

# COMMANDER C




**SIMPLE, RELIABLE MOTOR CONTROL**  
**0.25kW - 132kW (0.33 hp to 200hp)**  
**100V | 200V | 400V | 575V | 690V**

## Commander C Highlights

- Set just 4 parameters to get your drive started
- Plug-in options for advanced control
- Dual Safe Torque Off (STO)
- Up to 180% overload for high torque applications
- On board PLC
- Straight forward installation and commissioning
- Easy motor pairing and performance control
- Robust and reliable design

## COMMANDER C DRIVE SPECIFICATIONS

| Power & Control   |   |
|---|---|
| Supply Requirements   | 100 V drive: 100 V to 120 V ±10 %<br>200 V drive: 200 V to 240 V ±10 %<br>400 V drive: 380 V to 480 V ±10 %<br>575 V drive: 500 V to 575 V ±10 %<br>690 V drive: 500 V to 690 V ±10 %<br>Maximum supply imbalance: 2 % negative phase sequence (equivalent to 3 % voltage imbalance between phases) |
| Input Displacement Power Factor                                 | 0.97  |
| Phase   | 1 and 3 (model dependent)   |
| Power Range   | 0.25 to 132 kW / 0.33 to 200 hp   |
| Input Frequency Range   | 45 to 66 Hz   |
| Output Frequency/Speed Range                                    | 0 to 550 Hz   |
| Switching Frequency   | Size 1 - 4: 0.667, 1, 2, 3, 4, 6, 8, 12 & 16 kHz<br>Size 5 - 9: 2, 3, 4, 6, 8, 12 & 16 kHz<br>(Factory default = 3kHz)  |
| Heavy Duty Overload Capability                                  | 150 % for 60 s (open loop mode), 180 % for 3 s (RFC-A mode)   |
| Operating Modes   | Linear V to F<br>Square V to F<br>Dynamic V to F<br>Set Point V to F<br>Stator Resistance Compensation<br>RFC-A (enhanced open-loop performance)  |
| Stopping Modes  | Coast, Ramp, Ramp & DC Injection Braking, DC Injection Braking with 0 Hz detect, Timed DC Injection Braking<br><br>Built-in braking transistor, external resistor required  |
| Communication & Interfaces                                      |   |
| Communications  | Modbus RTU, EtherCAT, PROFIBUS, Ethernet, DeviceNET, CANopen, PROFINET, POWERLINK (all available with AI/SI-options)  |
| Keypads   | Fixed LED keypad<br>Remote IP66 Keypad (available as an accessory)<br>Remote IP66 RTC Keypad (available as an accessory)<br>HMI (available as an accessory)   |
| User Software Tools (Free To Download)                          | Connect (PC commissioning & cloning tool)<br>Machine Control Studio for on-board PLC programming  |
| Inputs & Outputs  |   |
| Analogue  | 2 x Analogue input<br>Possible settings: 0-10 V, 0-20 mA, 4-20 mA (No Alarm), 4-20 mA (Alarm), 4-20 mA (Error)<br><br>1 x Analogue output<br>Possible settings: 0-10 V  |
| Digital   | 3 x Digital inputs (1 frequency input)<br>1 x Digital input / output programmable<br>1 x Digital input / output programmable (can be used as a frequency or PWM output to represent analogue value)   |
| Digital Input Logic   | Positive  |
| Relay   | 1 x Relay (single pole, double throw relay)   |
| Accuracy  | Frequency 0.02%, Analogue input 1: 11 bit plus sign, Analogue input 2: 11 bit. Current typical 2%.  |
| Extra I/O with SI-I/O Option Module (Available as an Accessory) | 3 x Analogue inputs (default) / Digital inputs programmable<br>4 x Digital input / output programmable<br>1 x Digital input<br>2 x Relays   |

| Mounting & Environment                |   |
|---------------------------------------|---|
| IP Rating                             | IP20<br>Conduit Box UL Type 1 ingress protection (available as an accessory)  |
| Storage Temperature                   | -40 °C to 60 °C (-4 °F to 140 °F)   |
| Operating Temperature Without De-Rate | -20 °C to 40 °C (-4 °F to 104 °F)   |
| Operating Temperature with De-Rate    | -20 °C to 60 °C (-4 °F to 140 °F) Frames 1 to 4<br>-20 °C to 55 °C (-4 °F to 131 °F) Frames 5 to 9  |
| Cooling                               | Integral cooling fan  |
| Altitude                              | ≤3000 m (≤1000 m no de-rate; 1000 m to 3000 m derate 1 % every 100 m)   |
| Humidity                              | 95 % non-condensing at 40 °C / 104 °F - EN61800-2(3k3)  |
| Pollution                             | Pollution degree 2 - dry, non-conducting pollution only   |
| Vibration                             | Reference standard IEC60068-2-27, IEC60068-2-29 bump test, IEC60068-2-64 random vibration test, IEC60068-2-6, EN61800-5-1 sinusoidal vibration test. Tested to Environmental Category ENV3  |
| Mechanical Shock                      | Tested in accordance with IEC 60068-2-27 and IEC 60068-2-29   |
| Mounting Methods                      | Frame 1 to 4 – Surface mount via mounting holes or DIN Rail mount<br>Frame 5 to 9 – Surface mount via mounting brackets or through-panel mount via through-panel mounting kit   |
| Mounting Clearance                    | 0 mm either side, 100 mm above and below  |
| Overvoltage Category                  | Category III (IEC/EN/KN/UL 61800-5-1)   |
| Corrosive Environments                | EN 60721-3-3 ISO9223 Class C3   |
| Maximum Motor Cable Length            | 75 m Frame 1<br>100 m Frames 2 to 4<br>200 m Frames 5 to 6<br>250 m Frames 7 to 9   |
| Standards                             |   |
| Approvals                             | CE (European Union), cUL Listed (USA and Canada), DNV (marine applications), KC (Korea), RCM (Australia/ New Zealand), EAC (Russian Customs Union), UKCA (United Kingdom), C-Tick (Australia)<br>                          |
| Product Safety Standards              | IEC/EN/KN/UL 61800-5-1, CSA C22.2 No.274, GB12668.501-2013<br>C300 models only: The Safe Torque Off (STO) function may be used as a safety component of a machine.<br>Type examination certificates by TÜV Rheinland:<br>Frame sizes 1 - 4: No. 01/205/5383.03/18<br>Frame sizes 5 - 9: No. 01/205/5387.02/18 |
| TÜV                                   | Functional safety parameters:<br>EN ISO 13849-1 - Cat 4, PL <sub>e</sub><br>EN61800-5-2/EN62061/IEC 61508 - SIL 3<br>UL functional safety approval: FSPC E171230  |
| Product EMC Standards                 | IEC/ EN 61800-3 Immunity and Emissions<br>EN 61000-6-2: Immunity for industrial environments<br>EN 61000-6-4: Emissions for industrial environments<br>EN 61000-3-2: Harmonic current emissions<br>An EMC data sheet is available on request  |
| RoHS                                  | Complies with the Restriction of Hazardous Substances Directive (2011/65/EU)  |
| Immunity Compliance                   | Second environment (Industrial)   |
| ISO                                   | Manufacturing facilities comply with ISO 9001:2015 and ISO 14001  |
| Warranty                              |   |
| Warranty                              | 5 Years (warranty terms and conditions apply)   |
| Accessories                           |   |
| Remote Interfaces                     | Remote keypad IP66, Remote keypad RTC, HMI  |
| Filters & Cables                      | External EMC filters, CT communications cable   |
| Communication & Feedback, SI-Options  | AI-485 24 V Adaptor, SI-EtherCAT, SI-PROFIBUS, SI-Ethernet , SI-DeviceNET, SI-CANopen, SI-PROFINET , SI-POWERLINK, SI-Encoder   |

|  |  |
|--|--|
| <b>Back-up &amp; Cloning</b>                 | AI-Back-up Adaptor<br>AI-Smart Adaptor   |
| <b>Conduit Box</b>                           | For UL Type 1 ingress protection   |
| <b>Protection</b>                            |  |
| <b>Conformal Coating</b>                     | 100 % Coverage   |
| <b>DC Bus Undervoltage Error Level</b>       | 100 V models: 175 Vdc  |
|  | 200 V models: 175 Vdc  |
|  | 400 V models: 330 Vdc  |
|  | 575 V models: 435 Vdc  |
| <b>DC Bus Overvoltage Error Level</b>        | 690 V models: 435 Vdc  |
|  | Frame sizes 1 - 4:   |
|  | 100 V models: 510 Vdc  |
|  | 200 V models: 510 Vdc  |
| <b>DC Bus Overvoltage Error Level</b>        | 400V models: 870 Vdc   |
|  | Frame size 5 - 9:  |
|  | 200V models: 415 Vdc   |
|  | 400 V models: 830 Vdc  |
| <b>Drive Overload Error</b>                  | 575 V models: 990 Vdc  |
| <b>Instantaneous Overcurrent Error/Limit</b> | 690 V models: 1190 Vdc   |
| <b>Phase Loss Error</b>                      | Programmable: Default settings: 180% for 3s, 150% for 60s  |
| <b>Overtemperature Error</b>                 | 220% of rated motor current  |
| <b>Short Circuit Error</b>                   | DC Bus Ripple Threshold Exceeded   |
| <b>Ground Fault Error</b>                    | Control Board Over Temperature, Inverter Model Temperature, Inverter Thermistor Temperature, Drive heatsink temperature exceeds 95°C (203°F) |
| <b>Motor Thermal Protection</b>              | Protection against output phase-to-phase fault   |
| <b>Keep Running</b>                          | Protection against output phase-to-ground fault  |
| <b>Dedicated Thermistor Input</b>            | Electronically protects the motor from over-heating due to loading conditions  |
| <b>General</b>                               |  |
| <b>Items supplied with the drive</b>         | Parameter set to avoid errors and machine downtime (needs to be configured)  |
|  | Avoid downtime or machine damage due to overheated motor   |
|  | Step-By-Step Guide, Safety Information, Grounding bracket (Frames 1 to 4), Surface mounting brackets (frame 5 to 9)                          |

# FUNCTIONALITY

## Modbus RTU Communications (available with AI-485 Adaptor)

|                      |                            |
|----------------------|----------------------------|
| Control Word Control | ✓                          |
| Cloning              | ✓                          |
| Serial Baud Rate     | 600 to 115000 bps          |
| Modbus RTU Protocol  | 8.2NP, 8.1NP, 8.1EP, 8.1OP |

## On Board PLC

|  |   |
|--|---|
| User Memory Space                          | 30 KB   |
| User Software Tools<br>(Free to Download)  | <p>Machine Control Studio</p> <ul style="list-style-type: none"> <li>• CODESYS based</li> <li>• Included programming languages: ladder diagram, structure text, function block diagram, instruction list, sequential function chart, continuous function chart             <ul style="list-style-type: none"> <li>• Function block libraries</li> </ul> </li> <li>• On-line monitoring of program variables with user defined watch windows             <ul style="list-style-type: none"> <li>• Support for on-line change of program</li> </ul> </li> </ul> |
| Pre-set Programs<br>(Available on Request) | Unbalanced Load Detection (Laundry Application)   |

## Reference

|   |   |
|---|---|
| Selectable References                   | 4 (Selectable: Analogue Ref. 1, Analogue Ref. 2, Pre-set Frequency Ref., Keypad Ref.) |
| Jog Reference                           | ✓   |
| Up / Down % Reference (Motorised Pot)   | ✓   |
| Bi-Polar Reference                      | ✓   |
| Pre-set Speeds                          | 8   |
| Pre-set Timer                           | ✓   |
| Skip Frequencies                        | 3   |
| Skip Frequencies Dead Band              | ✓   |
| Local/Remote                            | ✓   |
| S-Ramp                                  | ✓   |
| Acceleration Rates                      | 8   |
| Deceleration Rates                      | 8   |
| Frequency Input Reference (Pulse Train) | 0 Hz to 100 kHz   |
| Run Reverse                             | ✓   |
| Torque Reference                        | ✓   |

## Application Specific

|                        |            |
|------------------------|------------|
| PID Controller         | PI Control |
| PID Feedforward        | ✓          |
| PID Threshold Detector | ✓          |
| PID Slew Rate          | ✓          |

|  |  |
|--|--|
| Reference Configuration                                  | ✓  |
| Run/Stop Configuration                                   | ✓  |
| Input Scaling  | ✓  |
| Run Permit (Latching Run)                                | ✓  |
| Limit Switches   | ✓  |
| Additional Application Parameters                        | 64   |
| <b>Control</b>   |  |
| Control Mode: Linear V to F                              | ✓ (Definable Boost)  |
| Control Mode: Square V to F                              | ✓ (Definable Boost)  |
| Control Mode: Low Energy Mode (Dynamic V to F)           | ✓  |
| Control Mode: Set Point V to F                           | ✓  |
| Control Mode: Stator Resistance Compensation             | ✓  |
| Control Mode: RFC-A (Enhanced Open-Loop Performance)     | ✓  |
| Motor Stability Optimiser                                | ✓  |
| Slip Compensation  | ✓  |
| Auto-tune: Static  | ✓  |
| Auto-tune: Rotating                                      | ✓  |
| Switching Frequency                                      | Size 1 - 4: 0.667, 1, 2, 3, 4, 6, 8, 12 & 16 kHz<br>Size 5 - 9: 2, 3, 4, 6, 8, 12 & 16 kHz<br>(Factory default = 3kHz) |
| Catch an Already Spinning Motor                          | ✓  |
| Speed Feedback via SI-Encoder Option                     | ✓  |
| Second Motor Set-up                                      | ✓  |
| Motor Pre-Heat Control                                   | ✓  |
| Stop Mode: Ramp  | ✓  |
| Stop Mode: Coast   | ✓  |
| Stop Mode: Ramp & DC Injection                           | ✓  |
| Stop Mode: DC Injection Braking with 0 Hz detect         | ✓  |
| Stop Mode: Timed DC Injection Braking                    | ✓  |
| Built-in Braking Transistor (External Resistor Required) | ✓  |
| Brake Settings (DC bus)                                  | ✓  |
| Programmable Braking in RFC-A Mode                       | ✓  |
| Mechanical Brake Controller                              | ✓  |
| Supply Loss Detection                                    | ✓  |
| Low DC Link Operation                                    | ✓  |

|                                   |                                   |
|-----------------------------------|-----------------------------------|
| Analogue Input Control            | ✓                                 |
| Analogue Output Control           | ✓                                 |
| Digital Input Control             | ✓                                 |
| Digital Output Control            | ✓                                 |
| Relay Control                     | ✓                                 |
| Logic Function Control            | ✓                                 |
| Timer Function Control            | ✓                                 |
| Limit Switch Control              | ✓                                 |
| Variable Selector                 | ✓                                 |
| Temperature Monitoring            | ✓                                 |
| Keypad Button Assignment          | ✓                                 |
| Programmable Output Current Limit | ✓                                 |
| <b>General</b>                    |                                   |
| Diagnostics                       | ✓                                 |
| Error History Log                 | 10                                |
| Auto-Reset After Error            | ✓                                 |
| Error Time Stamping               | ✓                                 |
| Power Loss Ride Through           | ✓                                 |
| Run Time Log                      | ✓                                 |
| Cloning                           | Via: Modbus RTU, SD Card, Connect |
| Energy Meter                      | ✓                                 |
| Security                          | 4-digit PIN protectionw           |

# DIMENSIONS

## Commander C200/C300 Dimensions

| Frame Size | Overall Dimensions |     |     |       |       |       | Mounting Dimensions |      |       |       | Mounting Hole Dia. |      | Weight |       |
|------------|--------------------|-----|-----|-------|-------|-------|---------------------|------|-------|-------|--------------------|------|--------|-------|
|            | mm                 |     |     | in    |       |       | mm                  |      | in    |       | mm                 | in   | kg     | lb    |
|            | H                  | W   | D   | H     | W     | D     | H                   | W    | H     | W     |                    |      |        |       |
| 1          | 160                | 75  | 130 | 6.30  | 2.95  | 5.1   | 143                 | 53   | 5.7   | 2.08  | 5.0                | 0.20 | 0.75   | 1.65  |
| 2          | 205                | 75  | 150 | 8.07  | 2.95  | 5.9   | 194                 | 55   | 7.63  | 2.17  | 5.0                | 0.20 | 1.3    | 3.0   |
| 3          | 226                | 90  | 160 | 8.90  | 3.54  | 6.3   | 215                 | 70.7 | 8.46  | 2.80  | 5.0                | 0.20 | 1.5    | 3.3   |
| 4          | 277                | 115 | 175 | 10.90 | 4.50  | 6.9   | 265                 | 86   | 10.43 | 3.40  | 6.0                | 0.23 | 3.13   | 6.9   |
| 5          | 391                | 143 | 200 | 15.39 | 5.63  | 7.87  | 375                 | 106  | 14.76 | 4.17  | 6.5                | 0.26 | 7.4    | 16.3  |
| 6          | 291                | 210 | 227 | 15.39 | 8.27  | 8.94  | 378                 | 196  | 14.88 | 7.72  | 7.0                | 0.28 | 14.0   | 30.9  |
| 7          | 557                | 270 | 280 | 21.93 | 10.63 | 11.02 | 538                 | 220  | 21.18 | 8.66  | 9.0                | 0.35 | 28.0   | 61.7  |
| 8          | 804                | 310 | 290 | 31.65 | 12.21 | 11.42 | 784                 | 259  | 30.87 | 10.20 | 9.0                | 0.35 | 52.0   | 114.6 |
| 9A         | 1069               | 310 | 290 | 42.09 | 12.21 | 11.42 | 1051                | 259  | 41.38 | 10.20 | 9.0                | 0.35 | 46.0   | 101.4 |
| 9E         | 1108               | 310 | 290 | 43.62 | 12.21 | 11.42 | 1090                | 259  | 42.91 | 10.20 | 9.0                | 0.35 | 66.5   | 146.6 |



### Documentation & Downloads

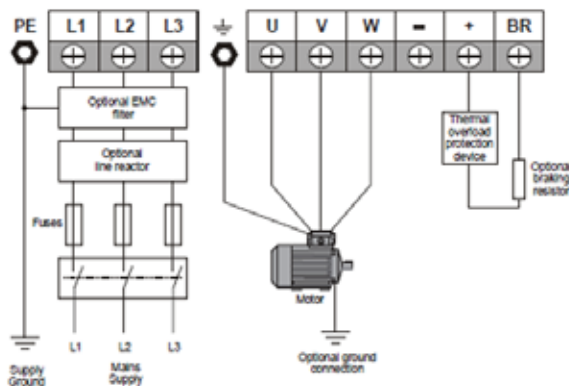
Product documentation and PC tools available for download from:

[www.controltechniques.com/support](http://www.controltechniques.com/support)

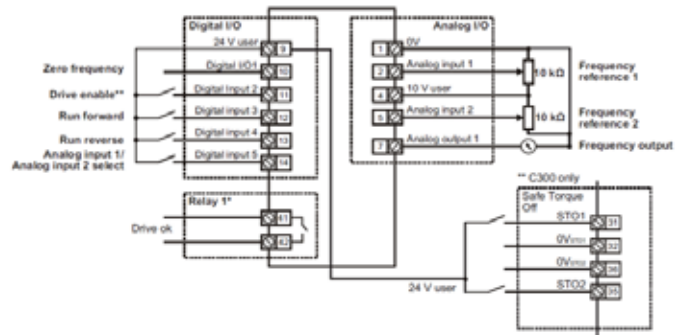


# CONNECTIONS

Typical Power Connections



Default Control Connections



# PRODUCT CODES

**C200- 03 4 00073 A - 101 00 AB100**

|   |                              |  |                                  |  |
|---|------------------------------|--|----------------------------------|--|
| <b>Model:</b><br>C200 – The lead product for Commander C range<br>C300 – As C200 + dual STO | <b>Frame Size:</b><br>1 to 9 | <b>Current Rating:</b><br>Heavy Duty current rating x 10 | <b>CT Reserved</b>               | <b>Product Variant:</b><br>AB100- Standard |
| <b>Voltage Rating:</b>  |                              |  | <b>Regional Default Setting:</b> |  |
| 1: 100 V drive (100 V to 120 V ±10 %)   |                              |  | 00 – 50 Hz                       |  |
| 2: 200 V drive (200 V to 240 V ±10 %)   |                              |  | 01 – 60 Hz                       |  |
| 4: 400 V drive (380 V to 480 V ±10 %)   |                              |  |                                  |  |
| 5: 575 V drive (500 V to 575 V ±10 %)   |                              |  |                                  |  |
| 6: 690 V drive (500 V to 690 V ±10 %)   |                              |  |                                  |  |
| <b>Drive Format:</b>  |                              |  |                                  |  |
| A – AC in AC out  |                              |  |                                  |  |
| *E – AC in AC out, External line reactor  |                              |  |                                  |  |



# MODEL NUMBER AND RATINGS

Variants with C3 built-in EMC filter

| Product Code              | Input Phases | Frame Size | Heavy Duty                 |                        |                        | Normal Duty                |                        |                        |
|---------------------------|--------------|------------|----------------------------|------------------------|------------------------|----------------------------|------------------------|------------------------|
|                           |              |            | Max Continuous Current (A) | Motor Shaft Power (kW) | Motor Shaft Power (hp) | Max Continuous Current (A) | Motor Shaft Power (kW) | Motor Shaft Power (hp) |
| <b>100/120 Vac +/-10%</b> |              |            |                            |                        |                        |                            |                        |                        |
| C200-01100017A10100AB100  | 1            | 01         | 1.7                        | 0.25                   | 0.33                   |                            |                        |                        |
| C200-01100024A10100AB100  | 1            | 01         | 2.4                        | 0.37                   | 0.5                    |                            |                        |                        |
| C200-02100042A10100AB100  | 1            | 02         | 4.2                        | 0.75                   | 1                      |                            |                        |                        |
| C200-02100056A10100AB100  | 1            | 02         | 5.6                        | 1.1                    | 1.5                    |                            |                        |                        |
| <b>200/240 Vac +/-10%</b> |              |            |                            |                        |                        |                            |                        |                        |
| C200-01200017A10100AB100  | 1            | 01         | 1.7                        | 0.25                   | 0.33                   |                            |                        |                        |
| C200-01200024A10100AB100  | 1            | 01         | 2.4                        | 0.37                   | 0.5                    |                            |                        |                        |
| C200-01200033A10100AB100  | 1            | 01         | 3.3                        | 0.55                   | 0.75                   |                            |                        |                        |
| C200-01200042A10100AB100  | 1            | 01         | 4.2                        | 0.75                   | 1                      |                            |                        |                        |
| C200-02200024A10100AB100  | 1   3        | 02         | 2.4                        | 0.37                   | 0.5                    |                            |                        |                        |
| C200-02200033A10100AB100  | 1   3        | 02         | 3.3                        | 0.55                   | 0.75                   |                            |                        |                        |
| C200-02200042A10100AB100  | 1   3        | 02         | 4.2                        | 0.75                   | 1                      |                            |                        |                        |
| C200-02200056A10100AB100  | 1   3        | 02         | 5.6                        | 1.1                    | 1.5                    |                            |                        |                        |
| C200-02200075A10100AB100  | 1   3        | 02         | 7.5                        | 1.5                    | 2                      |                            |                        |                        |
| C200-03200100A10100AB100  | 1   3        | 03         | 10                         | 2.2                    | 3                      |                            |                        |                        |
| C200-04200133A10100AB100  | 1   3        | 04         | 13.3                       | 3                      | 3                      |                            |                        |                        |
| C200-04200176A10100AB100  | 3            | 04         | 17.6                       | 4                      | 5                      |                            |                        |                        |
| C200-05200250A10100AB100  | 3            | 05         | 25                         | 5.5                    | 7.5                    | 30                         | 7.5                    | 10                     |
| C200-06200330A10100AB100  | 3            | 06         | 33                         | 7.5                    | 10                     | 50                         | 11                     | 15                     |
| C200-06200440A10100AB100  | 3            | 06         | 44                         | 11                     | 15                     | 58                         | 15                     | 20                     |
| C200-07200610A10100AB100  | 3            | 07         | 61                         | 15                     | 20                     | 75                         | 18.5                   | 25                     |
| C200-07200750A10100AB100  | 3            | 07         | 75                         | 18.5                   | 25                     | 94                         | 22                     | 30                     |
| C200-07200830A10100AB100  | 3            | 07         | 83                         | 22                     | 30                     | 117                        | 30                     | 40                     |
| C200-08201160A10100AB100  | 3            | 08         | 116                        | 30                     | 40                     | 149                        | 37                     | 50                     |
| C200-08201320A10100AB100  | 3            | 08         | 132                        | 37                     | 50                     | 180                        | 45                     | 60                     |
| C200-09201760A10100AB100  | 3            | 09         | 176                        | 45                     | 60                     | 216                        | 55                     | 75                     |
| C200-09202190A10100AB100  | 3            | 09         | 219                        | 55                     | 75                     | 266                        | 75                     | 100                    |
| C200-09201760E10100AB100  | 3            | 09         | 176                        | 45                     | 60                     | 216                        | 55                     | 75                     |
| C200-09202190E10100AB100  | 3            | 09         | 219                        | 55                     | 75                     | 266                        | 75                     | 100                    |
| <b>380/480 Vac +/-10%</b> |              |            |                            |                        |                        |                            |                        |                        |
| C200-02400013A10100AB100  | 3            | 02         | 1.3                        | 0.37                   | 0.5                    |                            |                        |                        |
| C200-02400018A10100AB100  | 3            | 02         | 1.8                        | 0.55                   | 0.75                   |                            |                        |                        |
| C200-02400023A10100AB100  | 3            | 02         | 2.3                        | 0.75                   | 1                      |                            |                        |                        |
| C200-02400032A10100AB100  | 3            | 02         | 3.2                        | 1.1                    | 1.5                    |                            |                        |                        |
| C200-02400041A10100AB100  | 3            | 02         | 4.1                        | 1.5                    | 2                      |                            |                        |                        |
| C200-03400056A10100AB100  | 3            | 03         | 5.6                        | 2.2                    | 3                      |                            |                        |                        |
| C200-03400073A10100AB100  | 3            | 03         | 7.3                        | 3                      | 3                      |                            |                        |                        |
| C200-03400094A10100AB100  | 3            | 03         | 9.4                        | 4                      | 5                      |                            |                        |                        |

For Normal Duty applications, use Heavy Duty ratings.

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|                          |   |    |      |      |     |     |      |     |  |
|--------------------------|---|----|------|------|-----|-----|------|-----|--|
| C200-04400135A10100AB100 | 3 | 04 | 13.5 | 5.5  | 7.5 |     |      |     |  |
| C200-04400170A10100AB100 | 3 | 04 | 17   | 7.5  | 10  |     |      |     |  |
| C200-05400270A10100AB100 | 3 | 05 | 27   | 11   | 20  | 30  | 15   | 20  |  |
| C200-05400300A10100AB100 | 3 | 05 | 30   | 15   | 20  | 30  | 15   | 20  |  |
| C200-06400350A10100AB100 | 3 | 06 | 35   | 15   | 25  | 38  | 18.5 | 25  |  |
| C200-06400420A10100AB100 | 3 | 06 | 42   | 18.5 | 30  | 48  | 22   | 30  |  |
| C200-06400470A10100AB100 | 3 | 06 | 47   | 22   | 30  | 63  | 30   | 40  |  |
| C200-07400660A10100AB100 | 3 | 07 | 66   | 30   | 50  | 79  | 37   | 50  |  |
| C200-07400770A10100AB100 | 3 | 07 | 77   | 37   | 60  | 94  | 45   | 60  |  |
| C200-07401000A10100AB100 | 3 | 07 | 100  | 45   | 75  | 112 | 55   | 75  |  |
| C200-08401340A10100AB100 | 3 | 08 | 134  | 55   | 100 | 155 | 75   | 100 |  |
| C200-08401570A10100AB100 | 3 | 09 | 157  | 75   | 125 | 184 | 90   | 125 |  |
| C200-09402000A10100AB100 | 3 | 09 | 200  | 90   | 150 | 221 | 110  | 150 |  |
| C200-09402240A10100AB100 | 3 | 09 | 224  | 110  | 150 | 266 | 132  | 200 |  |
| C200-09402000E10100AB100 | 3 | 09 | 200  | 90   | 150 | 221 | 110  | 150 |  |
| C200-09402240E10100AB100 | 3 | 09 | 224  | 110  | 150 | 266 | 132  | 200 |  |

**500/575 Vac +/- 10%**

|                          |   |    |     |      |     |     |      |     |  |
|--------------------------|---|----|-----|------|-----|-----|------|-----|--|
| C200-05500030A10100AB100 | 3 | 05 | 3   | 1.5  | 2   | 3.9 | 2.2  | 3   |  |
| C200-05500040A10100AB100 | 3 | 05 | 4   | 2.2  | 3   | 6.1 | 4    | 5   |  |
| C200-05500069A10100AB100 | 3 | 05 | 6.9 | 4    | 5   | 10  | 5.5  | 7.5 |  |
| C200-06500100A10100AB100 | 3 | 06 | 10  | 5.5  | 7.5 | 12  | 7.5  | 10  |  |
| C200-06500150A10100AB100 | 3 | 06 | 15  | 7.5  | 10  | 17  | 11   | 15  |  |
| C200-06500190A10100AB100 | 3 | 06 | 19  | 11   | 15  | 22  | 15   | 20  |  |
| C200-06500230A10100AB100 | 3 | 06 | 23  | 15   | 20  | 27  | 18.5 | 25  |  |
| C200-06500290A10100AB100 | 3 | 06 | 29  | 18.5 | 25  | 34  | 22   | 30  |  |
| C200-06500350A10100AB100 | 3 | 06 | 35  | 22   | 30  | 43  | 30   | 40  |  |
| C200-07500440A10100AB100 | 3 | 07 | 44  | 30   | 40  | 53  | 37   | 50  |  |
| C200-07500550A10100AB100 | 3 | 07 | 55  | 37   | 50  | 73  | 45   | 60  |  |
| C200-08500630A10100AB100 | 3 | 08 | 63  | 45   | 60  | 86  | 55   | 75  |  |
| C200-08500860A10100AB100 | 3 | 08 | 86  | 55   | 75  | 108 | 75   | 100 |  |
| C200-09501040A10100AB100 | 3 | 09 | 104 | 75   | 100 | 125 | 90   | 125 |  |
| C200-09501310A10100AB100 | 3 | 09 | 131 | 90   | 125 | 150 | 110  | 150 |  |
| C200-09501040E10100AB100 | 3 | 09 | 104 | 75   | 100 | 125 | 90   | 125 |  |
| C200-09501310E10100AB100 | 3 | 09 | 131 | 90   | 125 | 150 | 110  | 150 |  |

**500/690 Vac +/- 10%**

|                          |   |    |    |      |    |    |      |    |  |
|--------------------------|---|----|----|------|----|----|------|----|--|
| C200-07600190A10100AB100 | 3 | 07 | 19 | 15   | 20 | 23 | 18.5 | 25 |  |
| C200-07600240A10100AB100 | 3 | 07 | 24 | 18.5 | 25 | 30 | 22   | 30 |  |
| C200-07600290A10100AB100 | 3 | 07 | 29 | 22   | 30 | 36 | 30   | 40 |  |
| C200-07600380A10100AB100 | 3 | 07 | 38 | 30   | 40 | 46 | 37   | 50 |  |
| C200-07600440A10100AB100 | 3 | 07 | 44 | 37   | 50 | 52 | 45   | 60 |  |
| C200-07600540A10100AB100 | 3 | 07 | 54 | 45   | 60 | 73 | 55   | 75 |  |

|                          |   |    |     |     |     |     |     |     |
|--------------------------|---|----|-----|-----|-----|-----|-----|-----|
| C200-08600630A10100AB100 | 3 | 08 | 63  | 55  | 75  | 86  | 75  | 100 |
| C200-08600860A10100AB100 | 3 | 08 | 86  | 75  | 100 | 108 | 90  | 125 |
| C200-09601040A10100AB100 | 3 | 09 | 104 | 90  | 125 | 125 | 110 | 150 |
| C200-09601310A10100AB100 | 3 | 09 | 131 | 110 | 150 | 150 | 132 | 175 |
| C200-09601040E10100AB100 | 3 | 09 | 104 | 90  | 125 | 125 | 110 | 150 |
| C200-09601310E10100AB100 | 3 | 09 | 132 | 110 | 150 | 150 | 132 | 175 |

Note: The listed ordering codes are for C200, 50 Hz default setting.

For C300 change the model digits (C200-xxxxxxxxxxxxxxxxxxxx) from C200 to C300.

For 60 Hz change the Regional Default Setting digits (xxxx-xxxxxxxxxxxx00xxxx) from 00 to 01.



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