

### 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).

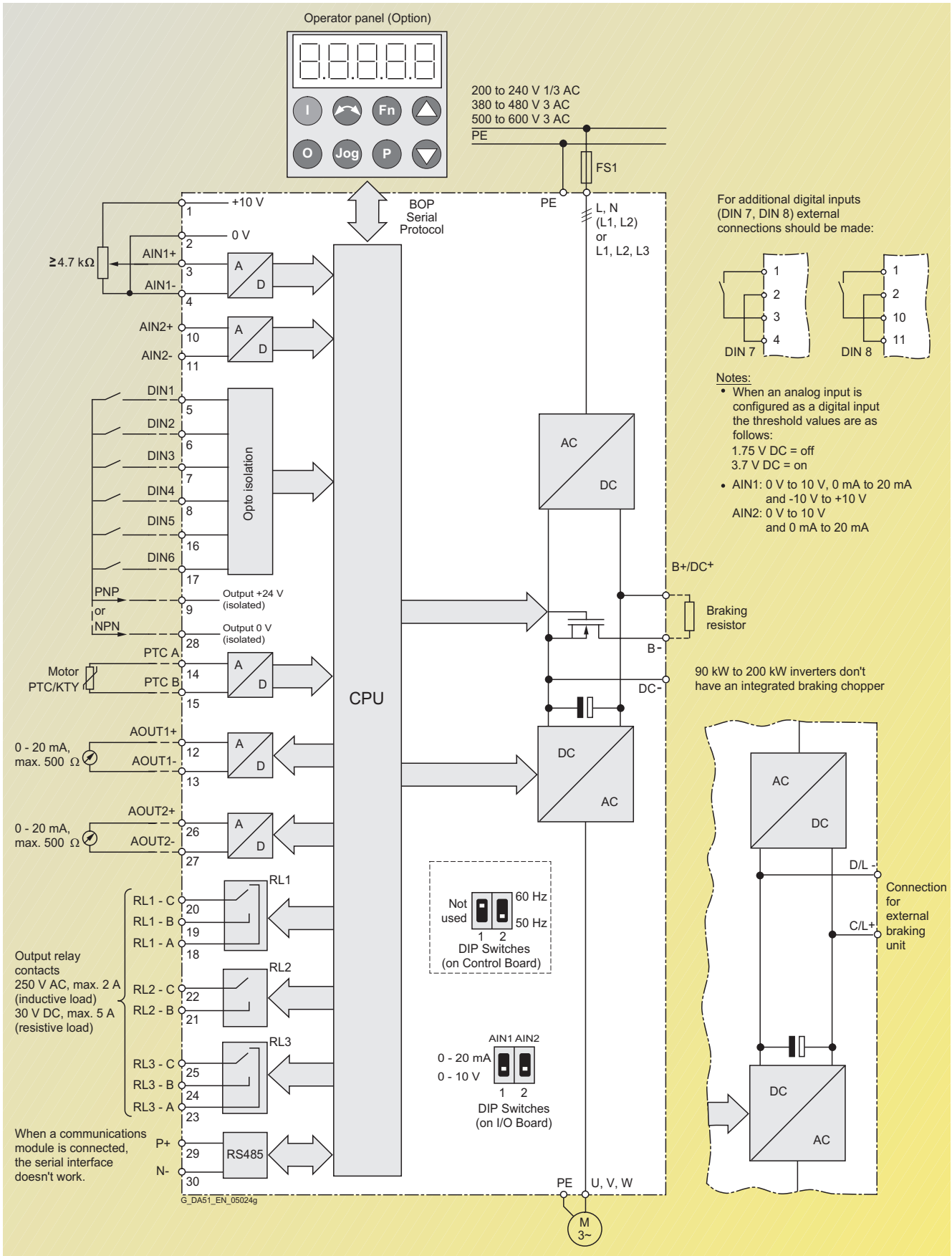
### Protection features

- 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
- $f_t$  motor thermal protection
- Locked motor protection
- Stall prevention
- Parameter interlock.

# MICROMASTER 440

## Circuit diagrams

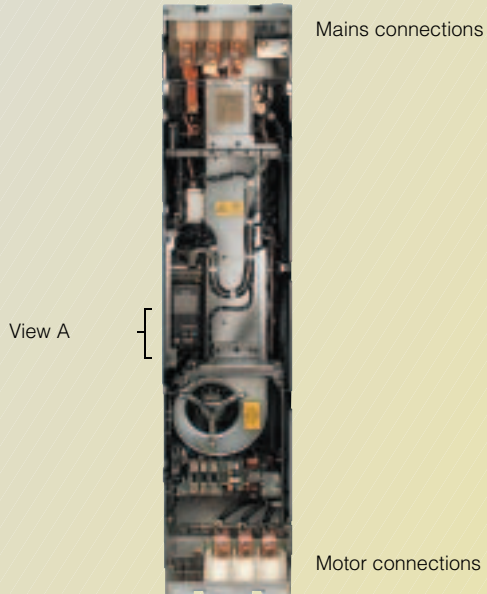
### General circuit diagram



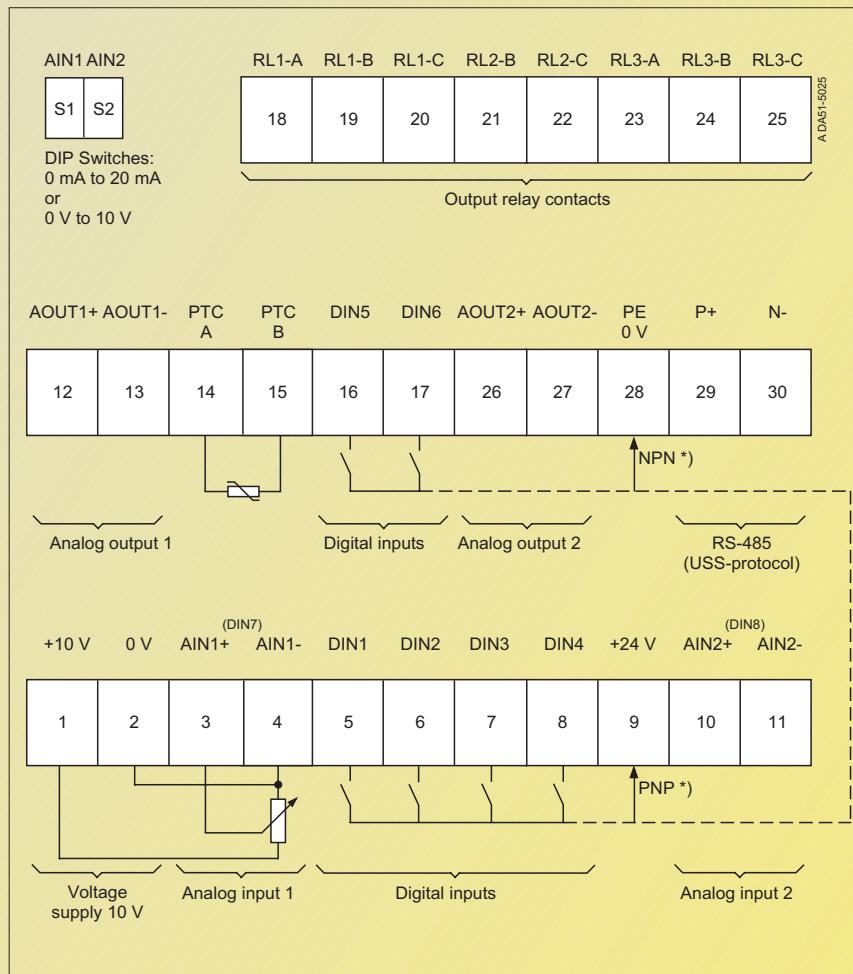
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### Terminal connection diagram

Example, frame size FX



View A



\*) PNP or NPN possible

# MICROMASTER 440

## Technical data

### MICROMASTER 440 inverter

|   |                                     |   |   |  |
|---|-------------------------------------|---|---|--|
| Mains voltage and power ranges                                  |                                     | 1 AC 200 V to 240 V ± 10 %<br>3 AC 200 V to 240 V ± 10 %<br>3 AC 380 V to 480 V ± 10 %<br>3 AC 500 V to 600 V ± 10 %  | <b>CT</b> (constant torque)<br>0.12 kW to 3 kW<br>0.12 kW to 45 kW<br>0.37 kW to 200 kW<br>0.75 kW to 75 kW | <b>VT</b> (variable torque)<br>–<br>5.5 kW to 45 kW<br>7.5 kW to 250 kW<br>1.5 kW to 90 kW |
| Input frequency   |                                     | 47 Hz to 63 Hz  |   |  |
| Output frequency  | 0.12 kW to 75 kW<br>90 kW to 200 kW | 0 Hz to 650 Hz (in <i>V/f</i> mode)<br>0 Hz to 267 Hz (in <i>V/f</i> mode)  | 0 Hz to 200 Hz (in vector mode)<br>0 Hz to 200 Hz (in vector mode)  |  |
| Power factor  |                                     | ≥ 0.95  |   |  |
| Inverter efficiency   |                                     | 96 % to 97 %  |   |  |
| Overload capability   | 0.12 kW to 75 kW<br>90 kW to 200 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                   |   |  |
| – CT mode   |                                     | 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<br>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 59 s, cycle time 300 s                                  |   |  |
| Inrush current  |                                     | not higher than rated input current   |   |  |
| Control method  |                                     | Vector control, torque control, linear <i>V/f</i> characteristic; quadratic <i>V/f</i> characteristic; Multipoint characteristic (programmable <i>V/f</i> characteristic); flux current control (FCC)             |   |  |
| Pulse frequency   | 0.12 kW to 75 kW<br>90 kW to 200 kW | 4 kHz (standard); 16 kHz (standard with 230 V inverters 0.12 kW to 5.5 kW)<br>2 kHz to 16 kHz (in 2 kHz steps)<br>2 kHz (standard with VT mode); 4 kHz (standard with CT mode)<br>2 kHz to 4 kHz (in 2 kHz steps) |   |  |
| Fixed frequencies   |                                     | 15, programmable  |   |  |
| Skip frequency ranges   |                                     | 4, programmable   |   |  |
| Setpoint resolution   |                                     | 0.01 Hz digital<br>0.01 Hz serial<br>10 bit analog  |   |  |
| Digital inputs  |                                     | 6 fully programmable isolated digital inputs; switchable PNP/NPN  |   |  |
| Analog inputs   |                                     | 2 programmable analog inputs<br>• 0 V to 10 V, 0 mA to 20 mA and –10 V to +10 V (AIN1)<br>• 0 V to 10 V and 0 mA to 20 mA (AIN2)<br>• 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<br>90 – 250 kW         | max. 50 m (shielded), max. 100 m (unshielded)<br>max. 100 m (shielded), max. 150 m (unshielded)<br>(see variant dependent options)  |   |  |
| with output choke   |                                     |   |   |  |
| Electromagnetic compatibility (see Selection and Ordering Data) |                                     | EMC filter, Class A or Class B to EN 55 011 available as an option<br>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<br>90 kW to 200 kW | CT: –10 °C to +122.00 °F (+14 °F to +122 °F)<br>VT: –10 °C to +40 °C (+14 °F to +104 °F)<br>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<br>90 kW to 200 kW | up to 1000 m above sea level without derating<br>up to 2000 m above sea level without derating  |   |  |
| 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                                       |                                     | Ⓜ, cⓂ, CE, c-tick   |   |  |
| CE marking  |                                     | Conformity with low-voltage directive 73/23/EEC   |   |  |
| Dimensions and weights (without options)                        |                                     | Frame size (FS)   | H x W x D, max. (mm)  | Weight, approx. (kg)   |
|   |                                     | A   | 173 x 73 x 149  | 1.3  |
|   |                                     | B   | 202 x 149 x 172   | 3.4  |
|   |                                     | C   | 245 x 185 x 195   | 5.7  |
|   |                                     | D   | 520 x 275 x 245   | 17   |
|   |                                     | E   | 650 x 275 x 245   | 22   |
|   |                                     | F without filter  | 850 x 350 x 320   | 56   |
|   |                                     | F with filter   | 1150 x 350 x 320  | 75   |
|   |                                     | FX  | 1400 x 326 x 356  | 116  |
|   |                                     | GX  | 1533 x 326 x 545  | 176  |

### Derating data

#### Pulse frequency

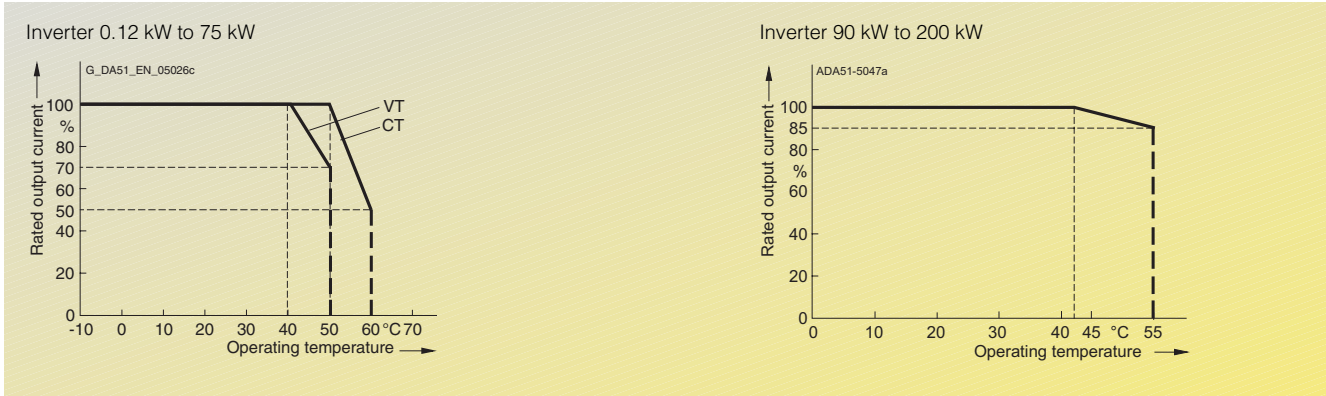
| Output<br>kW                              | Rated output current in A<br>for a pulse frequency of                                  |       |       |        |        |        |        |
|---|--|-------|-------|--------|--------|--------|--------|
|   | 4 kHz  | 6 kHz | 8 kHz | 10 kHz | 12 kHz | 14 kHz | 16 kHz |
| <b>Mains voltage 1/3 AC 200 V</b>         |  |       |       |        |        |        |        |
| 0.12 to 5.5                               | Values correspond to the 4 kHz standard values.<br>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   |
| <b>Mains operating voltage 3 AC 400 V</b> |  |       |       |        |        |        |        |
| 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  | –     | –     | –      | –      | –      | –      |
| <b>Mains operating voltage 3 AC 500 V</b> |  |       |       |        |        |        |        |
| 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   |

# MICROMASTER 440

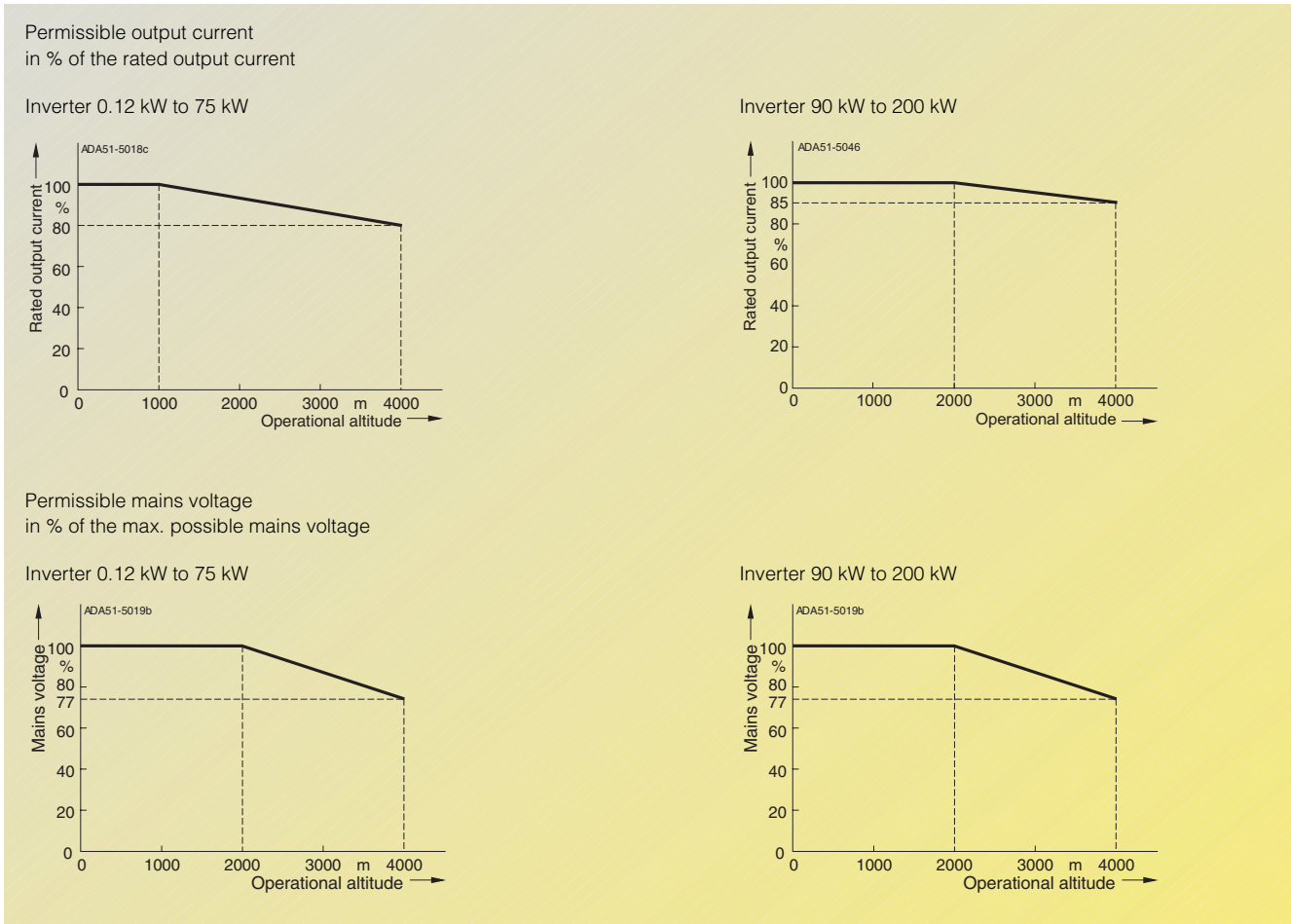
## Technical data

### Derating data (continued)

#### Operating temperature



#### Installation height above sea level



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### MICROMASTER 440 inverter without filter<sup>2)</sup>

| CT (constant torque)                               |      |                                   |                      | VT (variable torque) |     |                                   |                      | MICROMASTER 440 without filter <sup>2)</sup> |                 |                    |
|--|------|-----------------------------------|----------------------|----------------------|-----|-----------------------------------|----------------------|--|-----------------|--------------------|
| Output   |      | Rated input current <sup>1)</sup> | Rated output current | Output               |     | Rated input current <sup>1)</sup> | Rated output current | Frame size                                   | Weight, approx. | Order No.          |
| kW   | hp   | A                                 | A                    | kW                   | hp  | A                                 | A                    | (FS)   | kg              |                    |
| <b>Mains voltage 1 AC 200 V to 240 V</b>           |      |                                   |                      |                      |     |                                   |                      |  |                 |                    |
| 0.12   | 0.16 | 2.3                               | 0.9                  | –                    | –   | –                                 | –                    | A  | 1.3             | 6SE6440-2UC11-2AA1 |
| 0.25   | 0.33 | 4.3                               | 1.7                  | –                    | –   | –                                 | –                    | A  | 1.3             | 6SE6440-2UC12-5AA1 |
| 0.37   | 0.50 | 5.9                               | 2.3                  | –                    | –   | –                                 | –                    | A  | 1.3             | 6SE6440-2UC13-7AA1 |
| 0.55   | 0.75 | 7.7                               | 3.0                  | –                    | –   | –                                 | –                    | A  | 1.3             | 6SE6440-2UC15-5AA1 |
| 0.75   | 1.0  | 10.1                              | 3.9                  | –                    | –   | –                                 | –                    | A  | 1.3             | 6SE6440-2UC17-5AA1 |
| 1.1  | 1.5  | 15.0                              | 5.5                  | –                    | –   | –                                 | –                    | B  | 3.3             | 6SE6440-2UC21-1BA1 |
| 1.5  | 2    | 18.6                              | 7.4                  | –                    | –   | –                                 | –                    | B  | 3.3             | 6SE6440-2UC21-5BA1 |
| 2.2  | 3    | 26.8                              | 10.4                 | –                    | –   | –                                 | –                    | B  | 3.3             | 6SE6440-2UC22-2BA1 |
| 3.0  | 4    | 35.9                              | 13.6                 | –                    | –   | –                                 | –                    | C  | 5.5             | 6SE6440-2UC23-0CA1 |
| <b>Mains operating voltage 3 AC 200 V to 240 V</b> |      |                                   |                      |                      |     |                                   |                      |  |                 |                    |
| 0.12   | 0.16 | 1.1                               | 0.9                  | –                    | –   | –                                 | –                    | A  | 1.3             | 6SE6440-2UC11-2AA1 |
| 0.25   | 0.33 | 2.2                               | 1.7                  | –                    | –   | –                                 | –                    | A  | 1.3             | 6SE6440-2UC12-5AA1 |
| 0.37   | 0.50 | 3.0                               | 2.3                  | –                    | –   | –                                 | –                    | A  | 1.3             | 6SE6440-2UC13-7AA1 |
| 0.55   | 0.75 | 3.9                               | 3.0                  | –                    | –   | –                                 | –                    | A  | 1.3             | 6SE6440-2UC15-5AA1 |
| 0.75   | 1.0  | 5.2                               | 3.9                  | –                    | –   | –                                 | –                    | A  | 1.3             | 6SE6440-2UC17-5AA1 |
| 1.1  | 1.5  | 7.6                               | 5.5                  | –                    | –   | –                                 | –                    | B  | 3.3             | 6SE6440-2UC21-1BA1 |
| 1.5  | 2.0  | 10.2                              | 7.4                  | –                    | –   | –                                 | –                    | B  | 3.3             | 6SE6440-2UC21-5BA1 |
| 2.2  | 3.0  | 14.1                              | 10.4                 | –                    | –   | –                                 | –                    | B  | 3.3             | 6SE6440-2UC22-2BA1 |
| 3.0  | 4.0  | 18.4                              | 13.6                 | –                    | –   | –                                 | –                    | C  | 5.5             | 6SE6440-2UC23-0CA1 |
| 4.0  | 5.0  | 23.3                              | 17.5                 | 5.5                  | 7.5 | 28.3                              | 22                   | C  | 5.5             | 6SE6440-2UC24-0CA1 |
| 5.5  | 7.5  | 28.0                              | 22                   | 7.5                  | 10  | 34.2                              | 28                   | C  | 5.5             | 6SE6440-2UC25-5CA1 |
| 7.5  | 10   | 34.0                              | 28                   | 11.0                 | 15  | 48.7                              | 42                   | D  | 16              | 6SE6440-2UC27-5DA1 |
| 11.0   | 15   | 50.6                              | 42                   | 15.0                 | 20  | 63.1                              | 54                   | D  | 16              | 6SE6440-2UC31-1DA1 |
| 15.0   | 20   | 64.9                              | 54                   | 18.5                 | 25  | 80.2                              | 68                   | D  | 16              | 6SE6440-2UC31-5DA1 |
| 18.5   | 25   | 83.0                              | 68                   | 22                   | 30  | 96.0                              | 80                   | E  | 20              | 6SE6440-2UC31-8EA1 |
| 22   | 30   | 100.0                             | 80                   | 30                   | 40  | 127.0                             | 104                  | E  | 20              | 6SE6440-2UC32-2EA1 |
| 30   | 40   | 140.0                             | 104                  | 37                   | 50  | 171.0                             | 130                  | F  | 55              | 6SE6440-2UC33-0FA1 |
| 37   | 50   | 177.0                             | 130                  | 45                   | 60  | 206.0                             | 154                  | F  | 55              | 6SE6440-2UC33-7FA1 |
| 45   | 60   | 204.0                             | 154                  | –                    | –   | –                                 | –                    | F  | 55              | 6SE6440-2UC34-5FA1 |
| <b>Mains operating voltage 3 AC 380 V to 480 V</b> |      |                                   |                      |                      |     |                                   |                      |  |                 |                    |
| 0.37   | 0.50 | 1.5                               | 1.3                  | –                    | –   | –                                 | –                    | A  | 1.3             | 6SE6440-2UD13-7AA1 |
| 0.55   | 0.75 | 1.9                               | 1.7                  | –                    | –   | –                                 | –                    | A  | 1.3             | 6SE6440-2UD15-5AA1 |
| 0.75   | 1.0  | 2.4                               | 2.2                  | –                    | –   | –                                 | –                    | A  | 1.3             | 6SE6440-2UD17-5AA1 |
| 1.1  | 1.5  | 3.7                               | 3.1                  | –                    | –   | –                                 | –                    | A  | 1.3             | 6SE6440-2UD21-1AA1 |
| 1.5  | 2.0  | 4.8                               | 4.1                  | –                    | –   | –                                 | –                    | A  | 1.3             | 6SE6440-2UD21-5AA1 |
| 2.2  | 3.0  | 6.5                               | 5.9                  | –                    | –   | –                                 | –                    | B  | 3.3             | 6SE6440-2UD22-2BA1 |
| 3.0  | 4.0  | 8.6                               | 7.7                  | –                    | –   | –                                 | –                    | B  | 3.3             | 6SE6440-2UD23-0BA1 |
| 4.0  | 5.0  | 11.6                              | 10.2                 | –                    | –   | –                                 | –                    | B  | 3.3             | 6SE6440-2UD24-0BA1 |
| 5.5  | 7.5  | 15.6                              | 13.2                 | 7.5                  | 10  | 20.2                              | 19                   | C  | 5.5             | 6SE6440-2UD25-5CA1 |
| 7.5  | 10   | 22.0                              | 19                   | 11.0                 | 15  | 29.0                              | 26                   | C  | 5.5             | 6SE6440-2UD27-5CA1 |
| 11.0   | 15   | 32.3                              | 26                   | 15.0                 | 20  | 39.0                              | 32                   | C  | 5.5             | 6SE6440-2UD31-1CA1 |
| 15.0   | 20   | 38.5                              | 32                   | 18.5                 | 25  | 45.2                              | 38                   | D  | 16              | 6SE6440-2UD31-5DA1 |
| 18.5   | 25   | 47.1                              | 38                   | 22                   | 30  | 54.7                              | 45                   | D  | 16              | 6SE6440-2UD31-8DA1 |
| 22   | 30   | 56.3                              | 45                   | 30                   | 40  | 74.8                              | 62                   | D  | 16              | 6SE6440-2UD32-2DA1 |
| 30   | 40   | 78.0                              | 62                   | 37                   | 50  | 91.0                              | 75                   | E  | 20              | 6SE6440-2UD33-0EA1 |
| 37   | 50   | 95.0                              | 75                   | 45                   | 60  | 111.0                             | 90                   | E  | 20              | 6SE6440-2UD33-7EA1 |
| 45   | 60   | 122.0                             | 90                   | 55                   | 75  | 143.0                             | 110                  | F  | 56              | 6SE6440-2UD34-5FA1 |
| 55   | 75   | 148.0                             | 110                  | 75                   | 100 | 190.0                             | 145                  | F  | 56              | 6SE6440-2UD35-5FA1 |
| 75   | 100  | 188.0                             | 145                  | 90                   | 125 | 223.0                             | 178                  | F  | 56              | 6SE6440-2UD37-5FA1 |

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

When a line commutating choke is used, the specified values are reduced in the case of 200 V–240 V to between 55% to 70% and in the case of 380 V–480 V to between 70% and 80%.

2) Generally suited to heavy industrial applications. For details please refer to Appendix on page A/4.

# MICROMASTER 440

## Selection and ordering data

### MICROMASTER 440 inverter without filter<sup>3)</sup> (continued)

| CT (constant torque)                               |     |                     | VT (variable torque) |             |     |                     | MICROMASTER 440 without filter <sup>3)</sup> |            |                 |                           |
|--|-----|---------------------|----------------------|-------------|-----|---------------------|--|------------|-----------------|---------------------------|
| 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              |                           |
| <b>Mains operating voltage 3 AC 380 V to 480 V</b> |     |                     |                      |             |     |                     |  |            |                 |                           |
| <b>90</b>  | 125 | 168.5 <sup>1)</sup> | 178                  | <b>110</b>  | 150 | 204.5 <sup>1)</sup> | 205  | FX         | 110             | <b>6SE6440-2UD38-8FA1</b> |
| <b>110</b>   | 150 | 204.0 <sup>1)</sup> | 205                  | <b>132</b>  | 200 | 244.5 <sup>1)</sup> | 250  | FX         | 116             | <b>6SE6440-2UD41-1FA1</b> |
| <b>132</b>   | 200 | 244.5 <sup>1)</sup> | 250                  | <b>160</b>  | 250 | 296.4 <sup>1)</sup> | 302  | GX         | 170             | <b>6SE6440-2UD41-3GA1</b> |
| <b>160</b>   | 250 | 296.4 <sup>1)</sup> | 302                  | <b>200</b>  | 300 | 354.0 <sup>1)</sup> | 370  | GX         | 174             | <b>6SE6440-2UD41-6GA1</b> |
| <b>200</b>   | 300 | 354.0 <sup>1)</sup> | 370                  | <b>250</b>  | 350 | 442.0 <sup>1)</sup> | 477  | GX         | 176             | <b>6SE6440-2UD42-0GA1</b> |
| <b>Mains operating voltage 3 AC 500 V to 600 V</b> |     |                     |                      |             |     |                     |  |            |                 |                           |
| <b>0.75</b>  | 1.0 | 2.0 <sup>2)</sup>   | 1.4                  | <b>1.5</b>  | 2.0 | 3.8 <sup>2)</sup>   | 2.7  | C          | 5.5             | <b>6SE6440-2UE17-5CA1</b> |
| <b>1.5</b>   | 2.0 | 3.7 <sup>2)</sup>   | 2.7                  | <b>2.2</b>  | 3.0 | 5.3 <sup>2)</sup>   | 3.9  | C          | 5.5             | <b>6SE6440-2UE21-5CA1</b> |
| <b>2.2</b>   | 3.0 | 5.3 <sup>2)</sup>   | 3.9                  | <b>4.0</b>  | 5.0 | 8.2 <sup>2)</sup>   | 6.1  | C          | 5.5             | <b>6SE6440-2UE22-2CA1</b> |
| <b>4.0</b>   | 5.0 | 8.1 <sup>2)</sup>   | 6.1                  | <b>5.5</b>  | 7.5 | 11.2 <sup>2)</sup>  | 9  | C          | 5.5             | <b>6SE6440-2UE24-0CA1</b> |
| <b>5.5</b>   | 7.5 | 11.1 <sup>2)</sup>  | 9                    | <b>7.5</b>  | 10  | 13.3 <sup>2)</sup>  | 11   | C          | 5.5             | <b>6SE6440-2UE25-5CA1</b> |
| <b>7.5</b>   | 10  | 14.4 <sup>2)</sup>  | 11                   | <b>11.0</b> | 15  | 21.7 <sup>2)</sup>  | 17   | C          | 5.5             | <b>6SE6440-2UE27-5CA1</b> |
| <b>11.0</b>  | 15  | 21.5 <sup>2)</sup>  | 17                   | <b>15.0</b> | 20  | 26.8 <sup>2)</sup>  | 22   | C          | 5.5             | <b>6SE6440-2UE31-1CA1</b> |
| <b>15.0</b>  | 20  | 27.6 <sup>2)</sup>  | 22                   | <b>18.5</b> | 25  | 32.7 <sup>2)</sup>  | 27   | D          | 16              | <b>6SE6440-2UE31-5DA1</b> |
| <b>18.5</b>  | 25  | 33.6 <sup>2)</sup>  | 27                   | <b>22</b>   | 30  | 39.9 <sup>2)</sup>  | 32   | D          | 16              | <b>6SE6440-2UE31-8DA1</b> |
| <b>22</b>  | 30  | 40.1 <sup>2)</sup>  | 32                   | <b>30</b>   | 40  | 50.5 <sup>2)</sup>  | 41   | D          | 16              | <b>6SE6440-2UE32-2DA1</b> |
| <b>30</b>  | 40  | 52.0 <sup>2)</sup>  | 41                   | <b>37</b>   | 50  | 64.0 <sup>2)</sup>  | 52   | E          | 20              | <b>6SE6440-2UE33-0EA1</b> |
| <b>37</b>  | 50  | 67.0 <sup>2)</sup>  | 52                   | <b>45</b>   | 60  | 78.0 <sup>2)</sup>  | 62   | E          | 20              | <b>6SE6440-2UE33-7EA1</b> |
| <b>45</b>  | 60  | 85.0 <sup>2)</sup>  | 62                   | <b>55</b>   | 75  | 103.0 <sup>2)</sup> | 77   | F          | 56              | <b>6SE6440-2UE34-5FA1</b> |
| <b>55</b>  | 75  | 106.0 <sup>2)</sup> | 77                   | <b>75</b>   | 100 | 132.0 <sup>2)</sup> | 99   | F          | 56              | <b>6SE6440-2UE35-5FA1</b> |
| <b>75</b>  | 100 | 130.0 <sup>2)</sup> | 99                   | <b>90</b>   | 120 | 160.0 <sup>2)</sup> | 125  | F          | 56              | <b>6SE6440-2UE37-5FA1</b> |



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 4/14 to 4/20).

### Motors for MICROMASTER 440

Catalog M 11 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:  
<http://www.sea.siemens.com/motors>

1) Supplementary conditions:  
 Input current at rated operating point, applicable at short-circuit voltage of the supply  $U_{sc} = 2.33\%$  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  $U_{sc} = 1\%$  with reference to the inverter rated power and rated mains operating voltage of 500 V without a line commutating choke.

If a line commutating choke is used, the specified values at 500 V to 600 V are reduced to between 80% and 90%.

3) Generally suited to heavy industrial applications. For details please refer to Appendix on page A/4.