



# DriveWorksEZ® SOFTWARE PROGRAMMING FOR THE V1000 AND A1000 SERIES DRIVES



EN

DE  
ES  
FR  
IT

DriveWorksEZ  
DriveWorksEZ  
DriveWorksEZ  
DriveWorksEZ  
DriveWorksEZ

# The Intelligent Choice for Distributed Control

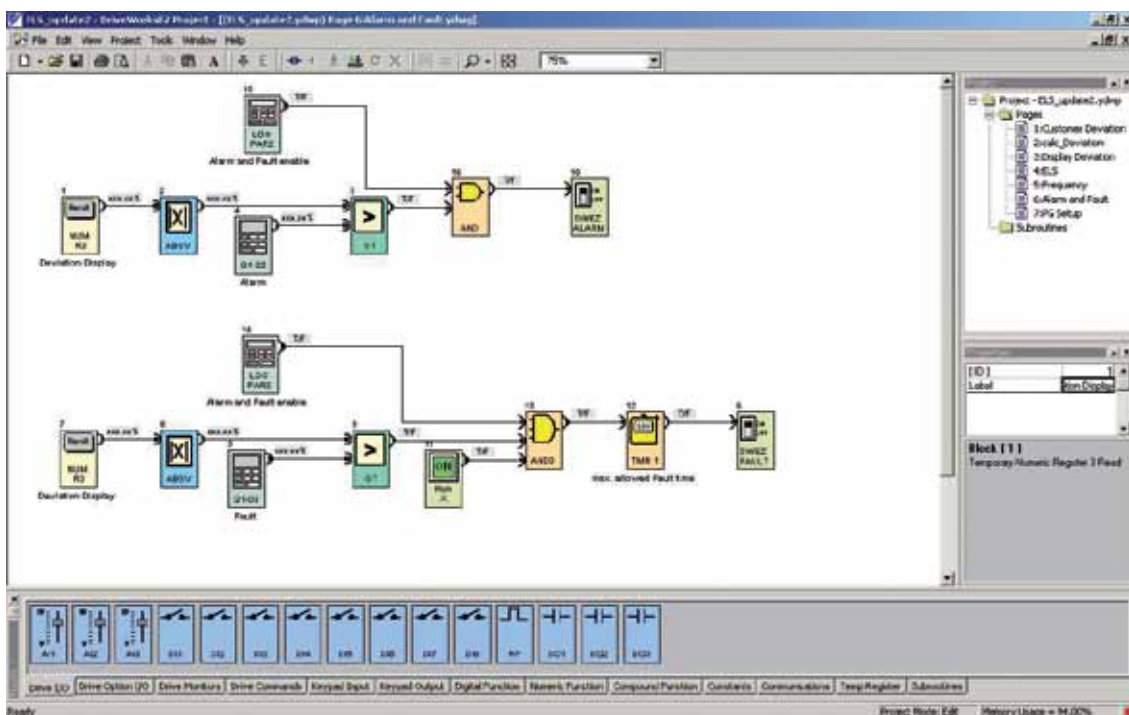
## DriveWorksEZ® Programming Software

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.

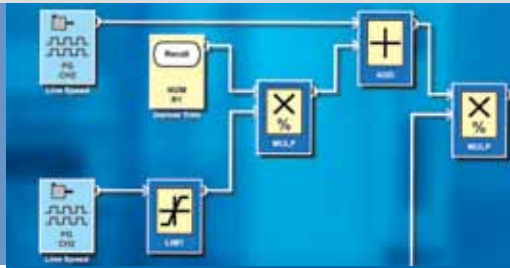


Example Application

## 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<sup>®</sup> 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<sup>®</sup> 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<sup>®</sup> 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<sup>®</sup> 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<sup>®</sup> 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<sup>®</sup> Specifications

	V1000	A1000
<b>Programming</b>		
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	
<b>Standard I/O</b>		
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
<b>Optional I/O</b>		
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)
<b>Network Communication</b>		
DeviceNet	■	■
Profibus-DP	■	■
EtherNet/IP	■	■
EtherCAT	■	■
CANopen	■	■
MECHATROLINK-II	■	■

■ - Available as option    -- - Not available

### Available DriveWorksEZ<sup>®</sup> 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



**YASKAWA Europe GmbH**

Drives & Motion Division  
Hauptstr. 185  
65760 Eschborn  
Germany

+49 6196 569-300  
info@yaskawa.eu.com  
www.yaskawa.eu.com