

Profile

PRODUCT

Ultra5000 Intelligent Servo Drives



Overview

The Ultra5000 Intelligent Position Drive is an integrated motion controller and digital servo drive in a convenient stand-alone package. Programmed with Ultraware configuration software through a built in ANSI C environment, the C programming language provides an open, universal programming language, advanced mathematics and efficient code execution. The Ultraware software includes libraries of motion control commands to streamline development activities and programming tasks. The Ultra5000 is the perfect fit for stand-alone, cost sensitive single axis applications requiring intelligent motion control functionality and on-board digital and analog I/O.

Features

Each intelligent positioning drive features:

- ◆ Integrated drive, controller and I/O packaging eliminates system components, connections and cost
- ◆ Standard DF-1 interface for stand-alone applications, optional DeviceNet communications interface for supervisory control architectures, including the ControlLogix platform
- ◆ Motion programs created in ANSI C for fast, efficient code execution and standard development environment
- ◆ Support for incremental, high-resolution and multi-turn absolute feedback, including Stegmann Hiperface and sine/cosine encoders
- ◆ Automatic motor recognition capability with intelligent feedback devices, eliminating the need to configure motor parameters

Power Options

- ◆ 100-230V AC, single phase input
 - 2098-IPD-005: 2.5 Amp Continuous, 7.5 Amp Peak
 - 2098-IPD-010: 5 Amp Continuous, 15 Amp Peak
 - 2098-IPD-020: 10 Amp Continuous, 30 Amp Peak
- ◆ 230V AC, single phase input
 - 2098-IPD-030: 15 Amp Continuous, 30 Amp Peak
- ◆ 230V AC, three-phase input
 - 2098-IPD-075: 35 Amp Continuous, 75 Amp Peak
 - 2098-IPD-150: 65 Amp Continuous, 150 Amp Peak

DeviceNet option available for all drives. Current specification is 0-peak.

Typical Applications

Applications requiring single axis intelligent motion control in a single, cost effective package will benefit from the use of the Ultra5000. Typical applications include:

- ◆ Packaging
- ◆ Metal Forming
- ◆ Converting
- ◆ Food Processing



Allen-Bradley

Catalog Numbers 2098-IPD-xxx-xx



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Specifications

GENERAL (2098-IPD-xxx(-DN)*	-050	-010	-020	-030	-075	-150
Peak Output Current (Amps)	7.5	15	30	30	65	150
Cont. Output Current (Amps)	2.5	5	10	15	35	65
Cont. Output Power (kW)	0.5	1	2	3	7.5	15

INPUT

Continuous Input Current	5	9	18	28	30	46
Input Voltage	← 100-240 volts AC Single-Phase →		230V AC Single Phase		← 230V AC Three Phase →	
Input Frequency	←		47-63 Hz		→	

USER PROGRAMMING

Language	Compiled ANSI C with Library of Motion Commands
Programming Environment	Full-featured Color Syntax Editor and "C" Compiler Integrated with Ultraware Software
User Program Memory Capacity	512 Kbytes
User Program Memory Storage Medium	Flash Memory, 100,000 Write Cycles
Nonvolatile Memory Capacity	16 Kbytes (approximately 4000 nonvolatile user variables)
Nonvolatile Memory Storage Medium	nvSRAM (high-speed SRAM/EEPROM)

INPUTS/OUTPUTS

General-Purpose Digital Inputs	16 Optically Isolated 12-24 Volt Inputs
General-Purpose Digital Outputs	7 Optically Isolated 12-24 Volt Outputs - 50 Milliampers Maximum
General-Purpose Relay Outputs	1 Normally Open Relay - 30 Volts DC Maximum Voltage, 1 Ampere Maximum Current
General-Purpose I/O Response	100 µsec
High-Speed Input Response	<1 µsec (Inputs 1 and 2)
General-Purpose Analog Inputs	2 12-bit Analog-to-Digital Converters (+/- 10v, single-ended)
General-Purpose Analog Outputs	2 12-bit Digital-to-Analog Converters (+/- 10v, +/- 2ma, single-ended)

COMMUNICATIONS

Serial	2 Independent RS-232/RS-422/RS-485 Ports, 1200-38,400 Baud
Networking	DF-1 Point-to-Point Standard, DeviceNet optional

MOTOR FEEDBACK

Input Modes	Incremental with Index, Sine/Cosine High Resolution Absolute (Single and Multi-turn)
Maximum Input Frequency	2.5 MHz (Encoder Lines), Over 1 Million Counts/Rev (High Resolution)
Comutation Startup	Hall Sensor

AUXILIARY FEEDBACK

Operation	Auxiliary Feedback Input
Input Modes	A quad B
Input Type	Line Receiver
Maximum Input Frequency	2.5 MHz (Encoder Lines)

MOTOR FEEDBACK

Acceleration Types	Linear, S-Curve
Motion Types	Move, Jog, Electronic Gear, Electronic Cam

* -DN indicated DeviceNet Option

For more information refer to our web site: www.ab.com/motion

www.rockwellautomation.com

Corporate Headquarters

Rockwell Automation, 777 East Wisconsin Avenue, Suite 1400, Milwaukee, WI, 53202-5302 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 17741
 Asia Pacific: Rockwell Automation, 55 Newton Road, #11-01/02 Revenue House, Singapore 307987, Tel: (65) 351 6723, Fax: (65) 355 1733

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