



Ultra3000 Digital Servo Drive Installation Manual

**(Catalog Numbers 2098-DSD-005, -010, and -020,
2098-DSD-005X, -010X, and -020X,
2098-DSD-005-DN, -010-DN, and -020-DN,
2098-DSD-005X-DN, -010X-DN, and -020X-DN,
2098-DSD-005-SE, -010-SE, and -020-SE)**

This document updates information about the 500, 1000, and 2000 Watt Ultra3000 drive products.

Use this document in conjunction with the *Ultra3000 Digital Servo Drive Installation Manual* (publication 2098-IN003E-EN-P). To obtain a copy, contact your local Rockwell Automation office or distributor, or access the document on-line at <http://literature.rockwellautomation.com>.

The power board electronics have changed on these drives. The change includes an enhancement to the in-rush current limiting circuitry that lowers the maximum in-rush current from 100A to 20A, and changes the maximum power-up/power-down cycle rate from one contactor cycle every two minutes to once every 10 seconds for up to two minutes, not to exceed 12 cycles in five minutes. The hardware upgrade results in a series change (from B to C) for the drives.

Firmware and software supporting this change include:

- Ultra3000 firmware version 1.45 to support the Series C hardware.
- Ultraware version 1.63 is required to download firmware to Series C drives containing the new power board.

Replace the *Ultra3000 (230V) Power Specifications* table with the one shown below. The new table includes in-rush current specifications for 500, 1000, and 2000 Watt Ultra3000 drives configured as Series A, B, or C.

Ultra3000 (230V) Power Specifications

The table below lists general power specifications and requirements for the Ultra3000 230V drives (2098-DSD-005x-xx, -010x-xx, and -020x-xx).

Specification	Description		
	2098-DSD-005	2098-DSD-010	2098-DSD-020
AC Input Voltage ¹	100-240V _{rms} Single Phase		
AC Input Frequency	47 - 63 Hz		
AC Input Current ^{2, 3} Nominal Maximum inrush (230V ac input) ⁴	5A rms 100A (0-peak) - Series A or B 20A (0-peak) - Series C	9A rms 100A (0-peak) - Series A or B 20A (0-peak) - Series C	18A rms 100A (0-peak) - Series A or B 20A (0-peak) - Series C
Continuous Output Current	2.5A (0-peak)	5A (0-peak)	10A (0-peak)
Intermittent Output Current	7.5A (0-peak)	15A (0-peak)	30A (0-peak)
Bus Capacitance	1410 µF	1880 µF	1880 µF
Internal Shunt Resistance	N/A	N/A	N/A
Shunt On	N/A	N/A	N/A
Shunt Off	N/A	N/A	N/A
Bus Overvoltage	400V dc	400V dc	400V dc
Energy Absorption Capability 115V ac input 230V ac input	93 Joules 38 Joules	125 Joules 51 Joules	
Continuous Power Output 115V ac input 230V ac input	0.25 kW 0.5 kW	0.5 kW 1.0 kW	1.0 kW 2.0 kW

- 1 Specification is for nominal voltage. The absolute limits are ±10%, or 88-265Vrms.
- 2 The 2098-DSD-005x-xx, -010x-xx, and -020x-xx (230V) drives are limited to:
Series A or B - one contactor cycle every two minutes
Series C - one contactor cycle every 10 seconds for up to two minutes, not to exceed 12 cycles in five minutes
- 3 Power initialization requires a short period of inrush current. Dual element time delay (slow blow) fuses are recommended (refer to Fuse Specifications on page A-5)
- 4 In-rush current limiting circuitry is enabled within 3 seconds after removal of AC line power.

For more information refer to our web site: www.ab.com/motion
 For Allen-Bradley Technical Support information refer to: www.ab.com/support or Tel: (1) 440.646.5800

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Corporate Headquarters

Rockwell Automation, 777 East Wisconsin Avenue, Suite 1400, Milwaukee, WI, 53204-5302 USA, Tel: (1) 414.212.5200, Fax: (1) 414.212.5201

Headquarters for Allen-Bradley Products, Rockwell Software Products and Global Manufacturing Solutions

Americas: Rockwell Automation, 1201 South Second Street, Milwaukee, WI 53204-2496 USA, Tel: (1) 414.382.2000, Fax: (1) 414.382.4444
 Europe: Rockwell Automation SA/NV, Vorstlaan/Boulevard du Souverain 36-BP 3A/B, 1170 Brussels, Belgium, Tel: (32) 2 663 0600, Fax: (32) 2 663 0640
 Asia Pacific: Rockwell Automation, 27/F Citicorp Centre, 18 Whitfield Road, Causeway Bay, Hong Kong, Tel: (852) 2887 4788, Fax: (852) 2508 1846

Headquarters for Dodge and Reliance Electric Products

Americas: Rockwell Automation, 6040 Ponders Court, Greenville, SC 29615-4617 USA, Tel: (1) 864.297.4800, Fax: (1) 864.281.2433
 Europe: Rockwell Automation, Brühlstraße 22, D-74834 Elztal-Dallau, Germany, Tel: (49) 6261 9410, Fax: (49) 6261 1774
 Asia Pacific: Rockwell Automation, 55 Newton Road, #11-01/02 Revenue House, Singapore 307987, Tel: (65) 351 6723, Fax: (65) 355 1733