Omega™ Series
Press Control System.

Comes pre-programmed with clutch/brake, main motor control, lube functions, after-monitoring, programmable limit switch and more.

Product Profile

Introduction

Before purchasing new mechanical presses, or retrofitting your present equipment, we would like to take this opportunity to make you aware of the substantial benefits and values that can be realized by choosing the Omega Configurable Press Control System. The system offers the unique capability of matching the press functions to your specific requirements.

The Omega Configurable Press Control System comes as a bundled package consisting of hardware, software, and documentation. It has been designed to conform with ANSI and OSHA regulations governing the use of solid-state controllers for press control operations.

Each SLC processor contains flash memory that has been pre-programmed at our factory with the software required to provide basic clutch/brake control as well as a full range of supporting functions.

Pre-Programmed EOI

The Allen-Bradley Omega Press Control System can be equipped with an optional EOI electronic operator interface, based on the Allen-Bradley PanelView™ 600. Like the controller portion of the control system, the 6556-SPV600 is also pre-programmed at our factory, and comes with a wide variety of runtime status and edit screens which greatly reduce the integration effort required to interface this high-performance control system to your stamping presses.

AC or DC Kits Available

Two Omega Press Control Systems are available. The 6556-SCBK3 works with a grounded 120V AC power source. The SCBK3DC is for use with press controls utilizing a 24VDC grounded power source. PanelView 600 Color Operator Interface

The window into the Configurable Press Control System (and your press operations) is a pre-configured operator interface based on Allen-Bradley's robust PanelView 600. This interface is simple, requiring only that the operator interface be powered and connected to the Omega Press Control System to begin.

Hardware Components

Hardware Components – Rack A

<table>
<thead>
<tr>
<th>Component</th>
<th>Quantity</th>
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</thead>
<tbody>
<tr>
<td>Ten-slot rack</td>
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<tr>
<td>Power supply</td>
<td>1</td>
</tr>
<tr>
<td>SLC processor</td>
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</tr>
<tr>
<td>16 point input modules</td>
<td>2</td>
</tr>
<tr>
<td>16 point output module</td>
<td>1</td>
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<tr>
<td>8 point output module</td>
<td>1</td>
</tr>
<tr>
<td>Communications module</td>
<td>1</td>
</tr>
<tr>
<td>Flash memory module</td>
<td>1</td>
</tr>
<tr>
<td>16 point input module</td>
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Hardware Components – Rack B

<table>
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<tr>
<th>Component</th>
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</thead>
<tbody>
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Publication 6556-1.12 – May 1998

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Printed in U.S.A.
Clutch/Brake Control
Allen-Bradley Omega Press Control Systems use common logic to control the clutch/brake portion of a mechanical stamping press. Wiring diagrams are available that enable the circuitry, including the motor controller, to be configured on a press-by-press basis. A single resolver is required, and a second resolver or rotary cam is required for a second position device.

Faults and Prompts
The Configurable Press Control System can display up to 40 faults and 40 prompts per processor. Faults define the problem to the specific processor, reducing the time required to bring the press back online.

Clutch & Brake Time Monitor
This logic calculates clutch and brake engage times. Both factors are indicators of clutch and brake wear; this feature permits these components to be repaired before failure results in an extended shutdown.

Production Monitor
This feature enables operators to determine percent complete and finish time of a run. The SLC processor's communications capabilities can transmit this data to computers used to schedule production.

Die Monitoring
Die monitoring provides automatic detection of absence, misalignment of material moving through an automated stamping press system, or a detection of incorrect material seated in a die. The operator can quickly identify the problem and take corrective action.

Optional Features
Optional features include tonnage monitoring, tonnage calibration and tonnage alarms. These features require the addition of hardware modules for their operation.

Configuration, Runtime, and Recipe Windows into Your Press Operations
The System's Recipe Storage feature allows critical die parameters to be stored. This helps reduce set-up time and can reduce the amount of press testing after die changeover.

Production Counters
A Production Run Counter permits the operator to input the total number of parts required for a specific production run, and provides real-time feedback. The Production Run Counter is a subset of the Production Run Counter, and is used to keep track of "bins" of parts during the production run.

Maintenance Timers
Two timers permit the accumulation of elapsed motor run time and clutch engaged time to schedule maintenance.

Lube
The System's lube function provides continuous, pulsed, and pulsed by press cycle modes. This feature helps maintain optimal lubrication levels.

Optional Features
Optional features include tonnage monitoring, tonnage calibration and tonnage alarms. These features require the addition of hardware modules for their operation.

Recipe Storage
Recipe storage provides an easy-to-use configuration for the SLC processor's communication capabilities.

Configuration Screens
Configuration screens for the lube and production counter features are provided by the Omega System. Using these screens, users can configure each of the System's features to meet their specific needs.

Main Menu Screen
A comprehensive main menu display permits operators to access the System's easy-to-use configuration, runtime, and recipe screens.

Runtime Screens
Runtime screens include set-up or monitoring screens for die monitor, clutch/brake, and fault prompts, as well as a screen for the optional tonnage monitor feature.

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