

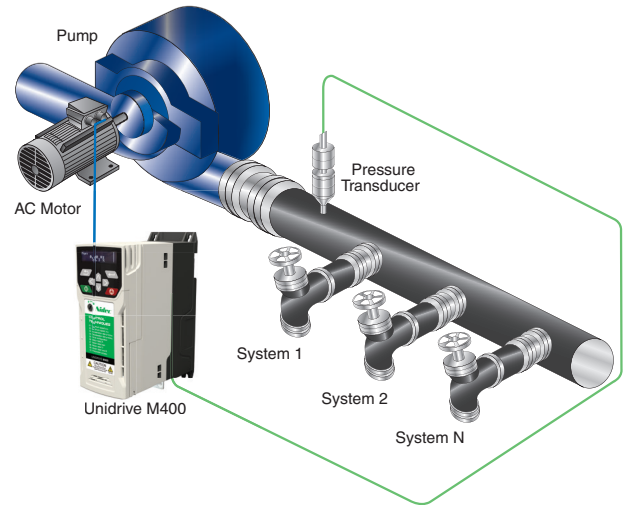
# Automation Solutions

## Simplex Pump Control

**Control Techniques knows automation solutions, and is experienced in pumping.**

The Control Techniques' Unidrive M400 simplex pump solution is an effective and versatile variable speed control system for maintaining constant pressure in a single pump configuration for ratings up to 200 hp.

Based on the highly reliable Unidrive M400 drive, this product offers cost effective pump control. An embedded controller in the drive eliminates the need for an external controller saving cost, space and programming time.



### STANDARD FEATURES:

- Dynamic V/Hz Energy Savings mode
- Built-in energy metering
- Wide power range — 0.33 hp to 200 hp
- Power range: 115 V to 690 V
- Smooth S-ramp speed variation
- Optional communications

### Start/Stop and control modes:

- Pressure transducer and flow switch
- Pressure transducer only

### Software operating features:

- Pressure PID mode
- Sleep / wake mode
- Start / stop delay
- Multiple set-point selection
- Pipe fill operation
- Automatic fault reset

### System protection functions:

- No suction detection/dry well detection
- Transducer loss detection
- High / low pressure detect
- No-flow detection
- Motor overload

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**CONTROL TECHNIQUES™**

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Unidrive M400 pump control systems include the simplex pump solution pre-programmed with pump control software and parameters to significantly reduce costs through measurable improvement in pumping reliability, up-time and performance.

## OPTIONS: SI Option Modules



An SI-I/O or SI-Ethernet option module can be ordered with Unidrive M400 frame sizes 2 and above (1 option module max per drive). The SI-I/O module provides I/O for additional pump features:

- Multiple set-point selection
- Over temperature switch input
- Fault reset input
- 2 additional user programmable relay outputs

SI-Ethernet provides convenient dual port connectivity to Modbus TCP/IP and EtherNet/IP networks. A built-in web server is available for easy diagnostics.

## CTVUE-304KE-CTASP

HMI operator interface provides a graphical interface and adds additional features of email alerts, remote Web access, value timing, flow monitoring and logging.



## CI-KEYPAD-LCD

To access the Unidrive M400 drive parameters without the need for a personal computer, this 4 line multi-language LCD keypad can be ordered. This option provides rapid setup and easy access to drive status and diagnostics.



## HOW TO ORDER:

For complete information on Unidrive M400 AC drives – including ratings, specifications and order codes – please refer to the Unidrive M400 Brochure or User Guide.

1. Order any Unidrive M400 part number and replace the last 5 digits of the order code with K0033 or K0035. This includes the pre-programmed Unidrive M400 with pump software and default pump configuration drive parameters, for example:

### Standard Drive:

M400-02400013A10101**AB100** (with DB transistor)

M400-09402000E10101**AN100** (without DB transistor)

### Simplex Pump Drive:

M400-02400013A10101**K0033** (with DB transistor)

M400-09402000E10101**K0035** (without DB transistor)

2. Order CI-KEYPAD-LCD for access to drive parameters, status and diagnostics and to load SD card files from the AI-BACKUP-ADAPTOR. One keypad is recommended to be order at a minimum.

3. Order AI-CTASP for backup default pump configuration drive parameters. This includes an AI-BACKUP-ADAPTOR and SD card with default pump configuration drive parameters pre-loaded.



## SOFTWARE CONFIGURATION:

The Unidrive M400 simplex pump parameters can be configured from a PC using Unidrive M Connect software and an optional programming cable (CT-USB-CABLE) and RS485 adaptor (AI-485-ADAPTOR), or via an SI-Ethernet option module.

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