Victory Controls, LLC

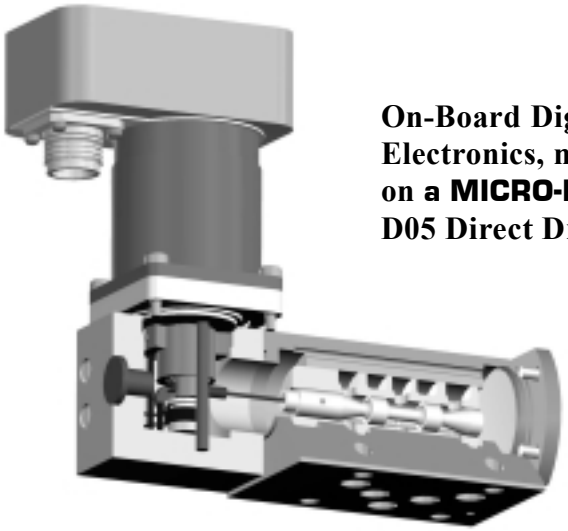
MICRO-DRIVE™ On-Board Digital Valve Driver

MAJOR FEATURES

- ☑ **Direct Drive** for Servo Performance
- ☑ **Optimized Fixed Gain** for selected valves
- ☑ **NEMA 4/ IP 67** enclosure on valve
- ☑ **Two-year Warranty**, parts and labor
- ☑ **Choices** of Analog Command Input
- ☑ **Proportional** Control for Digital Valves

USER BENEFITS

- ☑ Direct Drive = **No Nozzles or jets to clog-up**
- ☑ **Replaces** Dirt Sensitive Valves
- ☑ **No user tuning** required
- ☑ Simple Design = **Field Serviceable**
- ☑ **Little or no** Maintenance cost



On-Board Digital Electronics, mounted on a MICRO-DRIVE™ D05 Direct DriveValve

MDOBE-D05

PRODUCT DESCRIPTION

The **MICRO-DRIVE™ MDOBE Valve Drivers** are designed to interface Victory Controls Digital Servo Valves to PLC's, CNC's, and various other motion control systems. This on-board electronics (OBE) module allows the Victory Controls Digital Servo Valve to replace analog servo valves in existing systems or those new systems that do not produce digital step and direction outputs.

The command input signal is connected to a differential input amplifier to reduce common mode noise and is read into a microprocessor by a 12-bit analog-to-digital converter. The microprocessor then uses a proprietary algorithm to output the appropriate direction command and number of micro-steps to the stepping motor drive. As the stepping motor on the valve rotates, the valve spool moves, causing the flow out of the valve to change in direction and proportion relative to the analog input signal. The respective "gain sets" are stored in non-volatile memory and are selected by valve model to provide 100% of rated flow for 100% of the input signal. The input "sign" is used to determine the direction of flow for 4 way valves.

Electrical noise, temperature drift and analog variability are significantly reduced in this truly digital valve driver.

SPECIFICATIONS

Analog Command Input

Range	+/ -10 VDC, +/-5VDC
	0 to 10VDC, 0 to 5 VDC
	4 to 20 MA
Input Impedance	
Voltage Input	5.1K Ohm
Current Input	250 Ohm
A to D Resolution	+/- 2048
Sample/Update	600 microseconds
Gain Sets	Selected by DIP SW

Valve Driver Output

Voltage	24 – 40 VDC
Current per Phase	1.2 A rms
	1.4 A peak

Power Supply (Unregulated)

Req'd Input	24 - 40 VDC @ 1.2 A

Physical Specifications

Format	Nema 4/IP
Box Size	4 7/8 x 2 1/5 x 1 3/8
Mounting	Mounts to Valve
Input Connector	MS3102E-14S-6P
Temperature Range (Ambient or Valve Body)	
Max.Operating	0 to 70 Deg C
Storage	-40 to 85 Deg C