YASKAWA

DriveWorksEZ® SOFTWARE
PROGRAMMING FOR THE V1000 AND A1000 SERIES DRIVES

EN
DE
ES
FR
IT

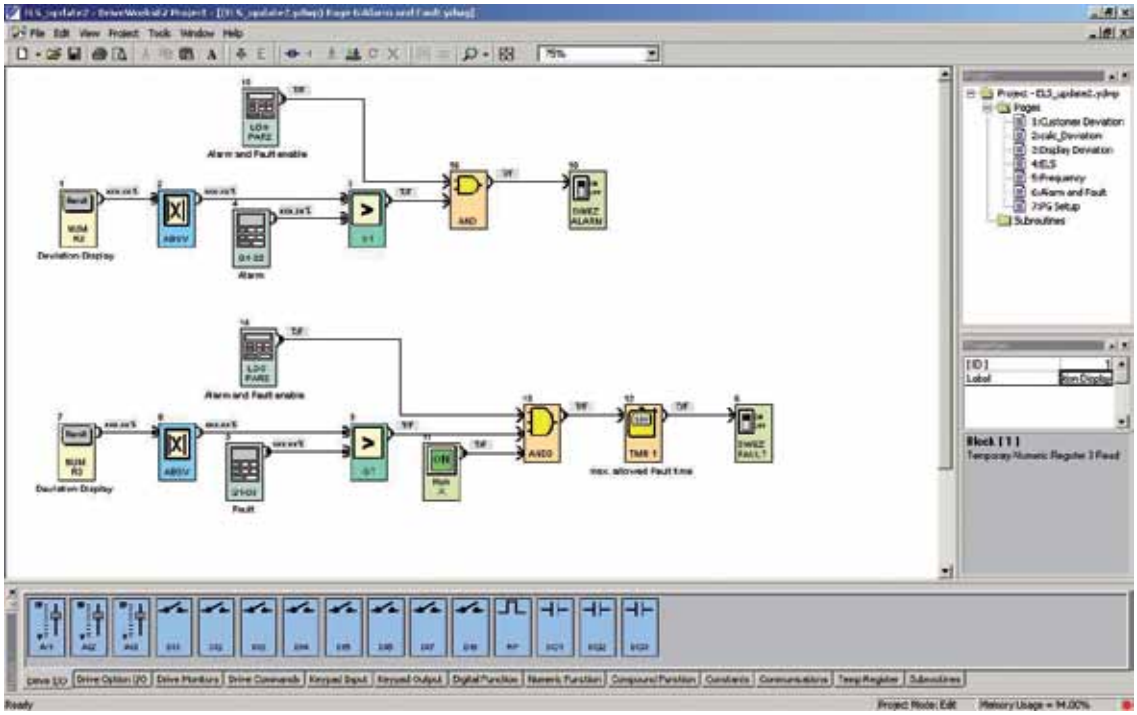
The Intelligent Choice for Distributed Control

DriveWorksEZ® Programming Software

The marketplace is moving towards flexible inverter software that allows the user to adapt their drive to machines/processes in a timely and cost effective manner. DriveWorksEZ® adds programmable functions that can tailor the V1000 and A1000 Series drives to the machine without the help of external controllers such as a PLC. This provides the user with easy access to the power of the inverters through an icon-based, graphical programming environment.

DriveWorksEZ® is a software system that provides the means to create custom drive functionality inside the V1000 and A1000 Series drives. The system is composed of dedicated inverter software and a PC tool for creating and downloading function-block based application programs. Simply create application programs by arranging function block icons in a visual flow chart. Total drive and machine control are only a few mouse clicks away. User-friendly program monitoring is included for fast, easy start-up and troubleshooting.

DriveWorksEZ® provides function on demand, allowing the customer to customize and adapt the V1000 and A1000 Series drives to their machine needs in a fast and intuitive manner.

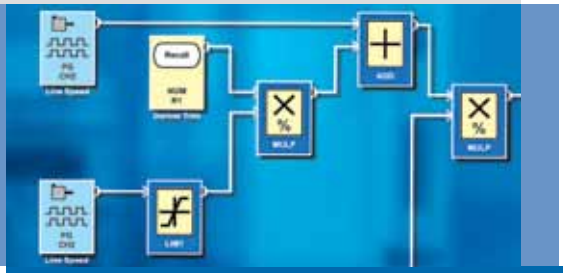


Example Application

Open Architecture

DriveWorksEZ® offers a variety of communication options. This makes it an ideal choice for most machine designs. Network interface options including DeviceNet, Profibus-DP, EtherNet/IP, EtherCAT, CANopen, MECHATROLINK-II, and others allow the V1000 and A1000 Series drives with DriveWorksEZ® to be a powerful node on the factory network. DriveWorksEZ® offers distributed, high-speed control that can off-load PLC processing and improve machine performance.

The V1000 and A1000 Series drives with DriveWorksEZ® can independently provide a complete machine solution for many applications, eliminating the need for PLCs or other controllers. This means reduced cost, design simplicity, and one-source responsibility.



User Friendly Start-up and Programmability

Easy to Use
DriveWorksEZ® has an intuitive, easy to use programming interface. Application programs can be created in a matter of minutes. Compiling and downloading take seconds resulting in less development time.

Fast Execution Time
DriveWorksEZ® has a fast execution time, regardless of program size or complexity. This guarantees maximum performance for every application by allowing for more precise machine operation over a greater operating range.

Flexible
DriveWorksEZ® has a wide variety of function blocks to choose from. It offers nearly unlimited control schemes due to direct access to all input/output registers and a multitude of logical, numeric and other functions. Machine design and control is more flexible than with a central controller.

On-Line Monitoring
DriveWorksEZ® makes it easy to debug and troubleshoot an application program. The status of each function block is continuously updated which takes the guesswork out of troubleshooting the program.

Process Control
DriveWorksEZ® includes a comprehensive PID control function block for machine processes. The PID control loop is extremely configurable and can be used to control almost any process variable.

DriveWorksEZ® Specifications

	V1000	A1000
Programming		
Number of available blocks	225	289
Number of block connections	50	100
Execution speed	2 ms	1 ms
Torque and speed loop update	2 ms	1 ms
Function types	10 numeric, 10 logic	12 numeric, 12 logic
Drive data	All commands, monitors, and parameters	
Standard I/O		
Analog inputs	1 (0-10 VDC), 1 (0-10 VDC or 4-20 mA / 0-20 mA)	1 (0-10 VDC or 4-20 mA / 0-20 mA), 2 (0 to +/-10 VDC)
Analog outputs	1 (0-10 VDC)	2 (0 to +/-10 VDC, 4-20 mA)
Digital inputs	6	8
Digital outputs	3 (1 relay / NO contact, 2 photo coupler)	3 (relay / NO contact)
Fault contact	1 (relay / changeover contact programmable)	1 (relay / changeover contact)
Pulse train input	1 (32 kHz)	1 (32 kHz)
Pulse train output	1 (32 kHz)	1 (32 kHz)
RS-422/485	MEMOBUS/Modbus 115.2 kbps	MEMOBUS/Modbus max. 115.2 kbps
Optional I/O		
Analog inputs	–	3 (0 to +/-10 VDC, 4-20 mA)
Analog outputs	–	2 (0 to +/-10 VDC)
Digital inputs	–	Binary (8, 12, or 16 Bit)
Digital outputs	–	8 (2 relay / NO contact, 6 photo coupler)
Encoder inputs	–	2 (incremental, 300 kHz max)
Network Communication		
DeviceNet	■	■
Profibus-DP	■	■
EtherNet/IP	■	■
EtherCAT	■	■
CANopen	■	■
MECHATROLINK-II	■	■

■ - Available as option – - Not available

Available DriveWorksEZ® Function Block Types
- Drive and Option I/O
- Monitors
- Drive Commands
- Keypad Input/Output
- Digital/Numeric/Compound Functions
- Constants
- Communications
- Temporary Registers

Global Certification
UL, cUL, CE, RoHS, and TUV

Drive Ratings

Voltage	V1000	A1000
1 ~ 200 V .... 240 V +10%/-15%	0.1 kW to 4.0 kW	N/A
3 ~ 200 V .... 240 V +10%/-15%	0.1 kW to 18.5 kW	0.55 kW to 110 kW
3 ~ 380 V .... 480 V +10%/- 15%	0.2 kW to 18.5 kW	0.55 kW to 630 kW

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Literature No. YEU_INV_DriveWorksEZ_EN_v2_0811
Printed in Germany, August 2011