

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 to eliminate system components, connections and cost
- ◆ Direct DF-1 interface to Panelview 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
 - 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
- ◆ 460 VAC AC, three-phase input
 - 2098-IPD-HV030: 7 Amp Continuous, 14 Amp Peak
 - 2098-IPD-HV050: 11 Amp Continuous, 22 Amp Peak
 - 2098-IPD-HV100: 23 Amp Continuous, 46 Amp Peak
 - 2098-IPD-HV150: 34 Amp Continuous, 68 Amp Peak
 - 2098-IPD-HV220: 47 Amp Continuous, 94 Amp Peak

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

Typical Applications

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

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



Allen-Bradley

Catalog Numbers 2098-IPD-xxx-xx



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Specifications

GENERAL 2098-IPD-xxx(-DN)*	-005	-010	-020	-030	-075	-150	-HV030	-HV050	-HV100	-HV150	-HV220
Peak Output Current (Amps)	7.5	15	30	30	65	150	7	11	23	34	47
Cont. Output Current (Amps)	2.5	5	10	15	35	65	14	22	46	68	94
Cont. Output Power (kW)	0.5	1	2	3	7.5	15	3	5	10	15	22

INPUT

Continuous Input Current	5	9	18	28	30	46	4	7	14	20	28	
Input Voltage	100-230 volts AC Single-Phase				230V AC Three Phase		460V 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)
Commutation 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)

MOTION CONTROL

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

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

www.rockwellautomation.com

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Publication 2098-PP001B-EN-P - June 2002
supersedes 2098-PP001A-EN-E - February 2002

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