current	Output		Rated input current [1])	Rated output current	Frame size	Weight, approx.	Order No.
kW	hp	A	A	kW	hp	A	A	(FS)	kg	
Mains voltage 1 AC 200 V to 240 V										
0.12	0.16	1.8	0.9	–	–	–	–	A	1.3	**6SE6440-2UC11-2AA1**
0.25	0.33	3.2	1.7	–	–	–	–	A	1.3	**6SE6440-2UC12-5AA1**
0.37	0.50	4.6	2.3	–	–	–	–	A	1.3	**6SE6440-2UC13-7AA1**
0.55	0.75	6.2	3.0	–	–	–	–	A	1.3	**6SE6440-2UC15-5AA1**
0.75	1.0	8.2	3.9	–	–	–	–	A	1.3	**6SE6440-2UC17-5AA1**
1.1	1.5	11.0	5.5	–	–	–	–	B	3.3	**6SE6440-2UC21-1BA1**
1.5	2	14.4	7.4	–	–	–	–	B	3.3	**6SE6440-2UC21-5BA1**
2.2	3	20.2	10.4	–	–	–	–	B	3.3	**6SE6440-2UC22-2BA1**
3.0	4	35.5	13.6	–	–	–	–	C	5.5	**6SE6440-2UC23-0CA1**
Mains operating voltage 3 AC 200 V to 240 V										
0.12	0.16	1.1	0.9	–	–	–	–	A	1.3	**6SE6440-2UC11-2AA1**
0.25	0.33	1.9	1.7	–	–	–	–	A	1.3	**6SE6440-2UC12-5AA1**
0.37	0.50	2.7	2.3	–	–	–	–	A	1.3	**6SE6440-2UC13-7AA1**
0.55	0.75	3.6	3.0	–	–	–	–	A	1.3	**6SE6440-2UC15-5AA1**
0.75	1.0	4.7	3.9	–	–	–	–	A	1.3	**6SE6440-2UC17-5AA1**
1.1	1.5	6.4	5.5	–	–	–	–	B	3.3	**6SE6440-2UC21-1BA1**
1.5	2.0	8.3	7.4	–	–	–	–	B	3.3	**6SE6440-2UC21-5BA1**
2.2	3.0	11.7	10.4	–	–	–	–	B	3.3	**6SE6440-2UC22-2BA1**
3.0	4.0	15.6	13.6	–	–	–	–	C	5.5	**6SE6440-2UC23-0CA1**
4.0	5.0	19.7	17.5	**5.5**	7.5	28.3	22	C	5.5	**6SE6440-2UC24-0CA1**
5.5	7.5	26.5	22	**7.5**	10	34.2	28	C	5.5	**6SE6440-2UC25-5CA1**
7.5	10	34.2	28	**11.0**	15	38.0	42	D	16	**6SE6440-2UC27-5DA1**
11.0	15	38.0	42	**15.0**	20	50.0	54	D	16	**6SE6440-2UC31-1DA1**
15.0	20	50.0	54	**18.5**	25	62.0	68	D	16	**6SE6440-2UC31-5DA1**
18.5	25	62.0	68	**22**	30	71.0	80	E	20	**6SE6440-2UC31-8EA1**
22	30	71.0	80	**30**	40	96.0	104	E	20	**6SE6440-2UC32-2EA1**
30	40	96.0	104	**37**	50	114.0	130	F	55	**6SE6440-2UC33-0FA1**
37	50	114.0	130	**45**	60	135.0	154	F	55	**6SE6440-2UC33-7FA1**
45	60	135.0	154	**55**	75	164.0	178	F	55	**6SE6440-2UC34-5FA1**
Mains operating voltage 3 AC 380 V to 480 V										
0.37	0.50	2.2	1.3	–	–	–	–	A	1.3	**6SE6440-2UD13-7AA1**
0.55	0.75	2.8	1.7	–	–	–	–	A	1.3	**6SE6440-2UD15-5AA1**
0.75	1.0	3.7	2.2	–	–	–	–	A	1.3	**6SE6440-2UD17-5AA1**
1.1	1.5	4.9	3.1	–	–	–	–	A	1.3	**6SE6440-2UD21-1AA1**
1.5	2.0	5.9	4.1	–	–	–	–	A	1.3	**6SE6440-2UD21-5AA1**
2.2	3.0	7.5	5.9	–	–	–	–	B	3.3	**6SE6440-2UD22-2BA1**
3.0	4.0	10.0	7.7	–	–	–	–	B	3.3	**6SE6440-2UD23-0BA1**
4.0	5.0	12.8	10.2	–	–	–	–	B	3.3	**6SE6440-2UD24-0BA1**
5.5	7.5	15.6	13.2	**7.5**	10	17.3	19	C	5.5	**6SE6440-2UD25-5CA1**
7.5	10	22.0	18.4	**11.0**	15	23.1	26	C	5.5	**6SE6440-2UD27-5CA1**
11.0	15	23.1	26	**15.0**	20	33.8	32	C	5.5	**6SE6440-2UD31-1CA1**
15.0	20	33.8	32	**18.5**	25	37.0	38	D	16	**6SE6440-2UD31-5DA1**
18.5	25	37.0	38	**22**	30	43.0	45	D	16	**6SE6440-2UD31-8DA1**
22	30	43.0	45	**30**	40	59.0	62	D	16	**6SE6440-2UD32-2DA1**
30	40	59.0	62	**37**	50	72.0	75	E	20	**6SE6440-2UD33-0EA1**
37	50	72.0	75	**45**	60	87.0	90	E	20	**6SE6440-2UD33-7EA1**
45	60	87.0	90	**55**	75	104.0	110	F	56	**6SE6440-2UD34-5FA1**
55	75	104.0	110	**75**	100	139.0	145	F	56	**6SE6440-2UD35-5FA1**
75	100	139.0	145	**90**	125	169.0	178	F	56	**6SE6440-2UD37-5FA1**

1) Supplementary conditions: Input current at rated operating point, applicable at short-circuit voltage of the supply U_{sc} = 2 % with reference to the inverter rated power and rated mains operating voltage of 240 V or 400 V without a line commutating choke.

2) Acc. to EMC EN 61800-3 generally suited to heavy industrial applications. For details please refer to Appendix on page A/4.

Selection and ordering data

MICROMASTER 440 inverter without filter [3] (continued)

CT (constant torque)				VT (variable torque)				MICROMASTER 440 without filter [3]		
Output		Rated input current	Rated output current	Output		Rated input current	Rated output current	Frame size	Weight, approx.	Order No.
kW	hp	A	A	kW	hp	A	A	(FS)	kg	
Mains operating voltage 3 AC 380 V to 480 V										
90	125	169.0 [1]	178	**110**	150	200.0 [1]	205	FX	116	**6SE6440-2UD38-8FA1**
110	150	200.0 [1]	205	**132**	200	245.0 [1]	250	FX	116	**6SE6440-2UD41-1FA1**
132	200	245.0 [1]	250	**160**	250	297.0 [1]	302	GX	174	**6SE6440-2UD41-3GA1**
160	250	297.0 [1]	302	**200**	300	354.0 [1]	370	GX	174	**6SE6440-2UD41-6GA1**
200	300	354.0 [1]	370	**250**	350	442.0 [1]	477	GX	174	**6SE6440-2UD42-0GA1**
Mains operating voltage 3 AC 500 V to 600 V										
0.75	1.0	2.0 [2]	1.4	**1.5**	2.0	3.2 [2]	2.7	C	5.5	**6SE6440-2UE17-5CA1**
1.5	2.0	3.7 [2]	2.7	**2.2**	3.0	4.4 [2]	3.9	C	5.5	**6SE6440-2UE21-5CA1**
2.2	3.0	5.3 [2]	3.9	**4.0**	5.0	6.9 [2]	6.1	C	5.5	**6SE6440-2UE22-2CA1**
4.0	5.0	8.1 [2]	6.1	**5.5**	7.5	9.4 [2]	9	C	5.5	**6SE6440-2UE24-0CA1**
5.5	7.5	11.1 [2]	9	**7.5**	10	12.6 [2]	11	C	5.5	**6SE6440-2UE25-5CA1**
7.5	10	14.4 [2]	11	**11.0**	15	18.1 [2]	17	C	5.5	**6SE6440-2UE27-5CA1**
11.0	15	21.5 [2]	17	**15.0**	20	24.9 [2]	22	C	5.5	**6SE6440-2UE31-1CA1**
15.0	20	24.9 [2]	22	**18.5**	25	30.0 [2]	27	D	16	**6SE6440-2UE31-5DA1**
18.5	25	30.0 [2]	27	**22**	30	35.0 [2]	32	D	16	**6SE6440-2UE31-8DA1**
22	30	35.0 [2]	32	**30**	40	48.0 [2]	41	D	16	**6SE6440-2UE32-2DA1**
30	40	48.0 [2]	41	**37**	50	58.0 [2]	52	E	20	**6SE6440-2UE33-0EA1**
37	50	58.0 [2]	52	**45**	60	69.0 [2]	62	E	20	**6SE6440-2UE33-7EA1**
45	60	69.0 [2]	62	**55**	75	83.0 [2]	77	F	56	**6SE6440-2UE34-5FA1**
55	75	83.0 [2]	77	**75**	100	113.0 [2]	99	F	56	**6SE6440-2UE35-5FA1**
75	100	113.0 [2]	99	**90**	120	138.0 [2]	125	F	56	**6SE6440-2UE37-5FA1**

See Appendix for note on ordering.

All MICROMASTER 440 inverters are supplied with a Status Display Panel (SDP). A BOP, AOP or other options have to be ordered separately (see Pages 4/16 to 4/22).

Motors for MICROMASTER 440

Catalog D 81.1 contains selection and ordering data for motors which are particularly suitable for operation with the MICROMASTER 440 inverters (see Appendix for overview).

This catalog is suitable for IEC motors. For motors according to US standards (NEMA) please refer to Catalog D 81.2 U.S./Canada (see Appendix for overview) and to: http://www.sea.siemens.com/motors

1) Supplementary conditions: Input current at rated operating point, applicable at short-circuit voltage of the supply $U_{sc} \geq 2.33$ % with reference to the inverter rated power and rated mains operating voltage of 400 V.

2) Supplementary conditions: Input current at rated operating point, applicable at short-circuit voltage of the supply $U_{SC} = 2$ % with reference to the inverter rated power and rated mains operating voltage of 500 V without a line commutating choke.

3) Acc. to EMC EN 61800-3 generally suited to heavy industrial applications. For details please refer to Appendix on page A/4.

MICROMASTER 440 inverter with internal filter Class A [2])

CT (constant torque)				VT (variable torque)				MICROMASTER 440 with internal filter Class A [2])		
Output		Rated input current [1])	Rated output current	Output		Rated input current [1])	Rated output current	Frame size	Weight, approx.	Order No.
kW	hp	A	A	kW	hp	A	A	(FS)	kg	
Mains operating voltage 1 AC 200 V to 240 V										
0.12	0.16	1.8	0.9	–	–	–	–	A	1.3	**6SE6440-2AB11-2AA1**
0.25	0.33	3.2	1.7	–	–	–	–	A	1.3	**6SE6440-2AB12-5AA1**
0.37	0.50	4.6	2.3	–	–	–	–	A	1.3	**6SE6440-2AB13-7AA1**
0.55	0.75	6.2	3.0	–	–	–	–	A	1.3	**6SE6440-2AB15-5AA1**
0.75	1.0	8.2	3.9	–	–	–	–	A	1.3	**6SE6440-2AB17-5AA1**
1.1	1.5	11.0	5.5	–	–	–	–	B	3.4	**6SE6440-2AB21-1BA1**
1.5	2	14.4	7.4	–	–	–	–	B	3.4	**6SE6440-2AB21-5BA1**
2.2	3	20.2	10.4	–	–	–	–	B	3.4	**6SE6440-2AB22-2BA1**
3.0	4	35.5	13.6	–	–	–	–	C	5.7	**6SE6440-2AB23-0CA1**
Mains operating voltage 3 AC 200 V to 240 V										
3.0	4.0	15.6	13.6	–	–	–	–	C	5.7	**6SE6440-2AC23-0CA1**
4.0	5.0	19.7	17.5	**5.5**	7.5	28.3	22	C	5.7	**6SE6440-2AC24-0CA1**
5.5	7.5	26.5	22.0	**7.5**	10.0	34.2	28	C	5.7	**6SE6440-2AC25-5CA1**
Mains operating voltage 3 AC 380 V to 480 V										
2.2	3.0	7.5	5.9	–	–	–	–	B	3.4	**6SE6440-2AD22-2BA1**
3.0	4.0	10.0	7.7	–	–	–	–	B	3.4	**6SE6440-2AD23-0BA1**
4.0	5.0	12.8	10.2	–	–	–	–	B	3.4	**6SE6440-2AD24-0BA1**
5.5	7.5	15.6	13.2	**7.5**	10	17.6	19	C	5.7	**6SE6440-2AD25-5CA1**
7.5	10	22.0	18.4	**11.0**	15	23.1	26	C	5.7	**6SE6440-2AD27-5CA1**
11.0	15	23.1	26	**15.0**	20	33.8	32	C	5.7	**6SE6440-2AD31-1CA1**
15.0	20	33.8	32	**18.5**	25	37.0	38	D	17	**6SE6440-2AD31-5DA1**
18.5	25	37.0	38	**22**	30	43.0	45	D	17	**6SE6440-2AD31-8DA1**
22	30	43.0	45	**30**	40	59.0	62	D	17	**6SE6440-2AD32-2DA1**
30	40	59.0	62	**37**	50	72.0	75	E	22	**6SE6440-2AD33-0EA1**
37	50	72.0	75	**45**	60	87.0	90	E	22	**6SE6440-2AD33-7EA1**
45	60	87.0	90	**55**	75	104.0	110	F	75	**6SE6440-2AD34-5FA1**
55	75	104.0	110	**75**	100	139.0	145	F	75	**6SE6440-2AD35-5FA1**
75	100	139.0	145	**90**	125	169.0	178	F	75	**6SE6440-2AD37-5FA1**

See Appendix for note on ordering.

All MICROMASTER 440 inverters are supplied with a Status Display Panel (SDP). A BOP, AOP or other options have to be ordered separately (see Pages 4/16 to 4/22).

Motors for MICROMASTER 440

Catalog D 81.1 contains selection and ordering data for motors which are particularly suitable for operation with the MICROMASTER 440 inverters (see Appendix for overview).

This catalog is suitable for IEC motors. For motors according to US standards (NEMA) please refer to Catalog D 81.2 U.S./Canada (see Appendix for overview) and to: http://www.sea.siemens.com/motors

1) Supplementary conditions: Input current at rated operating point, applicable at short-circuit voltage of the supply U_{sc} = 2 % with reference to the inverter rated power and rated mains operating voltage of 240 V or 400 V without a line commutating choke.

2) Use of MICROMASTER inverters with internal filter is not permissible on non-grounded mains supplies.

Options
Variant dependent options

Overview

EMC filter, Class A

Filter for inverters without an internal filter for

- 3 AC 200 V to 240 V, frame sizes A and B
- 3 AC 380 V to 480 V, frame size A, FX, GX

Filters for frame sizes FX and GX are only permitted to be used in combination with a line commutating choke.

All other inverters with the exception of inverters for 500 V to 600 V can be supplied with an internal Class A filter.

The requirements are fulfilled using shielded cables with a max. length of 25 m.

EMC filter, Class B

Filter for inverters without an internal filter for

- 3 AC 200 V to 240 V, frame sizes A and B
- 3 AC 380 V to 480 V, frame size A.

The requirements are fulfilled using shielded cables with a max. length of 25 m.

For inverters 15 kW to 75 kW without filters, EMC filters of Class B from Schaffner can be used.

The requirements are fulfilled using shielded cables with a max. length of 25 m to 50 m (depending on the type, details on request).

With this filter, the inverter complies with the emission standard EN 55 011, Class B for conducted interference emissions.

Additional EMC filter, Class B

Available for inverters with an internal Class A EMC filter, frame sizes A, B and C.

The requirements are fulfilled using shielded cables with a max. length of 25 m.

With this filter, the inverter complies with the emission standard EN 55 011, Class B for conducted interference emissions.

Filter Class B with low leakage currents

EMC filter for 1 AC 200 V to 240 V inverters, frame sizes A and B, without an internal EMC filter Class A.

With this filter, the inverter complies with the emission standard EN 55 011, Class B for conducted interference emissions. The leakage currents are reduced to < 3.5 mA.

The requirements are fulfilled using shielded cables with a max. length of 5 m.

Leakage currents:

The leakage currents of the inverters with/without filter (internal/external) may exceed 30 mA. Typical values in practice are between 10 mA and 50 mA. The exact values depend on the design, environment and cable lengths. Interference-free operation with residual current operated devices with a trigger value of 30 mA cannot be guaranteed. However, operation with residual current circuit-breakers with a trigger value of 300 mA is possible. Please refer to the Instruction Manual for details.

LC filter and sinusoidal filter

The LC filter/sinusoidal filter limits the rate of rise of voltage and the capacitive charge/discharge currents which usually occur with inverter operation. This means that much longer shielded motor cables are possible when using LC filters/sinusoidal filters and the service life of the motor achieves values similar to those with direct mains operation. Use of an output choke isn't required with that.

Please note when using LC filters/sinusoidal filters:

- Only *V/f*, FCC control permissible
- Please observe the derating of 15 % when selecting the appropriate inverter
- Operation only permissible with 4 kHz pulse frequency Note: Please observe derating for frame sizes FX and GX.
- The output frequency is limited to 150 Hz
- Operation and commissioning only with connected motor as the LC filter/sinusoidal filter is not idling-proof!

The LC filters/sinusoidal filters can be used for all MICROMASTER 440 inverters of frame sizes A to GX.

- Frame sizes D to F: The LC filters, frame sizes D to F, are designed for mounting upright in the control cabinet. Due to leakage flux lines caused by physical sources, a minimum distance of 50 mm to adjacent modules and metal parts is recommended.
- Frame sizes FX and GX: The sinusoidal filters, frame sizes FX and GX, are designed for mounting upright in the control cabinet. Due to leakage flux lines caused by physical sources, a minimum distance of 100 mm to adjacent modules and metal parts is recommended.

Technical data

LC filter and sinusoidal filter

Mains voltage	3 AC 380 V to 480 V	3 AC 500 V to 600 V
Current (at 40 °C/50 °C)		
For frame size A (0.37 to 1.5 kW)	4.5 A/4.1 A	–
For frame size B (2.2 to 4 kW)	11.2 A/10.2 A	–
For frame size C (0.75 to 4 kW)	–	9.0 A/6.1 A
For frame size C (5.5 to 11 kW)	32.6 A/26 A	22.4 A/17 A
For frame size D (15 kW)	38.8 A/32 A	27.5 A/22 A
For frame size D (18.5 kW)	45.9 A/38 A	32.6 A/27 A
For frame size D (22 kW)	63.2 A/45 A	41.8 A/32 A
For frame size E (30 kW)	76.5 A/62 A	53 A/41 A
For frame size E (37 kW)	112.2 A/90 A	63.2 A/52 A
For frame size F (45 kW)	112.2 A/90 A	78.5 A/62 A
For frame size F (55 kW)	147.9 A/110 A	101 A/77 A
For frame size F (75 kW)	181.6 A/145 A	127.5 A/99 A
Current (at 40 °C/55 °C)		
For frame size FX (90 kW and 110 kW)	225 A/191 A	–
For frame size GX (132 kW)	276 A/235 A	–
For frame size GX (160 kW)	333 A/283 A	–
For frame size GX (200 kW)	408 A/347 A	–

Technical data (continued)

LC filter and sinusoidal filter

Limiting of motor overvoltage			≤ 1078 V
d*V*/d*t* limiting			≤ 500 V/μs
Pulse frequency			4 kHz
Max. motor frequency			150 Hz
Max. permissible motor cable lengths			
For frame sizes A to F	shielded		200 m
	unshielded		300 m
For frame sizes FX and GX	shielded		300 m
	unshielded		450 m
Insulation strength			Overvoltage category III to VDE 0110
Electromagnetic compatibility			
For frame sizes A to F			Up to 200 m motor cable length with emissions to Class A according to EN 55 011 in conjunction with filtered inverters and unshielded cables
For frame sizes FX and GX			Up to 150 m motor cable length with emissions to Class A according to EN 55 011 in conjunction with filtered inverters and unshielded cables
Conformity			CE according to the low-voltage directive 73/23/EEC
Approvals			cUL E 219022
Strain resistance			EN 60 068-2-31
Humidity			95 % humidity, non-condensing
Degree of protection			
For frame sizes A to C			IP20 (to EN 60 529)
For frame sizes D to F			IP00/IP20 (to EN 60 529 with terminal covers)
For frame sizes FX and GX			IP00
Insulation class			H (180 °C)
Temperature range			
For frame sizes A to F	Operation		–10 °C to +40 °C (+14 °F to +104 °F) 100 % P_n
			to +50 °C (to +122 °F) 80 % P_n
	Storage		–25 °C to +70 °C (–13 °F to +158 °F)
For frame sizes FX and GX	Operation		–10 °C to +40 °C (+14 °F to +104 °F) 100 % P_n
			to +55 °C (to +131 °F) 85 % P_n
	Storage		–40 °C to +70 °C (–40 °F to +158 °F)
Installation altitude			
For frame sizes A to C			Up to 2000 m: 100 % P_n
			2000 to 4000 m: 62.5 % P_n
For frame sizes D to F			Up to 1000 m: 100 % P_n
			1000 to 4000 m: 12.5 % derating for each 1000 m
For frame sizes FX and GX			Up to 2000 m: 100 % P_n
			2000 to 4000 m: 7.5 % derating for each 1000 m
Mounting position			
For frame sizes A to C			Footprint or suspended
For frame sizes D to F, FX and GX			upright
Ventilation clearances			
For frame sizes A to C	Top		100 mm
	Bottom		100 mm
	Side		100 mm
For frame sizes D to F, FX and GX	Top		100 mm
	Side		100 mm
Connection system	Input, litz wire or terminal		1U1, 1V1, 1W1
	Output, terminals		1U2, 1V2, 1W2
Torque for conductor connections		Terminal cross-section	Torque
For frame sizes A to C		–	1.5 Nm to 1.8 Nm
For frame sizes D to F		16 mm²	2.0 Nm to 4.0 Nm
		35 mm²	2.5 Nm to 5.0 Nm
		50 mm²	3.0 Nm to 6.0 Nm
		95 mm²	6.0 Nm to 12.0 Nm
		150 mm²	10.0 Nm to 20.0 Nm
For frame sizes FX and GX		–	14.0 Nm to 31.0 Nm
Weight, approx.			
For frame size A			7 kg
For frame size B			11 kg
For frame size C			8.5 kg to 29 kg
For frame size D			21 kg to 42 kg
For frame size E			49.5 kg to 67 kg
For frame size F			67 kg to 126 kg
For frame size FX			135 kg
For frame size GX			138 kg to 208 kg

Options
Variant dependent options

Overview

Line commutating choke

Line commutating chokes are used to smooth voltage peaks or to bridge commutating dips. In addition, line commutating chokes reduce the effects of harmonics on the inverter and the power supply. If the line impedance is < 1 %, a line commutating choke must be used in order to reduce the current peaks.

In line with EN 61 000-3-2 regulations "Limits for harmonic currents with device input current ≤16 A per phase", there are special aspects for drives with 250 W to 550 W and 230 V single-phase supplies which can be used in non-industrial applications (1st environment).

For devices with 250 W and 350 W, it is necessary either to fit the recommended input chokes or to apply to the power utility company for authorization to connect the devices to the public power supply.
No limits are currently defined in the EN 61 000-3-2 standard for professionally used devices with a connected load >1 kW which means that the inverters with an output power ≥ 0.75 kW comply with the EN 61 000-3-2 standard.

However, in accordance with the regulations of EN 61000-3-12 "Limits for harmonic currents > 16 A and ≤ 75 A per phase" an approval is necessary from the power supplier for drives that are intended to be connected to the public low-voltage network. Please refer to the Operating Instructions for the values of the harmonic currents.

Output choke

Output chokes can be supplied for reducing the capacitive compensation currents and d*V*/d*t* in the case of motor cables >50 m (shielded) or >100 m (unshielded).

For max. permissible cable lengths, see the Technical Data.

Brake resistors

The brake resistors are designed for use with the MICROMASTER 440 inverter series, frame sizes A to F, with internal brake chopper and enable loads with a large moment of inertia to be braked quickly. During braking of the motor and the load, excess energy is fed back to the inverter. This causes the voltage to rise in the DC link. The inverter transfers the excess energy to the externally mounted braking resistor.

For MICROMASTER 440 inverters of frame sizes FX and GX, external SIMOVERT MASTERDRIVES brake units and the appropriate brake resistors can be used (see Catalog DA 65.10).

Gland plate

Gland plates are available for inverters of frame sizes A, B and C. All the other frame sizes have the shield connection for the control cable integrated in the inverter.

The shield for the power cable has to be connected externally (e.g. in the control cabinet). Exception: Inverters of frame sizes D and E and frame size F with integrated class A filter. In this case the shield connection is integrated in the inverter.

The gland plate enables the shields of the power and control cables to be terminated ensuring optimum EMC performance.

Technical data

Max. permissible cable lengths from the motor to the inverter when using output chokes

The following table shows the maximum permissible cable lengths from the motor to the inverter when using output chokes.

Note:

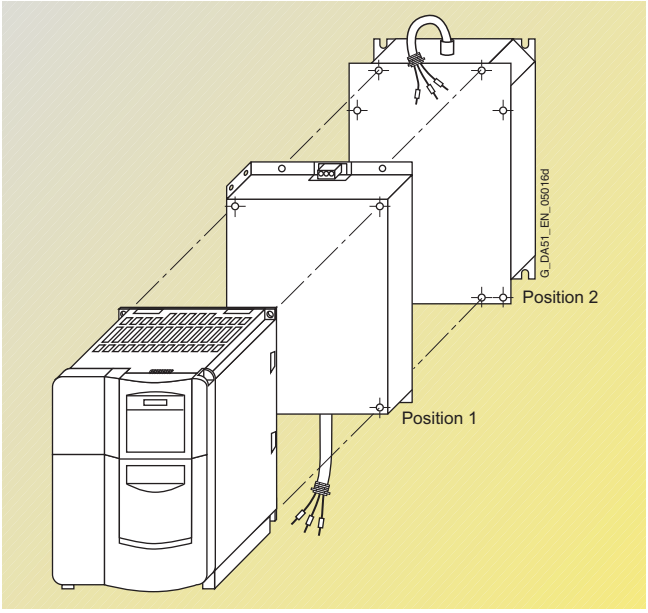
Operation up to 150 Hz output frequency only!

Frame size	Output choke	**Max. permissible motor cable lengths (shielded/unshielded)** for a mains voltage of			
(FS)	Type	200 V to 240 V ± 10 %	380 V to 400 V ± 10 %	401 V to 480 V ± 10 %	500 V to 600 V ± 10 %
A	6SE6400-3TC00-4AD3	200 m/300 m	–	–	–
A	6SE6400-3TC00-4AD2	–	150 m/225 m	100 m/150 m	–
B	6SE6400-3TC01-0BD3	200 m/300 m	150 m/225 m	100 m/150 m	–
C	6SE6400-3TC03-2CD3	200 m/300 m	200 m/300 m	100 m/150 m	–
C	6SE6400-3TC01-8CE3	–	–	–	100 m/150 m
D to F	6SE6400-3TC. .-. . . .	200 m/300 m	200 m/300 m	200 m/300 m	200 m/300 m
FX	6SL3000-2BE32-1AA0	–	300 m/450 m	300 m/450 m	–
FX	6SL3000-2BE32-6AA0	–	300 m/450 m	300 m/450 m	–
GX	6SL3000-2BE33-2AA0	–	300 m/450 m	300 m/450 m	–
GX	6SL3000-2BE33-8AA0	–	300 m/450 m	300 m/450 m	–
GX	6SL3000-2BE35-0AA0	–	300 m/450 m	300 m/450 m	–

Design

General installation instructions

- A maximum of two footprint components plus inverter are permissible.
- If an LC filter is used, it must, if possible, be mounted directly on the wall of the control cabinet due to weight reasons.
  If an LC filter of frame size C is used, therefore, only one footprint component is permissible. If a line choke and LC filter are used, the line choke must be located on the left of the inverter.
  Required distance between line choke and inverter: 75 mm.
- The EMC filter must be mounted directly below the frequency inverter if possible.
- If mounted on the side, the line-side components are to be mounted to the left of the frequency inverter whereas the output-side components are to be mounted to the right of the frequency inverter.
- If a braking resistor is used, it must, if possible, be mounted directly on the wall of the control cabinet due to reasons relating to temperature increases.



Example of installation with frequency inverter, EMC filter (position 1) and line choke (position 2)

Availability of the options as footprint components

	Frame size								
	A	B	C	D	E	F	G	FX	GX
Line commutating choke	✓	✓	✓	✓	✓				
EMC filter	✓	✓	✓						
LC filter	✓	✓	✓						
Output choke	✓	✓	✓						
Braking resistor	✓	✓							

Recommended combinations of inverters and options

Frequency inverter	**Footprint**		**Mounted on side**	
Frame size	Position 1	Position 2	To the left of the inverter (for line-side components)	To the right of the inverter (for output-side components)
A and B	EMC filter	Line commutating choke	–	Output choke and/or Braking resistor
	EMC filter or Line commutating choke	Output choke or LC filter	–	Braking resistor
	EMC filter or Line commutating choke	Braking resistor	–	–
	EMC filter or Line commutating choke or Braking resistor	–	–	–
C	EMC filter	Line commutating choke	–	Output choke and/or Braking resistor
	EMC filter or Line commutating choke	Output choke	–	Braking resistor
	LC filter	–	EMC filter and/or Line commutating choke	Braking resistor
D and E	Line commutating choke	–	EMC filter	Output choke or LC filter and/or Braking resistor
F, G, FX and GX	–	–	EMC filter and/or Line commutating choke	Output choke or LC filter and/or Braking resistor

Options
Variant dependent options

Selection and ordering data

The options listed here (filters, chokes, brake resistors, gland plates, fuses and circuit-breakers) must be selected to match the respective inverter.

The inverter and the associated options have the same voltage ratings. Alternatively fuses and circuit-breakers can be provided. Both provide short circuit protection of the inverter supply line and the inverter. A semiconductor protection of the inverter with the suggested 3NA... fuses and the 3RV.../3VL... circuit-breakers is not envisaged.

*) Must be used in combination with a line commutating choke.

Mains voltage	Output (CT)		Inverter **without** filter	Order No. of the options		
				EMC filter, Class A	**EMC filter, Class B**	**Line commutating choke**
	kW	hp				
1 AC 200 V to 240 V	0.12	0.16	6SE6440-2UC11-2AA1	–	**6SE6400-2FL01-0AB0** with low leakage currents	**6SE6400-3CC00-4AB3**
	0.25	0.33	6SE6440-2UC12-5AA1	–		
	0.37	0.50	6SE6440-2UC13-7AA1	–		**6SE6400-3CC01-0AB3**
	0.55	0.75	6SE6440-2UC15-5AA1	–		
	0.75	1.0	6SE6440-2UC17-5AA1	–		
	1.1	1.5	6SE6440-2UC21-1BA1	–	**6SE6400-2FL02-6BB0** with low leakage currents	**6SE6400-3CC02-6BB3**
	1.5	2.0	6SE6440-2UC21-5BA1	–		
	2.2	3.0	6SE6440-2UC22-2BA1	–		
	3.0	4.0	6SE6440-2UC23-0CA1	–	–	**6SE6400-3CC03-5CB3**
3 AC 200 V to 240 V	0.12	0.16	6SE6440-2UC11-2AA1	**6SE6400-2FA00-6AD0**	**6SE6400-2FB00-6AD0**	**6SE6400-3CC00-3AC3**
	0.25	0.33	6SE6440-2UC12-5AA1			
	0.37	0.50	6SE6440-2UC13-7AA1			**6SE6400-3CC00-5AC3**
	0.55	0.75	6SE6440-2UC15-5AA1			
	0.75	1.0	6SE6440-2UC17-5AA1			
	1.1	1.5	6SE6440-2UC21-1BA1	**6SE6400-2FA01-4BC0**	**6SE6400-2FB01-4BC0**	**6SE6400-3CC00-8BC3**
	1.5	2.0	6SE6440-2UC21-5BA1			**6SE6400-3CC01-4BD3**
	2.2	3.0	6SE6440-2UC22-2BA1			
	3.0	4.0	6SE6440-2UC23-0CA1	–	–	**6SE6400-3CC01-7CC3**
	4.0	5.0	6SE6440-2UC24-0CA1	–	–	**6SE6400-3CC03-5CD3**
	5.5	7.5	6SE6440-2UC25-5CA1	–	–	
	7.5	10	6SE6440-2UC27-5DA1	–	–	**6SE6400-3CC05-2DD0**
	11.0	15	6SE6440-2UC31-1DA1	–	–	
	15.0	20	6SE6440-2UC31-5DA1	–	–	
	18.5	25	6SE6440-2UC31-8EA1	–	–	**6SE6400-3CC08-8EC0**
	22	30	6SE6440-2UC32-2EA1	–	–	
	30	40	6SE6440-2UC33-0FA1	–	–	**6SE6400-3CC11-7FD0**
	37	50	6SE6440-2UC33-7FA1	–	–	
	45	60	6SE6440-2UC34-5FA1	–	–	
3 AC 380 V to 480 V	0.37	0.50	6SE6440-2UD13-7AA1	**6SE6400-2FA00-6AD0**	**6SE6400-2FB00-6AD0**	**6SE6400-3CC00-2AD3**
	0.55	0.75	6SE6440-2UD15-5AA1			
	0.75	1.0	6SE6440-2UD17-5AA1			**6SE6400-3CC00-4AD3**
	1.1	1.5	6SE6440-2UD21-1AA1			
	1.5	2.0	6SE6440-2UD21-5AA1			**6SE6400-3CC00-6AD3**
	2.2	3.0	6SE6440-2UD22-2BA1	–	–	**6SE6400-3CC01-0BD3**
	3.0	4.0	6SE6440-2UD23-0BA1	–	–	
	4.0	5.0	6SE6440-2UD24-0BA1	–	–	**6SE6400-3CC01-4BD3**
	5.5	7.5	6SE6440-2UD25-5CA1	–	–	**6SE6400-3CC02-2CD3**
	7.5	10	6SE6440-2UD27-5CA1	–	–	
	11.0	15	6SE6440-2UD31-1CA1	–	–	**6SE6400-3CC03-5CD3**
	15.0	20	6SE6440-2UD31-5DA1	–	EMC filter, Class B, available from Schaffner	**6SE6400-3CC04-4DD0**
	18.5	25	6SE6440-2UD31-8DA1	–		
	22	30	6SE6440-2UD32-2DA1	–		**6SE6400-3CC05-2DD0**
	30	40	6SE6440-2UD33-0EA1	–		**6SE6400-3CC08-3ED0**
	37	50	6SE6440-2UD33-7EA1	–		
	45	60	6SE6440-2UD34-5FA1	–		**6SE6400-3CC11-2FD0**
	55	75	6SE6440-2UD35-5FA1	–		
	75	100	6SE6440-2UD37-5FA1	–		**6SE6400-3CC11-7FD0**
	90	125	6SE6440-2UD38-8FA1	**6SL3000-0BE32-5AA0 *)**	–	**6SL3000-0CE32-3AA0**
	110	150	6SE6440-2UD41-1FA1	**6SL3000-0BE34-4AA0 *)**	–	**6SL3000-0CE32-8AA0**
	132	200	6SE6440-2UD41-3GA1		–	**6SL3000-0CE33-3AA0**
	160	250	6SE6440-2UD41-6GA1		–	**6SL3000-0CE35-1AA0**
	200	300	6SE6440-2UD42-0GA1	**6SL3000-0BE36-0AA0 *)**	–	
3 AC 500 V to 600 V	0.75	1.0	6SE6440-2UE17-5CA1	–	–	**6SE6400-3CC00-4CE3**
	1.5	2.0	6SE6440-2UE21-5CA1	–	–	
	2.2	3.0	6SE6440-2UE22-2CA1	–	–	**6SE6400-3CC00-8CE3**
	4.0	5.0	6SE6440-2UE24-0CA1	–	–	
	5.5	7.5	6SE6440-2UE25-5CA1	–	–	**6SE6400-3CC02-4CE3**
	7.5	10	6SE6440-2UE27-5CA1	–	–	
	11.0	15	6SE6440-2UE31-1CA1	–	–	
	15.0	20	6SE6440-2UE31-5DA1	–	–	**6SE6400-3CC04-4DD0**
	18.5	25	6SE6440-2UE31-8DA1	–	–	
	22	30	6SE6440-2UE32-2DA1	–	–	
	30	40	6SE6440-2UE33-0EA1	–	–	**6SE6400-3CC08-3ED0**
	37	50	6SE6440-2UE33-7EA1	–	–	
	45	60	6SE6440-2UE34-5FA1	–	–	**6SE6400-3CC11-2FD0**
	55	75	6SE6440-2UE35-5FA1	–	–	
	75	100	6SE6440-2UE37-5FA1	–	–	

Selection and ordering data (continued)

All options are certified to UL, except fuses. The 3NE1 fuses are UL-listed (equivalent to cULus).

Additional information on the listed fuses and circuit-breakers can be found in Catalogs LV 1 and LV 1 T.

Mains voltage	Output (CT)		Inverter **without** filter	Order No. of the options		
	kW	hp		**LC/sinusoidal filter**	**Output choke**	**Brake resistors**
1 AC 200 V to 240 V	0.12	0.16	6SE6440-2UC11-2AA1	–	**6SE6400-3TC00-4AD3**	**6SE6400-4BC05-0AA0**
	0.25	0.33	6SE6440-2UC12-5AA1	–		
	0.37	0.50	6SE6440-2UC13-7AA1	–		
	0.55	0.75	6SE6440-2UC15-5AA1	–		
	0.75	1.0	6SE6440-2UC17-5AA1	–		
	1.1	1.5	6SE6440-2UC21-1BA1	–	**6SE6400-3TC01-0BD3**	**6SE6400-4BC11-2BA0**
	1.5	2.0	6SE6440-2UC21-5BA1	–		
	2.2	3.0	6SE6440-2UC22-2BA1	–		
	3.0	4.0	6SE6440-2UC23-0CA1	–	**6SE6400-3TC03-2CD3**	**6SE6400-4BC12-5CA0**
3 AC 200 V to 240 V	0.12	0.16	6SE6440-2UC11-2AA1	–	**6SE6400-3TC00-4AD3**	**6SE6400-4BC05-0AA0**
	0.25	0.33	6SE6440-2UC12-5AA1	–		
	0.37	0.50	6SE6440-2UC13-7AA1	–		
	0.55	0.75	6SE6440-2UC15-5AA1	–		
	0.75	1.0	6SE6440-2UC17-5AA1	–		
	1.1	1.5	6SE6440-2UC21-1BA1	–	**6SE6400-3TC01-0BD3**	**6SE6400-4BC11-2BA0**
	1.5	2.0	6SE6440-2UC21-5BA1	–		
	2.2	3.0	6SE6440-2UC22-2BA1	–		
	3.0	4.0	6SE6440-2UC23-0CA1	–	**6SE6400-3TC03-2CD3**	**6SE6400-4BC12-5CA0**
	4.0	5.0	6SE6440-2UC24-0CA1	–		**6SE6400-4BC13-0CA0**
	5.5	7.5	6SE6440-2UC25-5CA1	–		
	7.5	10	6SE6440-2UC27-5DA1	–	**6SE6400-3TC05-4DD0**	**6SE6400-4BC18-0DA0**
	11.0	15	6SE6440-2UC31-1DA1	–		
	15.0	20	6SE6440-2UC31-5DA1	–		
	18.5	25	6SE6440-2UC31-8EA1	–	**6SE6400-3TC08-0ED0**	**6SE6400-4BC21-2EA0**
	22	30	6SE6440-2UC32-2EA1	–		
	30	40	6SE6440-2UC33-0FA1	–	**6SE6400-3TC15-4FD0**	**6SE6400-4BC22-5FA0**
	37	50	6SE6440-2UC33-7FA1	–		
	45	60	6SE6440-2UC34-5FA1	–		
3 AC 380 V to 480 V	0.37	0.50	6SE6440-2UD13-7AA1	**6SE6400-3TD00-4AD0**	**6SE6400-3TC00-4AD2**	**6SE6400-4BD11-0AA0**
	0.55	0.75	6SE6440-2UD15-5AA1			
	0.75	1.0	6SE6440-2UD17-5AA1			
	1.1	1.5	6SE6440-2UD21-1AA1			
	1.5	2.0	6SE6440-2UD21-5AA1			
	2.2	3.0	6SE6440-2UD22-2BA1	**6SE6400-3TD01-0BD0**	**6SE6400-3TC01-0BD3**	**6SE6400-4BD12-0BA0**
	3.0	4.0	6SE6440-2UD23-0BA1			
	4.0	5.0	6SE6440-2UD24-0BA1			
	5.5	7.5	6SE6440-2UD25-5CA1	**6SE6400-3TD03-2CD0**	**6SE6400-3TC03-2CD3**	**6SE6400-4BD16-5CA0**
	7.5	10	6SE6440-2UD27-5CA1			
	11.0	15	6SE6440-2UD31-1CA1			
	15.0	20	6SE6440-2UD31-5DA1	**6SE6400-3TD03-7DD0**	**6SE6400-3TC05-4DD0**	**6SE6400-4BD21-2DA0**
	18.5	25	6SE6440-2UD31-8DA1	**6SE6400-3TD04-8DD0**	**6SE6400-3TC03-8DD0**	
	22	30	6SE6440-2UD32-2DA1	**6SE6400-3TD06-1DD0**	**6SE6400-3TC05-4DD0**	
	30	40	6SE6440-2UD33-0EA1	**6SE6400-3TD07-2ED0**	**6SE6400-3TC08-0ED0**	**6SE6400-4BD22-2EA0**
	37	50	6SE6440-2UD33-7EA1	**6SE6400-3TD11-5FD0**	**6SE6400-3TC07-5ED0**	
	45	60	6SE6440-2UD34-5FA1		**6SE6400-3TC14-5FD0**	**6SE6400-4BD24-0FA0**
	55	75	6SE6440-2UD35-5FA1	**6SE6400-3TD15-0FD0**	**6SE6400-3TC15-4FD0**	
	75	100	6SE6440-2UD37-5FA1	**6SE6400-3TD18-0FD0**	**6SE6400-3TC14-5FD0**	
	90	125	6SE6440-2UD38-8FA1	**6SL3000-2CE32-3AA0**	**6SL3000-2BE32-1AA0**	–
	110	150	6SE6440-2UD41-1FA1		**6SL3000-2BE32-6AA0**	–
	132	200	6SE6440-2UD41-3GA1	**6SL3000-2CE32-8AA0**	**6SL3000-2BE33-2AA0**	–
	160	250	6SE6440-2UD41-6GA1	**6SL3000-2CE33-3AA0**	**6SL3000-2BE33-8AA0**	–
	200	300	6SE6440-2UD42-0GA1	**6SL3000-2CE34-1AA0**	**6SL3000-2BE35-0AA0**	–
3 AC 500 V to 600 V	0.75	1.0	6SE6440-2UE17-5CA1	**6SE6400-3TD01-0CE0**	**6SE6400-3TC01-8CE3**	**6SE6400-4BE14-5CA0**
	1.5	2.0	6SE6440-2UE21-5CA1			
	2.2	3.0	6SE6440-2UE22-2CA1			
	4.0	5.0	6SE6440-2UE24-0CA1			
	5.5	7.5	6SE6440-2UE25-5CA1	**6SE6400-3TD02-3CE0**		
	7.5	10	6SE6440-2UE27-5CA1			**6SE6400-4BE16-5CA0**
	11.0	15	6SE6440-2UE31-1CA1			
	15.0	20	6SE6440-2UE31-5DA1	**6SE6400-3TD02-3DE0**	**6SE6400-3TC03-2DE0**	**6SE6400-4BE21-3DA0**
	18.5	25	6SE6440-2UE31-8DA1	**6SE6400-3TD03-2DE0**		
	22	30	6SE6440-2UE32-2DA1	**6SE6400-3TD03-7DE0**		
	30	40	6SE6440-2UE33-0EA1	**6SE6400-3TD04-8EE0**	**6SE6400-3TC06-2FE0**	**6SE6400-4BE21-8EA0**
	37	50	6SE6440-2UE33-7EA1	**6SE6400-3TD06-1EE0**		
	45	60	6SE6440-2UE34-5FA1	**6SE6400-3TD07-1FE0**		**6SE6400-4BE24-2FA0**
	55	75	6SE6440-2UE35-5FA1	**6SE6400-3TD10-0FE0**	**6SE6400-3TC08-8FE0**	
	75	100	6SE6440-2UE37-5FA1	**6SE6400-3TD11-5FE0**		

Options
Variant dependent options

Selection and ordering data (continued)

● Use in America requires Ⓤ-listed fuses such as the Class NON/NOS range from Bussmann.

Mains voltage	Output (CT) kW	hp	Inverter **without** filter	Order No. of options **Gland plate**	**Fuses** (see LV 1) **3NA3**	**3NE1 (Ⓤ)**	**Circuit-breaker** (see Catalog LV 1)
1 AC 200 V to 240 V	0.12	0.16	6SE6440-2UC11-2AA1	**6SE6400-0GP00-0AA0**	**3NA3803**	●	**3RV1021-1EA10**
	0.25	0.33	6SE6440-2UC12-5AA1				**3RV1021-1HA10**
	0.37	0.50	6SE6440-2UC13-7AA1				**3RV1021-1JA10**
	0.55	0.75	6SE6440-2UC15-5AA1		**3NA3805**		**3RV1021-1KA10**
	0.75	1.0	6SE6440-2UC17-5AA1				**3RV1021-4AA10**
	1.1	1.5	6SE6440-2UC21-1BA1	**6SE6400-0GP00-0BA0**	**3NA3807**		**3RV1021-4DA10**
	1.5	2.0	6SE6440-2UC21-5BA1				**3RV1031-4EA10**
	2.2	3.0	6SE6440-2UC22-2BA1		**3NA3812**		**3RV1031-4FA10**
	3.0	4.0	6SE6440-2UC23-0CA1	**6SE6400-0GP00-0CA0**	**3NA3817**		**3RV1041-4JA10**
3 AC 200 V to 240 V	0.12	0.16	6SE6440-2UC11-2AA1	**6SE6400-0GP00-0AA0**	**3NA3803**	●	**3RV1021-1BA10**
	0.25	0.33	6SE6440-2UC12-5AA1				**3RV1021-1DA10**
	0.37	0.50	6SE6440-2UC13-7AA1				**3RV1021-1FA10**
	0.55	0.75	6SE6440-2UC15-5AA1		**3NA3805**		**3RV1021-1GA10**
	0.75	1.0	6SE6440-2UC17-5AA1				**3RV1021-1HA10**
	1.1	1.5	6SE6440-2UC21-1BA1	**6SE6400-0GP00-0BA0**	**3NA3807**		**3RV1021-1KA10**
	1.5	2.0	6SE6440-2UC21-5BA1				**3RV1021-4AA10**
	2.2	3.0	6SE6440-2UC22-2BA1		**3NA3810**		**3RV1021-4CA10**
	3.0	4.0	6SE6440-2UC23-0CA1	**6SE6400-0GP00-0CA0**			**3RV1031-4EA10**
	4.0	5.0	6SE6440-2UC24-0CA1		**3NA3812**		**3RV1031-4FA10**
	5.5	7.5	6SE6440-2UC25-5CA1		**3NA3814**		**3RV1031-4HA10**
	7.5	10	6SE6440-2UC27-5DA1	Integrated as standard for shield connection of the control cable and the power cable.	**3NA3820**	**3NE1817-0**	**3RV1042-4JA10**
	11.0	15	6SE6440-2UC31-1DA1		**3NA3824**	**3NE1820-0**	**3RV1042-4LA10**
	15.0	20	6SE6440-2UC31-5DA1				**3VL1712-.DD33-....**
	18.5	25	6SE6440-2UC31-8EA1		**3NA3830**	**3NE1021-0**	
	22	30	6SE6440-2UC32-2EA1		**3NA3832**	**3NE1022-0**	**3VL1716-.DD33-....**
	30	40	6SE6440-2UC33-0FA1	Integrated as standard for shield connection of the control cable. The shield of the power cable has to be connected externally (e.g. in the control cabinet).	**3NA3140**	**3NE1225-0**	**3VL3725-.DC36-....**
	37	50	6SE6440-2UC33-7FA1		**3NA3142**	**3NE1225-0**	**3VL4731-.DC36-....**
	45	60	6SE6440-2UC34-5FA1		**3NA3144**	**3NE1227-0**	
3 AC 380 V to 480 V	0.37	0.50	6SE6440-2UD13-7AA1	**6SE6400-0GP00-0AA0**	**3NA3803**	●	**3RV1021-1CA10**
	0.55	0.75	6SE6440-2UD15-5AA1				**3RV1021-1DA10**
	0.75	1.0	6SE6440-2UD17-5AA1				**3RV1021-1FA10**
	1.1	1.5	6SE6440-2UD21-1AA1				**3RV1021-1GA10**
	1.5	2.0	6SE6440-2UD21-5AA1				**3RV1021-1JA10**
	2.2	3.0	6SE6440-2UD22-2BA1	**6SE6400-0GP00-0BA0**	**3NA3805**		**3RV1021-1KA10**
	3.0	4.0	6SE6440-2UD23-0BA1				**3RV1021-4AA10**
	4.0	5.0	6SE6440-2UD24-0BA1		**3NA3807**		**3RV1021-4BA10**
	5.5	7.5	6SE6440-2UD25-5CA1	**6SE6400-0GP00-0CA0**			**3RV1031-4EA10**
	7.5	10	6SE6440-2UD27-5CA1		**3NA3812**		**3RV1031-4FA10**
	11.0	15	6SE6440-2UD31-1CA1		**3NA3814**		**3RV1031-4HA10**
	15.0	20	6SE6440-2UD31-5DA1	Integrated as standard for shield connection of the control cable and the power cable.	**3NA3820**	**3NE1817-0**	**3RV1042-4KA10**
	18.5	25	6SE6440-2UD31-8DA1		**3NA3822**	**3NE1818-0**	
	22	30	6SE6440-2UD32-2DA1		**3NA3824**	**3NE1820-0**	**3RV1042-4MA10**
	30	40	6SE6440-2UD33-0EA1		**3NA3830**	**3NE1021-0**	**3VL1712-.DD33-....**
	37	50	6SE6440-2UD33-7EA1		**3NA3832**	**3NE1022-0**	**3VL1716-.DD33-....**
	45	60	6SE6440-2UD34-5FA1	Integrated as standard for shield connection of the control cable. The shield of the power cable has to be connected externally (e.g. in the control cabinet).	**3NA3836**	**3NE1224-0**	**3VL3720-.DC36-....**
	55	75	6SE6440-2UD35-5FA1		**3NA3140**	**3NE1225-0**	**3VL3725-.DC36-....**
	75	100	6SE6440-2UD37-5FA1		**3NA3144**	**3NE1227-0**	**3VL3725-.DC36-....**
	90	125	6SE6440-2UD38-8FA1		–		**3VL4731-.DC36-....**
	110	150	6SE6440-2UD41-1FA1		–	**3NE1230-0**	
	132	200	6SE6440-2UD41-3GA1		–	**3NE1332-0**	
	160	250	6SE6440-2UD41-6GA1		–	**3NE1333-0**	**3VL4740-.DC36-....**
	200	300	6SE6440-2UD42-0GA1		–	**3NE1435-0**	**3VL5750-.DC36-....**
3 AC 500 V to 600 V	0.75	1.0	6SE6440-2UE17-5CA1	**6SE6400-0GP00-0CA0**	**3NA3803-6**	●	**3RV1021-1EA10**
	1.5	2.0	6SE6440-2UE21-5CA1				**3RV1021-1GA10**
	2.2	3.0	6SE6440-2UE22-2CA1				**3RV1021-1JA10**
	4.0	5.0	6SE6440-2UE24-0CA1		**3NA3805-6**		**3RV1021-4AA10**
	5.5	7.5	6SE6440-2UE25-5CA1				**3RV1021-4BA10**
	7.5	10	6SE6440-2UE27-5CA1		**3NA3810-6**		**3RV1021-4DA10**
	11.0	15	6SE6440-2UE31-1CA1		**3NA3812-6**		**3RV1031-4FA10**
	15.0	20	6SE6440-2UE31-5DA1	Integrated as standard for shield connection of the control cable and the power cable.	**3NA3814-6**	**3NE1803-0**	**3RV1031-4HA10**
	18.5	25	6SE6440-2UE31-8DA1		**3NA3820-6**	**3NE1817-0**	**3RV1042-4JA10**
	22	30	6SE6440-2UE32-2DA1		**3NA3822-6**	**3NE1818-0**	**3RV1042-4KA10**
	30	40	6SE6440-2UE33-0EA1		**3NA3824-6**	**3NE1820-0**	**3RV1042-4MA10**
	37	50	6SE6440-2UE33-7EA1				**3VL1712-.DD33-....**
	45	60	6SE6440-2UE34-5FA1	Integrated as standard for shield connection of the control cable. The shield of the power cable has to be connected externally (e.g. in the control cabinet).	**3NA3132-6**	**3NE1022-0**	**3VL1716-.DD33-....**
	55	75	6SE6440-2UE35-5FA1		**3NA3136-6**	**3NE1224-0**	**3VL3720-.DC36-....**
	75	100	6SE6440-2UE37-5FA1				**3VL3725-.DC36-....**

4

Selection and ordering data (continued)

Mains voltage	Output (CT) kW	Output (CT) hp	Inverter **with** internal filter Class A	Order No. of options **Additional EMC filter, Class B**	**Line commutating choke**	**LC filter**
1 AC 200 V to 240 V	0.12	0.16	6SE6440-2AB11-2AA1	**6SE6400-2FS01-0AB0**	**6SE6400-3CC00-4AB3**	–
	0.25	0.33	6SE6440-2AB12-5AA1			–
	0.37	0.50	6SE6440-2AB13-7AA1		**6SE6400-3CC01-0AB3**	–
	0.55	0.75	6SE6440-2AB15-5AA1			–
	0.75	1.0	6SE6440-2AB17-5AA1			–
	1.1	1.5	6SE6440-2AB21-1BA1	**6SE6400-2FS02-6BB0**	**6SE6400-3CC02-6BB3**	–
	1.5	2.0	6SE6440-2AB21-5BA1			–
	2.2	3.0	6SE6440-2AB22-2BA1			–
	3.0	4.0	6SE6440-2AB23-0CA1	**6SE6400-2FS03-5CB0**	**6SE6400-3CC03-5CB3**	–
3 AC 200 V to 240 V	3.0	4.0	6SE6440-2AC23-0CA1	**6SE6400-2FS03-8CD0**	**6SE6400-3CC01-7CC3**	–
	4.0	5.0	6SE6440-2AC24-0CA1		**6SE6400-3CC03-5CD3**	–
	5.5	7.5	6SE6440-2AC25-5CA1			–
3 AC 380 V to 480 V	2.2	3.0	6SE6440-2AD22-2BA1	**6SE6400-2FS01-6BD0**	**6SE6400-3CC01-0BD3**	**6SE6400-3TD01-0BD0**
	3.0	4.0	6SE6440-2AD23-0BA1			
	4.0	5.0	6SE6440-2AD24-0BA1		**6SE6400-3CC01-4BD3**	
	5.5	7.5	6SE6440-2AD25-5CA1	**6SE6400-2FS03-8CD0**	**6SE6400-3CC02-2CD3**	**6SE6400-3TD03-2CD0**
	7.5	10	6SE6440-2AD27-5CA1			
	11.0	15	6SE6440-2AD31-1CA1		**6SE6400-3CC03-5CD3**	
	15.0	20	6SE6440-2AD31-5DA1	An inverter **without** filter must be selected to satisfy the EMC requirements of Class B. In addition, an appropriate EMC filter of Class B from Schaffner is required.	**6SE6400-3CC04-4DD0**	**6SE6400-3TD03-7DD0**
	18.5	25	6SE6440-2AD31-8DA1			**6SE6400-3TD04-8DD0**
	22	30	6SE6440-2AD32-2DA1		**6SE6400-3CC05-2DD0**	**6SE6400-3TD06-1DD0**
	30	40	6SE6440-2AD33-0EA1		**6SE6400-3CC08-3ED0**	**6SE6400-3TD07-2ED0**
	37	50	6SE6440-2AD33-7EA1			**6SE6400-3TD11-5FD0**
	45	60	6SE6440-2AD34-5FA1		**6SE6400-3CC11-2FD0**	
	55	75	6SE6440-2AD35-5FA1			**6SE6400-3TD15-0FD0**
	75	100	6SE6440-2AD37-5FA1		**6SE6400-3CC11-7FD0**	**6SE6400-3TD18-0FD0**

Mains voltage	Output (CT) kW	Output (CT) hp	Inverter **with** internal filter Class A	Order No. of options **Output choke**	**Brake resistors**	**Gland plate**
1 AC 200 V to 240 V	0.12	0.16	6SE6440-2AB11-2AA1	**6SE6400-3TC00-4AD3**	**6SE6400-4BC05-0AA0**	**6SE6400-0GP00-0AA0**
	0.25	0.33	6SE6440-2AB12-5AA1			
	0.37	0.50	6SE6440-2AB13-7AA1			
	0.55	0.75	6SE6440-2AB15-5AA1			
	0.75	1.0	6SE6440-2AB17-5AA1			
	1.1	1.5	6SE6440-2AB21-1BA1	**6SE6400-3TC01-0BD3**	**6SE6400-4BC11-2BA0**	**6SE6400-0GP00-0BA0**
	1.5	2.0	6SE6440-2AB21-5BA1			
	2.2	3.0	6SE6440-2AB22-2BA1			
	3.0	4.0	6SE6440-2AB23-0CA1	**6SE6400-3TC03-2CD3**	**6SE6400-4BC12-5CA0**	**6SE6400-0GP00-0CA0**
3 AC 200 V to 240 V	3.0	4.0	6SE6440-2AC23-0CA1	**6SE6400-3TC03-2CD3**	**6SE6400-4BC12-5CA0**	**6SE6400-0GP00-0CA0**
	4.0	5.0	6SE6440-2AC24-0CA1		**6SE6400-4BC13-0CA0**	
	5.5	7.5	6SE6440-2AC25-5CA1			
3 AC 380 V to 480 V	2.2	3.0	6SE6440-2AD22-2BA1	**6SE6400-3TC01-0BD3**	**6SE6400-4BD12-0BA0**	**6SE6400-0GP00-0BA0**
	3.0	4.0	6SE6440-2AD23-0BA1			
	4.0	5.0	6SE6440-2AD24-0BA1			
	5.5	7.5	6SE6440-2AD25-5CA1	**6SE6400-3TC03-2CD3**	**6SE6400-4BD16-5CA0**	**6SE6400-0GP00-0CA0**
	7.5	10	6SE6440-2AD27-5CA1			
	11.0	15	6SE6440-2AD31-1CA1			
	15.0	20	6SE6440-2AD31-5DA1	**6SE6400-3TC05-4DD0**	**6SE6400-4BD21-2DA0**	Integrated as standard for shield connection of the control cable and the power cable.
	18.5	25	6SE6440-2AD31-8DA1	**6SE6400-3TC03-8DD0**		
	22	30	6SE6440-2AD32-2DA1	**6SE6400-3TC05-4DD0**		
	30	40	6SE6440-2AD33-0EA1	**6SE6400-3TC08-0ED0**	**6SE6400-4BD22-2EA0**	
	37	50	6SE6440-2AD33-7EA1	**6SE6400-3TC07-5ED0**		
	45	60	6SE6440-2AD34-5FA1	**6SE6400-3TC14-5FD0**	**6SE6400-4BD24-0FA0**	
	55	75	6SE6440-2AD35-5FA1	**6SE6400-3TC15-4FD0**		
	75	100	6SE6440-2AD37-5FA1	**6SE6400-3TC14-5FD0**		

Options
Variant dependent options

Selection and ordering data (continued)

Mains voltage	Output (CT) kW	hp	Inverter **with** internal filter Class A	Order No. of the options **Fuses** (see Catalog LV 1) 3NA3	3NE1 (UL)	**Circuit-breaker** (see Catalog LV 1)
1 AC 200 V to 240 V	0.12	0.16	6SE6440-2AB11-2AA1	**3NA3803**	●	**3RV1021-1EA10**
	0.25	0.33	6SE6440-2AB12-5AA1			**3RV1021-1HA10**
	0.37	0.50	6SE6440-2AB13-7AA1			**3RV1021-1JA10**
	0.55	0.75	6SE6440-2AB15-5AA1	**3NA3805**		**3RV1021-1KA10**
	0.75	1.0	6SE6440-2AB17-5AA1			**3RV1021-4AA10**
	1.1	1.5	6SE6440-2AB21-1BA1	**3NA3807**		**3RV1021-4DA10**
	1.5	2.0	6SE6440-2AB21-5BA1			**3RV1031-4EA10**
	2.2	3.0	6SE6440-2AB22-2BA1	**3NA3812**		**3RV1031-4FA10**
	3.0	4.0	6SE6440-2AB23-0CA1	**3NA3817**		**3RV1041-4JA10**
3 AC 200 V to 240 V	3.0	4.0	6SE6440-2AC23-0CA1	**3NA3810**	●	**3RV1031-4EA10**
	4.0	5.0	6SE6440-2AC24-0CA1	**3NA3812**		**3RV1031-4FA10**
	5.5	7.5	6SE6440-2AC25-5CA1	**3NA3814**		**3RV1031-4HA10**
3 AC 380 V to 480 V	2.2	3.0	6SE6440-2AD22-2BA1	**3NA3805**	●	**3RV1021-1KA10**
	3.0	4.0	6SE6440-2AD23-0BA1			**3RV1021-4AA10**
	4.0	5.0	6SE6440-2AD24-0BA1	**3NA3807**		**3RV1021-4BA10**
	5.5	7.5	6SE6440-2AD25-5CA1			**3RV1031-4EA10**
	7.5	10	6SE6440-2AD27-5CA1	**3NA3812**		**3RV1031-4FA10**
	11.0	15	6SE6440-2AD31-1CA1	**3NA3814**		**3RV1031-4HA10**
	15.0	20	6SE6440-2AD31-5DA1	**3NA3820**	**3NE1817-0**	**3RV1042-4KA10**
	18.5	25	6SE6440-2AD31-8DA1	**3NA3822**	**3NE1818-0**	
	22	30	6SE6440-2AD32-2DA1	**3NA3824**	**3NE1820-0**	**3RV1042-4MA10**
	30	40	6SE6440-2AD33-0EA1	**3NA3830**	**3NE1021-0**	**3VL1712-.DD33-....**
	37	50	6SE6440-2AD33-7EA1	**3NA3832**	**3NE1022-0**	**3VL1716-.DD33-....**
	45	60	6SE6440-2AD34-5FA1	**3NA3836**	**3NE1224-0**	**3VL3720-.DC36-....**
	55	75	6SE6440-2AD35-5FA1	**3NA3140**	**3NE1225-0**	**3VL3725-.DC36-....**
	75	100	6SE6440-2AD37-5FA1	**3NA3144**	**3NE1227-0**	**3VL4731-.DC36-....**

● Use in America requires UL-listed fuses such as the Class NON/NOS range from Bussmann.

Overview

Basic Operator Panel (BOP)

With the BOP, individual parameter settings can be made. Values and units are shown on a 5-digit display.

Basic Operator Panel (BOP)

A BOP can be used for several inverters. It can be directly mounted on the inverter or in a control cabinet door using a mounting kit.

Advanced Operator Panel (AOP)

The AOP enables MICROMASTER 440 parameter kits to be easily read and modified. In contrast to the BOP, the value and meaning of the parameters can be directly displayed as plain text in several languages by fast scrolling of the address.

Advanced Operator Panel (AOP)

The AOP is directly plugged into the inverter, or communicates with the latter through a door mounting kit. Together with the "AOP door mounting kit for multiple inverters", the AOP permits bus communication with up to 30 inverters at a transmission rate of 38 kbaud. (RS485, USS).

For servicing purposes, the AOP furthermore supports the download and upread of complete parameter kits.

Asian Advanced Operator Panel (AAOP)

The AAOP is the Chinese version of the AOP operator panel. It has an enhanced display and supports the operating languages of Chinese (simplified) and English.

Asian Advanced Operator Panel (AAOP)

Cyrillic Advanced Operator Panel (CAOP)

The CAOP is the Cyrillic version of the AOP Advanced Operator Panel. It supports the Cyrillic, German and English operator languages.

PROFIBUS module

For a complete PROFIBUS connection with up to ≤ 12 Mbaud. Remote control of the inverter is possible with the PROFIBUS module. Remote control and operation at the inverter can be combined using an operator panel plugged onto the PROFIBUS module. The PROFIBUS module can be supplied by an external 24 V DC power supply and is thus also active when the inverter is disconnected from the power supply.

Connection by means of a 9-pin Sub-D connector (available as an option).

DeviceNet module

For networking the inverters to the DeviceNet fieldbus system widely used on the American market. A maximum transmission rate of 500 kbaud is possible. Remote control of the inverter is possible with the DeviceNet module. Remote control and operation at the inverter can be combined using an operator panel plugged onto the DeviceNet module.

The connection to the DeviceNet bus system is made using a 5-pin connector with terminal strip.

CANopen module

Using the CANopen communications module, an inverter can be linked to the CANopen fieldbus system and remote control is then possible.

Remote control and operation at the inverter can be combined using an operator panel plugged onto the CANopen module.

The module is connected to the bus system through a 9-pin Sub-D connector.

Pulse encoder evaluation module

The pulse encoder evaluation module permits direct connection of the most widely encountered digital pulse encoders to the inverter.

They offer the following functions:

- Zero speed at full load torque
- Extremely accurate speed control
- Increased dynamic response of speed and torque control.

This module can be used with HTL and TTL pulse encoders (High voltage Transistor Logic, 24 V and Transistor Logic, 5 V).

Options
Variant independent options

Overview (continued)

Connection kit for PC to inverter

For controlling an inverter directly from a PC if the appropriate software has been installed (e.g. STARTER). Isolated RS-232 adapter module for reliable point-to-point connection to a PC. Includes a Sub-D connector and an RS-232 standard cable (3 m).

Connection kit for PC to AOP

For connecting a PC to an AOP or AAOP. Offline programming of inverters and archiving of parameter kits possible. Includes a desktop attachment kit for an AOP or AAOP, an RS-232 standard cable (3 m) with Sub-D connectors and a universal power supply unit.

Operator panel door mounting kit for single inverter

For mounting an operator panel in a control cabinet door. Degree of protection IP56. Contains a cable adapter module with screwless terminals for use with user's own RS-232 cables [1]).

AOP door mounting kit for multiple inverters (USS)

For mounting an AOP or AAOP in a control cabinet door. Degree of protection IP56. The AOP or AAOP can communicate with several inverters by means of the RS-485 USS protocol. The 4-pin connecting cable from the AOP or AAOP to the RS-485 terminals of the inverter and to the 24 V user terminal strip is not included [2]).

Start-up tools

- STARTER
  Starter is graphic start-up software for guided start-up for MICROMASTER 410/420/430/440 frequency inverters under Windows 2000/XP Professional. Parameter lists can be read out, altered, stored, entered and printed.
- DriveMonitor
  is a start-up software for list-oriented programming of frequency inverters. This program executes under Windows 98/NT/2000/ME/XP Professional.

Both programs are included on the Docu DVD which is provided with every inverter.

Selection and ordering data

The options listed here are suitable for all MICROMASTER 440 inverters.

Options	Order No.	
Basic Operator Panel (BOP)	**6SE6400-0BP00-0AA0**	
Advanced Operator Panel (AOP)	**6SE6400-0AP00-0AA1**	
Asian Advanced Operator Panel (AAOP)	**6SE6400-0AP00-0AB0**	
Cyrillic Advanced Operator Panel (CAOP)	**6SE6400-0AP00-0CA0**	
PROFIBUS module	**6SE6400-1PB00-0AA0**	
DeviceNet module	**6SE6400-1DN00-0AA0**	
CANopen module	**6SE6400-1CB00-0AA0**	
Pulse encoder evaluation module	**6SE6400-0EN00-0AA0**	
RS485/PROFIBUS bus connector	**6GK1500-0FC00**	
Connection kit for PC to inverter	**6SE6400-1PC00-0AA0**	
Connection kit for PC to AOP	**6SE6400-0PA00-0AA0**	
Operator panel door mounting kit for single inverter	**6SE6400-0PM00-0AA0**	
AOP door mounting kit for multiple inverters (USS)	**6SE6400-0MD00-0AA0**	
Start-up tool STARTER on DVD	**6SL3072-0AA00-0AG0**	Available on the Internet at: http://support.automation.siemens.com/WW/view/en/10804985/133100

1) A shielded cable of type Belden 8132 (28 AWG) is recommended. The maximum cable length is 5 m for RS-232.

2) A shielded cable of type Belden 8132 (28 AWG) is recommended. The maximum cable length is 10 m for RS-485.

Technical data

		PROFIBUS module 6SE6400-1PB00-0AA0	DeviceNet module 6SE6400-1DN00-0AA0
			
Size (height x width x depth)		161 mm x 73 mm x 46 mm	
Degree of protection		IP20	
Degree of pollution		2 to IEC 60 664-1 (DIN VDE 0110/T1), no condensation permitted during operation	
Strain resistance • Stationary • Transport	 Deflection Acceleration Deflection Acceleration	to IEC 60 068-2-6 (if module is installed correctly) 0.15 mm in the frequency range of 10 Hz to 58 Hz 19.6 m/s^2 in the frequency range of 58 Hz to 500 Hz 3.5 mm in the frequency range of 5 Hz to 9 Hz 9.8 m/s^2 in the frequency range of 9 Hz to 500 Hz	
Climatic category (during operation)		3K3 to IEC 60 721-3-3	
Cooling method		Natural air cooling	
Permissible ambient or cooling agent temperature • Operation • Storage and transport		 –10 °C to +50 °C (+14 °F to +122 °F) –25 °C to +70 °C (–13 °F to +158 °F)	
Relative humidity (permissible humidity rating) • Operation • Storage and transport		 ≤ 85 % (non-condensing) ≤ 95 %	
Electromagnetic compatibility	Emission Interference	to EN 55 011 (1991) Class A to IEC 60 801-3 and EN 61 000-4-3	
Power supply		6.5 V ± 5 %, max. 300 mA, internal from inverter or 24 V ± 10 %, max. 350 mA, external	6.5 V ± 5 %, max. 300 mA internal from inverter or 24 V, max. 60 mA from DeviceNet-Bus
Output voltage		5 V ± 10 %, max. 100 mA, galvanically isolated supply • for terminating the serial interface bus or • for supplying the OLP (Optical Link Plug)	–
Data transmission rate		max. 12 Mbaud	125, 250 and 500 Kbaud

Options
Variant independent options

Technical data (continued)

		CANopen module 6SE6400-1CB00-0AA0	**Pulse encoder evaluation module** 6SE6400-0EN00-0AA0
			
Size (height x width x depth)		161 mm x 73 mm x 46 mm	161 mm x 73 mm x 42 mm
Degree of protection		IP20	
Degree of pollution		2 to IEC 60664-1 (DIN VDE 0110/T1), no condensation permitted during operation	
Strain resistance • Stationary • Transport	 Deflection Acceleration Deflection Acceleration	to IEC 60068-2-6 (if module is installed correctly) 0.15 mm in the frequency range of 10 Hz to 58 Hz 19.6 m/s^2 in the frequency range of 58 Hz to 500 Hz 3.5 mm in the frequency range of 5 Hz to 9 Hz 9.8 m/s^2 in the frequency range of 9 Hz to 500 Hz	
Climatic category (during operation)		3K3 to IEC 60721-3-3	
Cooling method		Natural air cooling	
Permissible ambient or cooling agent temperature • Operation • Storage • Transportation		 –10 °C to +50 °C (+14 °F to +122 °F) –40 °C to +70 °C (–40 °F to +158 °F) –25 °C to +70 °C (–13 °F to +158 °F)	 –10 °C to +50 °C (+14 °F to +122 °F) –20 °C to +70 °C (–14 °F to +158 °F) –20 °C to +70 °C (–14 °F to +158 °F)
Electromagnetic compatibility	Emission Interference	to EN 55011 (1991) Class A to IEC 60801-3 and EN 61000-4-3	
Relative humidity (permissible humidity rating) • Operation • Storage and transport		 ≤ 85 % (non-condensing) ≤ 95 %	
Power supply		The CAN bus is supplied from the inverter power supply	5 V ± 5 %, 330 mA or 18 V non-regulated, 140 mA, short-circuit proof
Data transmission rate		10, 20, 50, 125, 250, 500, 800 kbaud and 1 Mbaud	–
Pulse frequency		–	max. 300 kHz

Selection and ordering data

Type of documentation	Language	Order No.
Docu pack, supplied with each inverter, containing DVD [1]) and Getting Started Guide [2]) (paper version)	Multilanguage	**6SE6400-5AD00-1AP1**
Operating instructions (paper version)	German, English, French, Italian, Spanish	
	Available as pdf file on the Internet at http://support.automation.siemens.com/WW/view/en/10804926/133300	
Parameter list (paper version)	German, English, French, Italian, Spanish	
	Available as pdf file on the Internet at http://support.automation.siemens.com/WW/view/en/10804926/133300	

1) The DVD contains operating instructions, parameter list, commissioning tools STARTER and DriveMonitor, multilanguage.

Available on the Internet: DriveMonitor at http://support.automation.siemens.com/WW/view/en/10804984/133100

STARTER at http://support.automation.siemens.com/WW/view/en/10804985/133100

2) Available on the Internet at http://support.automation.siemens.com/WW/view/en/10804926/133300

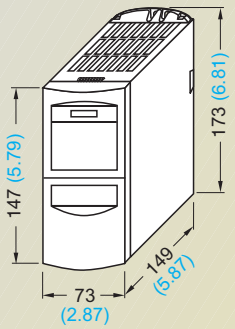
Dimension drawings

MICROMASTER 440 inverter

Frame size	1/3 AC 200 V to 240 V	3 AC 380 V to 480 V	3 AC 500 V to 600 V
A	0.12 kW to 0.75 kW	0.37 kW to 1.5 kW	–
B	1.1 kW to 2.2 kW	2.2 kW to 4 kW	–
C	3 kW to 5.5 kW	5.5 kW to 11 kW	0.75 kW to 11 kW

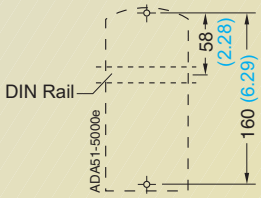
The specified outputs are valid for CT mode.

Note:
The inverters must not be mounted horizontally. But the inverters can be mounted without lateral spacing.

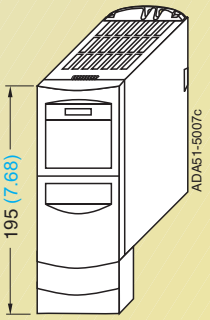


Inverter frame size **A**

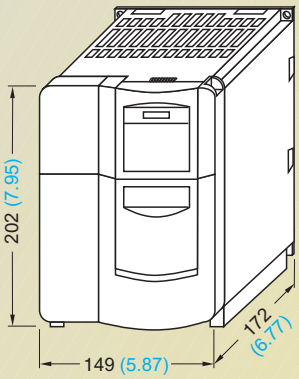
Drill and fixing pattern



Fixing with 2 x M4 bolts, 2 x M4 nuts, 2 x M4 washers
or by snapping onto a rail
Tightening torque with washers fitted: 2.5 Nm
Ventilation clearance required
Top and bottom: 100 mm

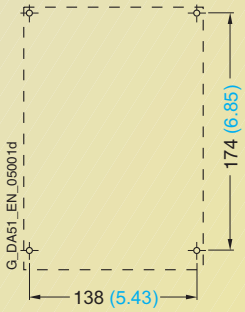


Inverter frame size **A** with **gland plate**

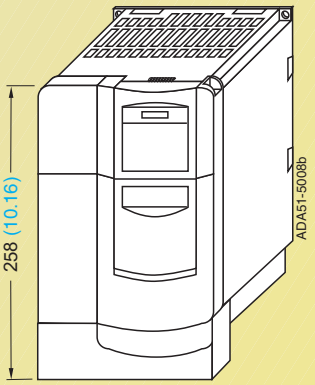


Inverter frame size **B**

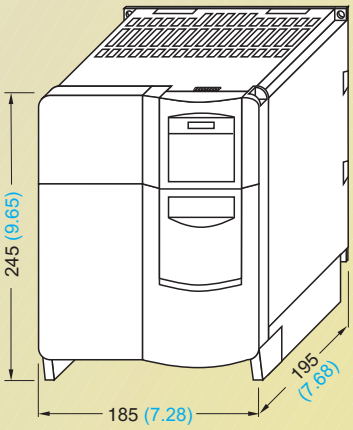
Drill pattern



Fixing with 4 x M4 bolts, 4 x M4 nuts, 4 x M4 washers
Tightening torque with washers fitted: 2.5 Nm
Ventilation clearance required
Top and bottom: 100 mm

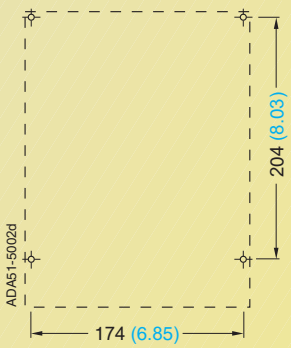


Inverter frame size **B** with **gland plate**

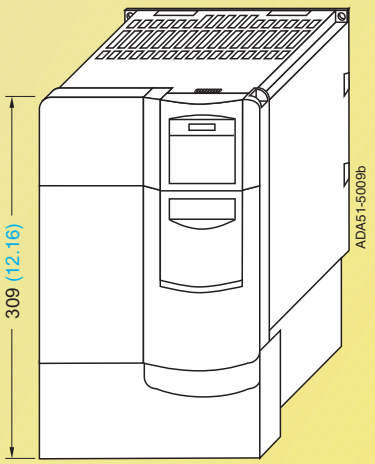


Inverter frame size **C**

Drill pattern



Fixing with 4 x M5 bolts, 4 x M5 nuts, 4 x M5 washers
Tightening torque with washers fitted: 3.0 Nm
Ventilation clearance required
Top and bottom: 100 mm



Inverter frame size **C** with **gland plate**

With the communications module, the mounting depth increases by 23 mm (0.91 inches). If a pulse encoder evaluation module is mounted in addition, the installation depth increases by another 23 mm (0.91 inches).

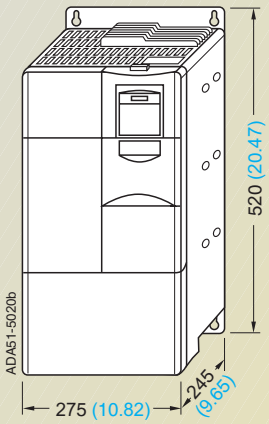
All dimensions in mm (values in brackets are in inches)

MICROMASTER 440 inverter (continued)

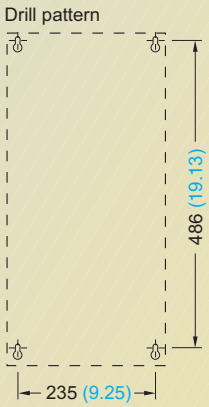
Frame size	3 AC 200 V to 240 V	3 AC 380 V to 480 V	3 AC 500 V to 600 V
D	7.5 kW to 15 kW	15 kW to 22 kW	15 kW to 22 kW
E	18.5 kW to 22 kW	30 kW to 37 kW	30 kW to 37 kW
F	30 kW to 45 kW	45 kW to 75 kW	45 kW to 75 kW

The specified outputs are valid for CT mode.

Note:
The inverters must not be mounted horizontally. But the inverters can be mounted without lateral spacing.

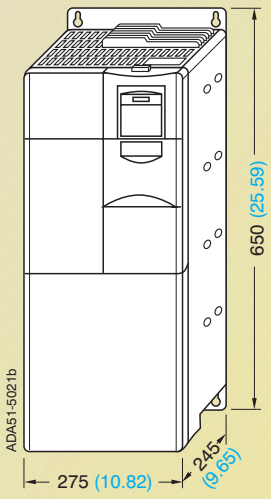


Inverter frame size **D**

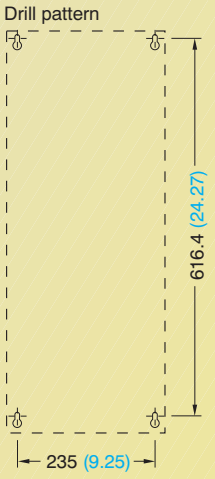


Fixing with
4 x M8 bolts, 4 x M8 nuts,
4 x M8 washers

Tightening torque with washers fitted: 13 Nm
Ventilation clearance required
Top and bottom: 300 mm

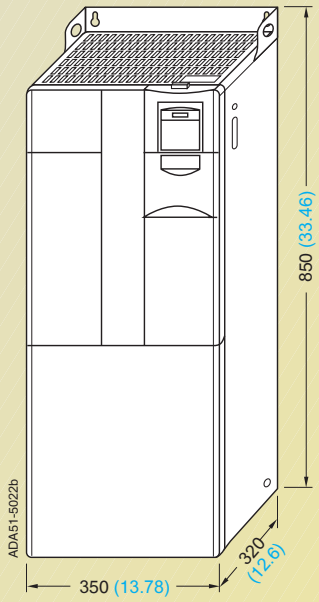


Inverter frame size **E**

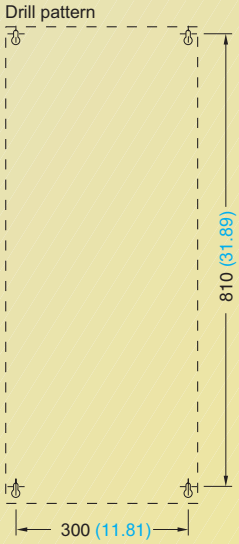


Fixing with
4 x M8 bolts, 4 x M8 nuts,
4 x M8 washers

Tightening torque with washers fitted: 13 Nm
Ventilation clearance required
Top and bottom: 300 mm

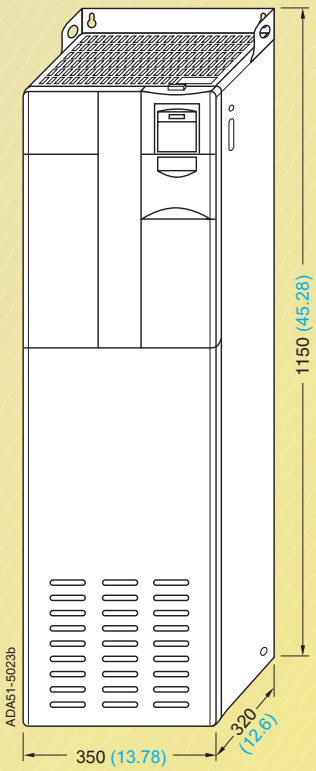


Inverter frame size **F**
without filter

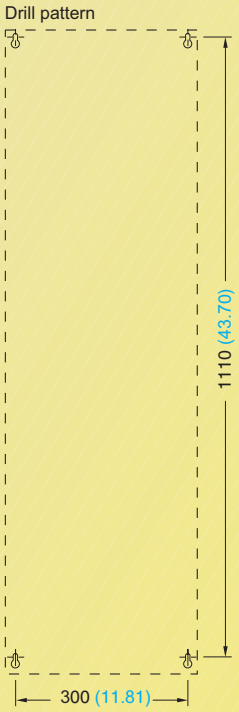


Fixing with
4 x M8 bolts, 4 x M8 nuts,
4 x M8 washers

Tightening torque with washers fitted: 13 Nm
Ventilation clearance required
Top and bottom: 350 mm



Inverter frame size **F**
with filter



Fixing with
4 x M8 bolts, 4 x M8 nuts,
4 x M8 washers

Tightening torque with washers fitted: 13 Nm
Ventilation clearance required
Top and bottom: 350 mm

All dimensions in mm (values in brackets are in inches)

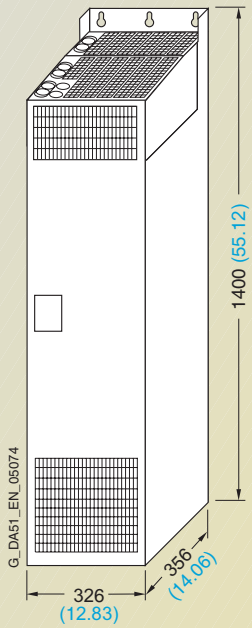
Dimension drawings

MICROMASTER 440 inverter (continued)

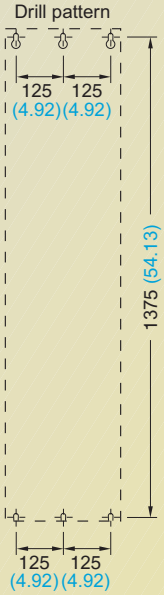
Frame size	3 AC 380 V to 480 V
FX	90 kW to 110 kW
GX	132 kW to 200 kW

The specified outputs are valid for CT mode.

Note:
The inverters must not be mounted horizontally. But the inverters can be mounted without lateral spacing.



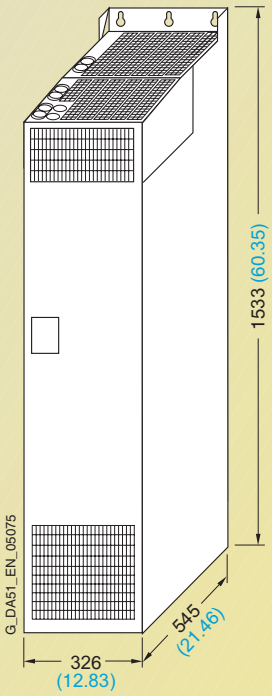
Inverter frame size **FX**



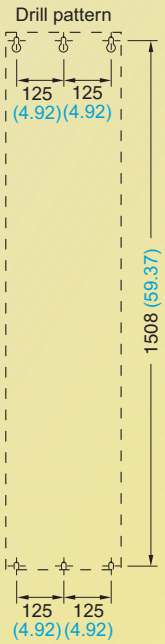
Fixing with
6 x M8 bolts
6 x M8 nuts
6 x M8 washers

Tightening torque with washers fitted: 13.0 Nm

Ventilation clearance required:
at top: 250 mm
at bottom: 150 mm
in front: 40 mm



Inverter frame size **GX**



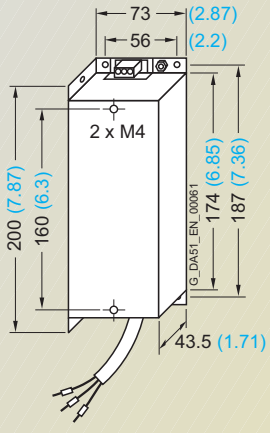
Fixing with
6 x M8 bolts
6 x M8 nuts
6 x M8 washers

Tightening torque with washers fitted: 13.0 Nm

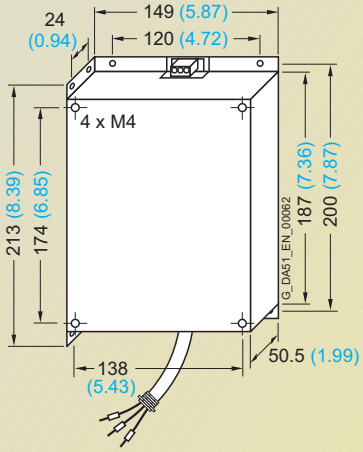
Ventilation clearance required:
at top: 250 mm
at bottom: 150 mm
in front: 50 mm

All dimensions in mm (values in brackets are in inches)

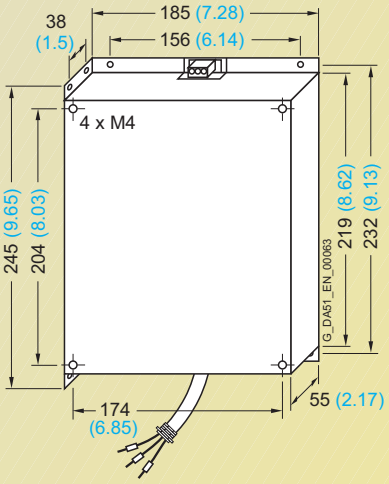
EMC filter



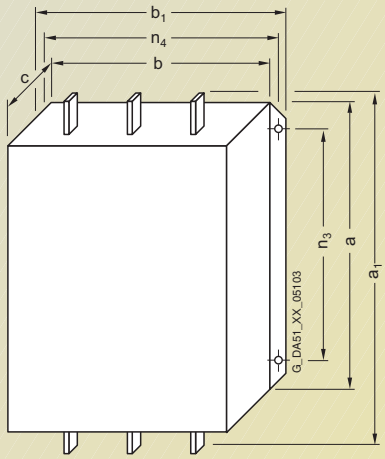
EMC filter for frame size **A**



For frame size **B**



For frame size **C**



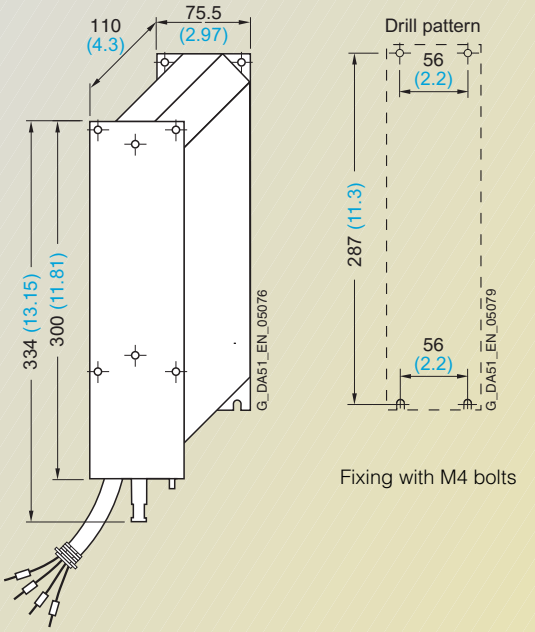
EMC filter Class A Type 6SL3000-	for inverter Frame size (FS)	Dimensions a	a_1	b	b_1	c	n_3	n_4	Weight, approx kg
0BE32-5AA0	**FX**	270 (10.63)	360 (14.17)	200 (7.87)	240 (9.45)	116 (4.57)	210 (8.27)	220 (8.66)	12.3
0BE34-4AA0	**GX/GX**	270 (10.63)	360 (14.17)	200 (7.87)	240 (9.45)	116 (4.57)	210 (8.27)	220 (8.66)	12.3
0BE36-0AA0	**GX**	310 (12.2)	400 (15.75)	215 (8.46)	265 (10.43)	140 (5.51)	250 (9.84)	240 (9.45)	19.0

EMC filter for frame sizes **FX and GX**

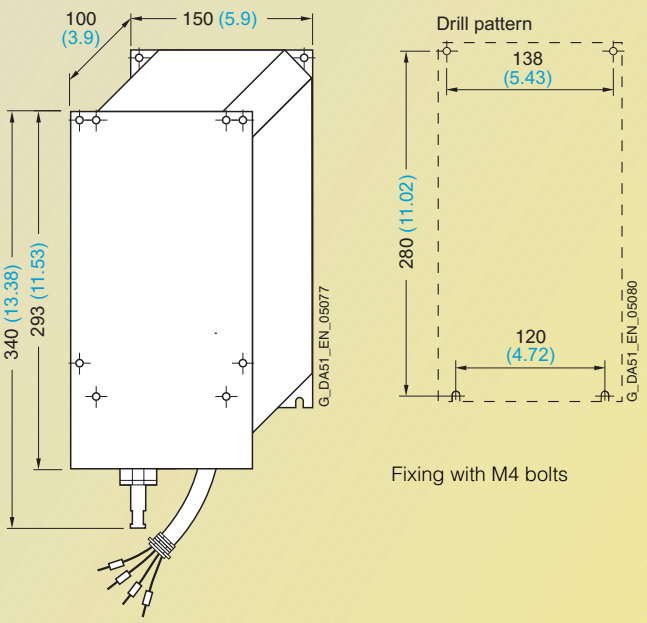
All dimensions in mm (values in brackets are in inches)

Dimension drawings

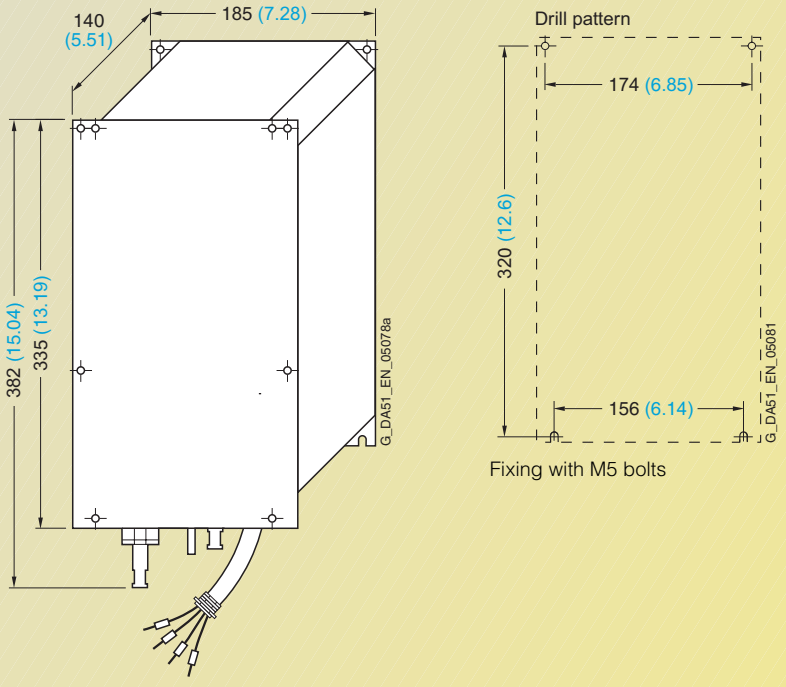
LC filter



LC filter for frame size **A**



For frame size **B**

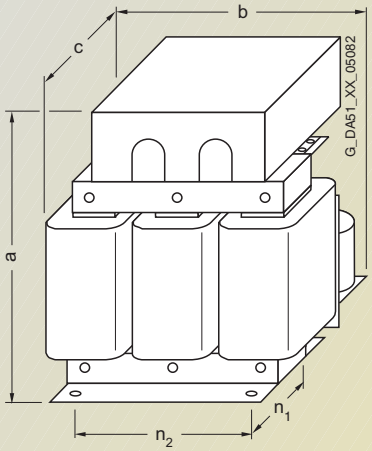


LC filter for frame size **C**

All dimensions in mm (values in brackets are in inches)

4

LC filter



Fixing with M10 bolts

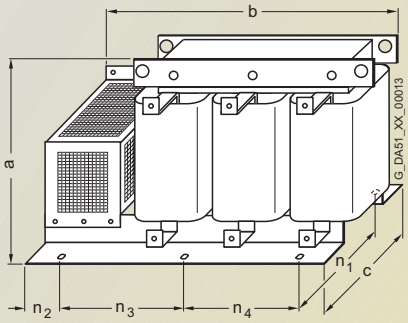
LC filter for frame sizes **D** to **F**

LC filter Type	for inverter Frame size (FS)	Dimensions a	b	c	n_1	n_2	Weight, approx kg
6SE6400-3TD03-7DD0	**D**	278 (10.94)	240 (9.45)	230 (9.06)	115 (4.53)	190 (7.48)	21.0
6SE6400-3TD04-8DD0	**D**	290 (11.42)	240 (9.45)	240 (9.45)	125 (4.92)	190 (7.48)	26.0
6SE6400-3TD06-1DD0	**D**	345 (13.58)	300 (11.81)	220 (8.66)	120 (4.72)	240 (9.45)	34.0
6SE6400-3TD02-3DE0	**D**	280 (11.02)	240 (9.45)	240 (9.45)	125 (4.92)	190 (7.48)	26.1
6SE6400-3TD03-2DE0	**D**	300 (11.81)	300 (11.81)	235 (9.25)	133 (5.24)	240 (9.45)	39.5
6SE6400-3TD03-7DE0	**D**	310 (12.2)	300 (11.81)	250 (9.84)	145 (5.71)	240 (9.45)	42.0
6SE6400-3TD07-2ED0	**E**	355 (13.98)	300 (11.81)	235 (9.25)	145 (5.71)	240 (9.45)	49.5
6SE6400-3TD04-8EE0	**E**	345 (13.58)	300 (11.81)	260 (10.24)	160 (6.3)	240 (9.45)	48.5
6SE6400-3TD06-1EE0	**E**	345 (13.58)	300 (11.81)	275 (10.83)	171 (6.73)	240 (9.45)	57.5
6SE6400-3TD11-5FD0	**E/F**	460 (18.11)	360 (14.17)	235 (9.25)	125 (4.92)	264 (10.39)	67.0
6SE6400-3TD15-0FD0	**F**	460 (18.11)	360 (14.17)	250 (9.84)	140 (5.51)	264 (10.39)	75.0
6SE6400-3TD18-0FD0	**F**	520 (20.47)	420 (16.54)	290 (11.42)	173 (6.81)	316 (12.44)	77.5
6SE6400-3TD07-1FE0	**F**	380 (14.96)	300 (11.81)	285 (11.22)	171 (6.73)	240 (9.45)	70.5
6SE6400-3TD10-0FE0	**F**	460 (18.11)	360 (14.17)	250 (9.84)	140 (5.11)	264 (10.39)	70.5
6SE6400-3TD11-5FE0	**F**	515 (20.28)	420 (16.54)	290 (11.42)	173 (6.81)	316 (12.44)	125.5

All dimensions in mm (values in brackets are in inches)

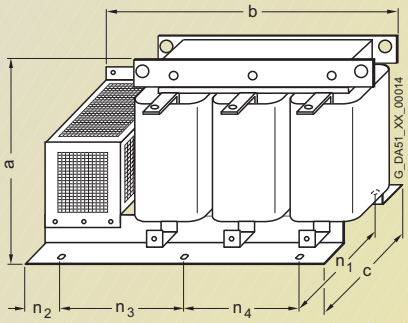
Dimension drawings

Sinusoidal filter



Sinusoidal filter for frame sizes **FX** and **GX**

Sinusoidal filter Type 6SL3000-	for inverter Frame size (FS)	Dimensions							Weight (max.)
		a	b	c	n_1	n_2	n_3	n_4	kg
2CE32-3AA0	**FX**	300 (11.81)	620 (24.41)	320 (12.6)	280 (11.02)	105 (4.13)	225 (8.86)	150 (5.91)	135.0
2CE32-8AA0	**GX**	300 (11.81)	620 (24.41)	320 (12.6)	280 (11.02)	105 (4.13)	225 (8.86)	150 (5.91)	138.0

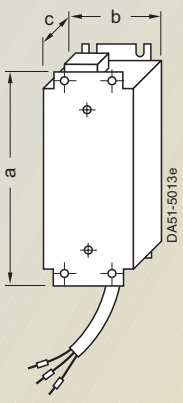


Sinusoidal filter for frame size **GX**

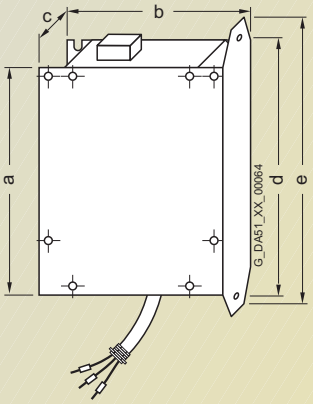
Sinusoidal filter Type 6SL3000-	for inverter Frame size (FS)	Dimensions							Weight (max.)
		a	b	c	n_1	n_2	n_3	n_4	kg
2CE33-3AA0	**GX**	370 (14.57)	620 (24.41)	360 (14.17)	320 (12.6)	105 (4.13)	225 (8.86)	150 (5.91)	144.0
2CE34-1AA0	**GX**	370 (14.57)	620 (24.41)	360 (14.17)	320 (12.6)	105 (4.13)	225 (8.86)	150 (5.91)	208.0

All dimensions in mm (values in brackets are in inches)

Line commutating chokes

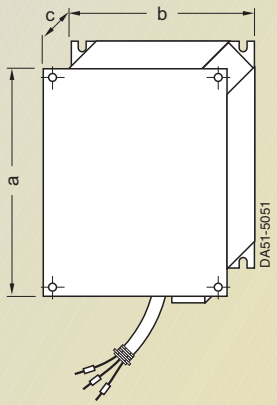


Line commutating choke for frame size **A**



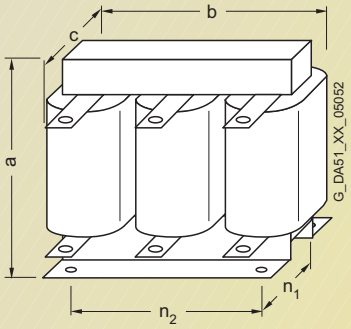
For frame sizes **B** and **C**

Line commutating choke for	Dimensions a	b	c	d	e	Weight (max.) kg
Frame size **A**	200 (7.87)	75.5 (2.97)	50 (1.97)	–	–	1.4
Frame size **B**	213 (8.39)	150 (5.91)	50 (1.97)	220 (8.66)	233 (9.17)	2.2
Frame size **C** (380–480 V)	245 (9.65)	185 (7.28)	50 (1.97)	264 (10.39)	280 (11.02)	5.1
Frame size **C** (500–600 V, 0.75–1.5 kW)	245 (9.65)	185 (7.28)	50 (1.97)	264 (10.39)	280 (11.02)	3.8
Frame size **C** (500–600 V, 2.2–4 kW)	245 (9.65)	185 (7.28)	50 (1.97)	264 (10.39)	280 (11.02)	4.0
Frame size **C** (500–600 V, 5.5–11 kW)	245 (9.65)	185 (7.28)	80 (3.15)	264 (10.39)	280 (11.02)	8.0



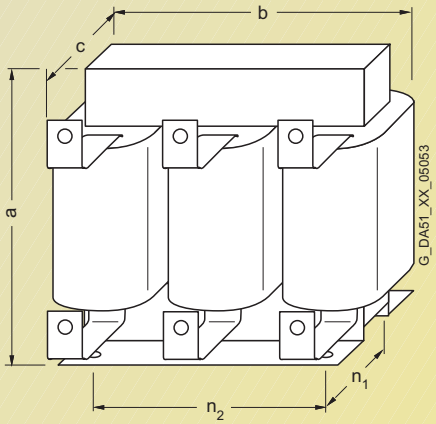
Line commutating choke for frame sizes **D** and **E**

Line commutating choke for	Dimensions a	b	c	Weight (max.) kg
Frame size **D**	520 (20.47)	275 (10.83)	85 (3.35)	9.5
Frame size **E**	650 (25.59)	275 (10.83)	95 (3.74)	17.0



Line commutating choke for inverter frame size **F**

Line commutating choke Type 6SE6400-	for inverter Frame size (FS)	Dimensions a	b	c	n_1	n_2	Weight (max.) kg
3CC11-....	**F**	228 (8.98)	240 (9.45)	141 (5.55)	95 (3.74)	185 (7.28)	25.0



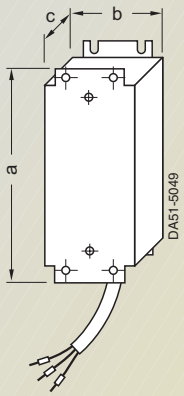
Line commutating choke for inverters of frame sizes **FX** and **GX**

Line commutating choke Type 6SL3000-	for inverter Frame size (FS)	Dimensions a	b	c	n_1	n_2	Weight (max.) kg
0CE32-....	**FX**	248 (9.76)	255 (10.04)	203 (7.99)	101 (3.98)	200 (7.87)	24.0
0CE33-....	**GX**	248 (9.76)	255 (10.04)	203 (7.99)	101 (3.98)	200 (7.87)	25.0
0CE35-....	**GX**	269 (10.59)	275 (10.83)	210 (8.27)	118 (4.65)	224 (8.82)	35.0

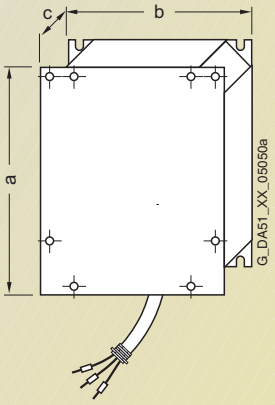
All dimensions in mm (values in brackets are in inches)

Dimension drawings

Output chokes

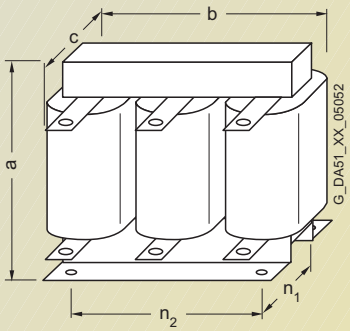


Output choke
for frame size **A**
6SE6400-3TC00-4AD2
6SE6400-3TC00-4AD3



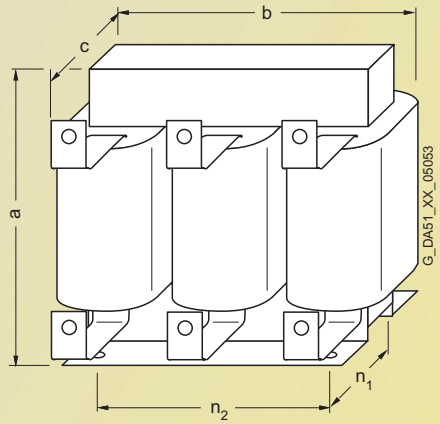
For frame sizes **B** and **C**
6SE6400-3TC01-0BD3
6SE6400-3TC01-8CE3
6SE6400-3TC03-2CD3

Output choke Type 6SE6400-	Dimensions			Weight (max.)
	a	b	c	kg
3TC00-4AD2	200 (7.87)	75.5 (2.97)	110 (4.33)	1.9
3TC00-4AD3	200 (7.87)	75.5 (2.97)	50 (1.97)	1.3
3TC01-0BD3	213 (8.39)	150 (5.91)	80 (3.15)	4.1
3TC01-8CE3	245 (9.65)	185 (7.28)	110 (4.33)	10.8
3TC03-2CD3	245 (9.65)	185 (7.28)	80 (3.15)	6.6



Output chokes
for inverters of frame sizes **D**, **E** and **F**

Output choke Type 6SE6400-	for inverter Frame size (FS)	Dimensions			to DIN 41 308		Weight (max.)
		a	b	c	n_1	n_2	kg
3TC03-2DE0	**D**	210 (8.27)	225 (8.86)	179 (7.05)	94 (3.70)	176 (6.93)	16.0
3TC03-8DD0	**D**	210 (8.27)	225 (8.86)	179 (7.05)	94 (3.70)	176 (6.93)	16.1
3TC05-4DD0	**D**	210 (8.27)	225 (8.86)	150 (5.91)	70 (2.76)	176 (6.93)	10.7
3TC06-2FE0	**F**	269 (10.59)	300 (11.81)	220 (8.66)	118 (4.65)	224 (8.82)	33.9
3TC07-5ED0	**E**	248 (9.76)	270 (10.63)	209 (8.23)	101 (3.98)	200 (7.87)	24.9
3TC08-0ED0	**E**	210 (8.27)	225 (8.86)	150 (5.91)	70 (2.76)	176 (6.93)	10.4
3TC08-8FE0	**F**	321 (12.64)	350 (13.78)	288 (11.34)	138 (5.43)	264 (10.39)	51.5
3TC14-5FD0	**F**	321 (12.64)	350 (13.78)	288 (11.34)	138 (5.43)	264 (10.39)	51.5
3TC15-4FD0	**F**	248 (9.76)	270 (10.63)	209 (8.23)	101 (3.98)	200 (7.87)	24.0



Output chokes
for inverters of frame sizes **FX** and **GX**

Output choke Type 6SL3000-	for inverter Frame size (FS)	Dimensions					Weight (max.)
		a	b	c	n_1	n_2	kg
2BE32-1AA0	**FX**	285 (11.22)	300 (11.81)	257 (10.12)	163 (6.42)	224 (8.82)	60.0
2BE32-6AA0	**FX**	315 (12.4)	300 (11.81)	277 (10.91)	183 (7.2)	224 (8.82)	66.0
2BE33-2AA0	**GX**	285 (11.22)	300 (11.81)	257 (10.12)	163 (6.42)	224 (8.82)	62.0
2BE33-8AA0	**GX**	285 (11.22)	300 (11.81)	277 (10.91)	183 (7.2)	224 (8.82)	73.0
2BE35-0AA0	**GX**	365 (14.37)	300 (11.81)	277 (10.91)	183 (7.2)	224 (8.82)	100.0

All dimensions in mm (values in brackets are in inches)

Brake resistors

Fig. 1:

Frame sizes A, B
Frame sizes C, D, E, F

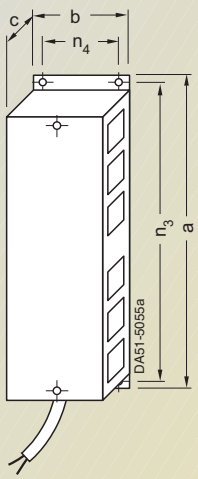


Fig. 2:

Fastening hole: circular hole Ø 5.2 mm
Fastening hole: slotted hole 6 x 12 mm or circular hole Ø 6.5 mm

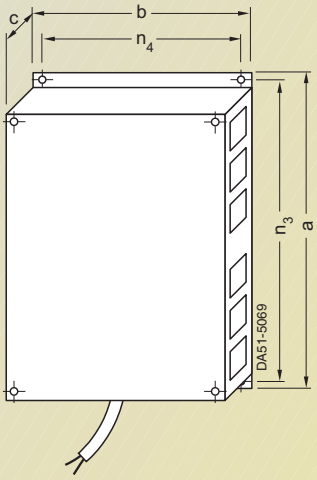
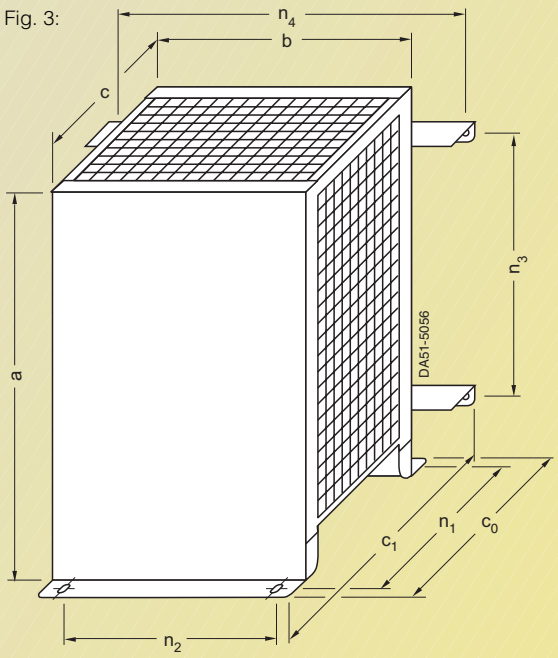


Fig. 3:



Brake resistors Type 6SE6400-	Resistor Ohm	for inverter Frame size (FS)	Figure No.	Dimensions a	b	c	c_0	c_1	For floor mounting n_1	n_2	For wall mounting n_3	n_4	Weight (max.) kg
4BC05-0AA0	180	**A**	1	230 (9.06)	72 (2.83)	43.5 (1.71)	–	–	–	–	217 (8.54)	56 (2.20)	1.0
4BC11-2BA0	68	**B**	2	239 (9.41)	149 (5.87)	43.5 (1.71)	–	–	–	–	226 (8.90)	133 (5.24)	1.6
4BC12-5CA0	39	**C**	3	285 (11.22)	185 (7.28)	150 (5.91)	185 (7.28)	217 (8.54)	170 (6.69)	145 (5.71)	200 (7.87)	230 (9.06)	3.8
4BC13-0CA0	27	**C**	3	285 (11.22)	185 (7.28)	150 (5.91)	185 (7.28)	217 (8.54)	170 (6.69)	145 (5.71)	200 (7.87)	230 (9.06)	3.8
4BC18-0DA0	10	**D**	3	515 (20.28)	270 (10.63)	175 (6.89)	210 (8.27)	242 (9.53)	195 (7.68)	205 (8.07)	350 (13.78)	315 (12.40)	7.4
4BC21-2EA0	6.8	**E**	3	645 (25.39)	270 (10.63)	175 (6.89)	210 (8.27)	242 (9.53)	195 (7.68)	205 (8.07)	480 (18.90)	315 (12.40)	10.6
4BC22-5FA0	3.3	**F**	3	650 (25.59)	395 (15.55)	315 (12.40)	350 (13.78)	382 (15.04)	335 (13.19)	270 (10.63)	510 (20.08)	435 (17.13)	16.7
4BD11-0AA0	390	**A**	1	230 (9.06)	72 (2.83)	43.5 (1.71)	–	–	–	–	217 (8.54)	56 (2.20)	1.0
4BD12-0BA0	160	**B**	2	239 (9.41)	149 (5.87)	43.5 (1.71)	–	–	–	–	226 (8.90)	133 (5.24)	1.6
4BD16-5CA0	56	**C**	3	285 (11.22)	185 (7.28)	150 (5.91)	185 (7.28)	217 (8.54)	170 (6.69)	145 (5.71)	200 (7.87)	230 (9.06)	3.8
4BD21-2DA0	27	**D**	3	515 (20.28)	270 (10.63)	175 (6.89)	210 (8.27)	242 (9.53)	195 (7.68)	205 (8.07)	350 (13.78)	315 (12.40)	7.4
4BD22-2EA0	15	**E**	3	645 (25.39)	270 (10.63)	175 (6.89)	210 (8.27)	242 (9.53)	195 (7.68)	205 (8.07)	480 (18.90)	315 (12.40)	10.6
4BD24-0FA0	8.2	**F**	3	650 (25.59)	395 (15.55)	315 (12.40)	350 (13.78)	382 (15.04)	335 (13.19)	270 (10.63)	510 (20.08)	435 (17.13)	16.7
4BE14-5CA0	120	**C**	3	285 (11.22)	185 (7.28)	150 (5.91)	185 (7.28)	217 (8.54)	170 (6.69)	145 (5.71)	200 (7.87)	230 (9.06)	3.8
4BE16-5CA0	82	**C**	3	285 (11.22)	185 (7.28)	150 (5.91)	185 (7.28)	217 (8.54)	170 (6.69)	145 (5.71)	200 (7.87)	230 (9.06)	3.8
4BE21-3DA0	39	**D**	3	515 (20.28)	270 (10.63)	175 (6.89)	210 (8.27)	242 (9.53)	195 (7.68)	205 (8.07)	350 (13.78)	315 (12.40)	7.4
4BE21-8EA0	27	**E**	3	645 (25.39)	270 (10.63)	175 (6.89)	210 (8.27)	242 (9.53)	195 (7.68)	205 (8.07)	480 (18.90)	315 (12.40)	10.6
4BE24-2FA0	12	**F**	3	650 (25.59)	395 (15.55)	315 (12.40)	350 (13.78)	382 (15.04)	335 (13.19)	270 (10.63)	510 (20.08)	435 (17.13)	16.7

Brake resistors for inverters of frame sizes **A** to **F**

All dimensions in mm (values in brackets are in inches)