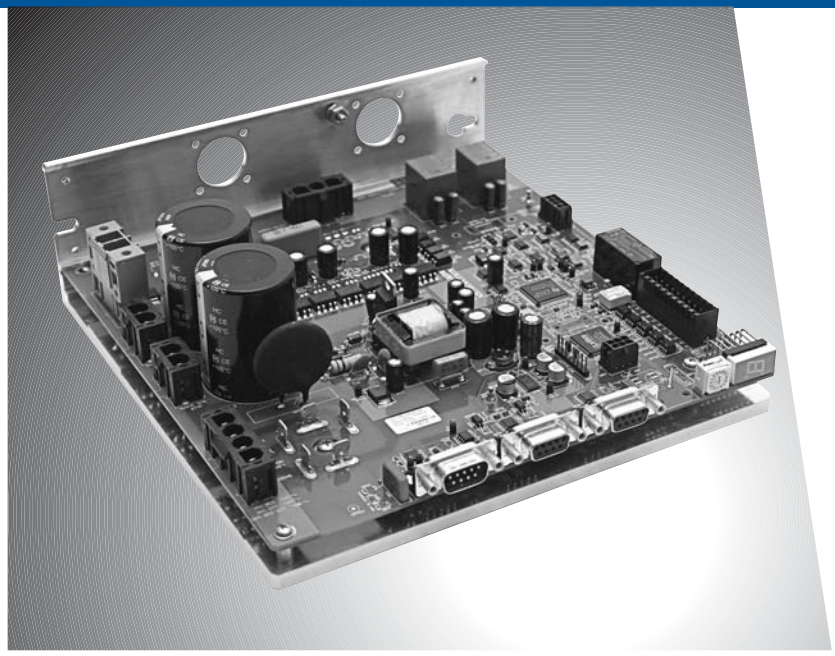
OFDL

www.DanaherMotion.com



DESCRIPTION

The OFDL (Open Frame Drive L-shape) is an integrated digital servo drive that controls the electric motor and the machine operation, and interfaces with the machine controller and other programming maintenance tools. The OFDL consists of a single circuit board including both the power stage and the digital circuitry.
The OFDL is designed to meet low cost requirement but at the same time it is a fully featured drive.

RATIONALE

The Motivating factor behind this development effort was the need to have an alternative low cost system. At the same time, the new product meets:

- Aggressive cost target
- Fully featured drive
- Compatibility with existing cabinet

SOLUTION

- Digital brushless servo system with innovative electronics to meet reliability and costs targets.
- Open frame drive for direct mounting within the existing enclosure.
- Modular software architecture for simple implementation of new features.

Solutions by DANAHER MOTION

DANAHER MOTION is a trademark of Danaher Corporation. Danaher Motion makes every attempt to ensure accuracy and reliability of the sepcifications in this publication. Specifications are subject to change without notice. Danaher Motion provides this information "AS IS" and disclaims all warranties, express or implied, including, but not limited to, implied warranties of merchantability and for a particular purpose It is the responsibiity of the product user to determine the suitability of this roduct for a specific application. ©2004 Danaher Motion.

Applications

- Painting machine, Plasma-cutting machine, packaging machine, Textile

FEATURES

Real-Time Data Monitoring

- Bus voltage
- Analog inputs
- Drive temperature
- Setup tool: SEPLink for windows
- Motor Current

Feedback

- Resolver
- Auxiliary encoder feedback (Master/Slave)
- Encoder Sensor bearing SKF
- Auxiliary Encoder feedback dual loop operation (future)
- Work with AKM motors

Servo Control

- Fully digital current,velocity and position loops.
- Patented torque angle control enhances motor performances
- PWM switching frequency 16 kHz
- Velocity loop bandwidths up to 400 Hz
- Analog velocity control loop
- Advanced patented sinewave comutation technology provides smooth, precise low-speed control as well as high-speed performance
- Sinusoidal Commutation
- Accurate torque control due to precision balanced current loops with open loop sensors

Reference Command

- 12 bit analog-to-digital conversion
- Pulse following control, configured as an encoder follower or pulse/direction counter
- Serial command
- Designed for future support of CANOpen controller

Motion Options

- Point-to-point incremental or absolute with trapeze and S-Curve profiles acceleration and deceleration control
- Motion indexing profiles in memory
- Homing functions

I/O's

- 7-Segment Indicator
- 1 Analog input
- Fault relay
- Motor temperature sensor
- Brake Relay
- Digital I/O (Configurable):
  - Optically isolated
  - 7 bi-directional inputs + HW Enable input
  - 2 Outputs

Communication

- RS-232
- CanOpen (future development)
- RS-485 Half Duplex
- ModBus communication rates: 9.6, 19.2, 38.4, 57.6, 115 kbps
- ModBus RTU protocol

Additional Features

- Encoder simulation
- 16-positions rotary switch for drive addressing
- New HW features can be added using high-density pin header connector

Robust Power Stage Options

- Self-protecting power modules
- DC Bus sharing
- Full protection against short circuit, under-voltage, over voltage, over current, motor and drive over-temperature, over-current, feedback loss, over speed and break (regeneration)
- Flexible current foldback protection
- External regen resistor readiness

Rating

AC Input	Output Continuous Current Per Phase (RMS/Phase)@ 45°	Output Peak Current Per Phase (RMS/Phase)	AC Line Input Voltage (VAC)	Rated Input Power (kW)	Rated Output Continuous Power (kW)
1 Phase	9 amps	18 amp. (0.5 sec)*	115	2.0	1.4
			220	3.9	2.7
3 Phase	9 amps	18 amp. (0.5 sec)*	115	2.0	1.4
			135	3.9	2.7

Rated DC voltage: 160 VDC-325 VDC
Lower ratings are available upon request, can be ordered with or without heat sink
* Forced cooling is required

Mechanical Dimensions

2.7" (height) x 7.5" (width) x 7.5" (length)