SPR-2000™

Programmable Fluid Controller

Full-Featured Programmable Control

The SPR-2000™ programmable fluid controller is designed to precisely control lubricant supplied to Unist Uni-Rollers®, Unist spray nozzles, and in-die lubrication points.

- **User-friendly controller**
- **program up to 250 different die sets or jobs**
- **Alarm monitoring of critical parameters**

At the heart of the SPR-2000™ is a proprietary electronic controller. The controller intermittently actuates a bank of valves to dispense the required quantity of fluid to the appropriate lube points. The programmable actuation of the valves is based on an intermittent (rate dependent) input from the line. On stamping presses, this input is typically based on the stroke of the press and comes from a programmable limit switch (PLS) or the press controller. In continuous speed operations such as roll forming, an optional rotation sensor is available which provides one input for each roller revolution on a Uni-Roller® Type S or Mini-Roller™ system.

The SPR-2000™ menu-driven software easily guides the user through the process of creating setups (programs) and saving them to memory. The system can save up to 250 different setups so changing to a new job is as simple as pushing a few buttons.

An optional press control interface takes this functionality one step further, allowing standard press controls to interface directly with the SPR-2000™ and change the setup based on the currently running job.

The SPR-2000™ is also designed to monitor critical parameters such as fluid level, fluid pressure, and flow (optional sensors may be required). It can alert the operator with an audible alarm, a red LED, and even an external alarm relay which can be wired directly to a press control. If unauthorized access to the system settings is an issue, the system can be configured with a custom 4-digit access code. This allows the operator to monitor alarms and recall saved setups, but not modify system settings or create new setups.

Specifications

Power supply:
110 VAC, 50/60 Hz or
220 VAC, 50/60 Hz

Control inputs:
Dry contact (switch closure)
Proximity sensor 10-30 VDC NPN, N.O.
24 VDC option for input #1

Alarm inputs:
Dry contact (switch closure)
Proximity sensor 10-30 VDC NPN, N.O.

Flow monitor inputs:
Dry contact (switch closure)
Proximity sensor 10-30 VDC NPN, N.O.

Outputs:
Same voltage as power supply
Maximum power - 10 watts per output
Valves: 1-22

Alarm relay:
Isolated, non-fused, single pole, double throw; 2 Amp load maximum

Maximum input rate:
50 cycles/second at 50% duty cycle
Minimum contact open or closed time:
10 milliseconds

Alarm inputs:
Dry contact (switch closure)
Proximity sensor 10-30 VDC NPN, N.O.

Programmable ranges:
Count (CNT): 0-255 counts
Delay (DEL): 0-100 seconds
(.010 second increments)
Duration (DUR): 0-100 seconds

Fuses:
Supply fuse: 2 amp
Output fuse: 5 amp

Operating temperature range:
0˚ to +50˚C [+32˚ to +122˚F]

Storage temperature range:
-20˚ to +70˚C [-4˚ to +158˚F]

SPR-2000 JR™

The SPR-2000 JR™ programmable fluid controller is designed as a less costly alternative to the standard SPR-2000™ programmable fluid controller. With many of the same features and functions as its more capable sibling, it can serve as the fluid control system for any application where only two outputs are required.

Easy Setup & Configuration

SPR-2000™ includes many features which make it versatile and easy to use. All operational setup and configuration are done through simple menus which are shown on a high-contrast, 4-Line X 20 character LCD display.

Main SPR-2000™ screens:

ACCESS CODE

```
Enter New Access
Code:       1234
Use Access Code? N
Press > for Y/N
```

Allows the user to set up passwords to control system access.

AUTO SETUP

```
Enter Maximum Number
of Strokes or Cycles
per minute: 0___
```

Prompts the user for job specifications and automatically creates a new setup (program) for Uni-Roller® applications.

EDIT

```
 SETUP 001 EDIT
 OUT  CNT DEL   DUR
LWR01 1__ 0___ .150
UPR01 1__ .100 .150
```

Allows the user to modify current setups and program spray nozzles for other auxiliary functions.

ALARM

```
ALARMS (*=Active)
Scroll to View List
01 Low Fluid
02 Low Pressure
```

Allows the user to monitor all critical system functions.

Display alarm screen
Lists all current alarm conditions

Prime button
Press and hold to momentarily actuate all outputs in the current setup which have count (CNT) and duration (DUR) set greater than zero.

Display edit screen
Use to enter new setups or edit existing setups.

Display run screen
Use to run a saved setup or to view a setup without changing setups.

Alarm LED
Illuminates when an alarm condition exists.

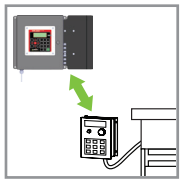
Display configuration menu
Use at initial set up and to modify system operating parameters

Enter button
Use to confirm data entries. Pressing repeatedly returns user to status screen (shown)

Options

Pressure switch
monitors for low fluid pressure. The switch is adjustable from 3-40 psi and is factory set at 5 psi.

Flow sensors
monitor each valve to verify fluid flow when the valve is actuated.



Press control interface
allows the SPR-2000™ to interface with standard press controllers and automatically run the proper setup when a job is changed at the press controls.

Adjustable stand
facilitates convenient, vibration-free mounting. The aluminum extruded legs of the stand also allow easy mounting of a 6 or 15 gallon tank. The hole in the base of the stand is large enough to accept a 3 gal stainless steel tank.

NEED MORE INFORMATION?

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