

# Model FPC Control System

## Open Architecture Multi-function Machine Controls for Fluid Power Safety of Hydraulic or Pneumatic Energy Based Machines

### Design Criteria

- Complies with OSHA and ANSI Codes B11.3-2012 and B11.2-2013 requirements.
- Complies with ANSI (American National Standards Institute) various B11 standards.
- Control reliable design for rotary (resolver or rotary cam) or linear action machines.
- Category 4 Control Category per EN 954.
- Performance Level – PL e per EN/ISO 13849-1.
- The FPC Control has redundant cross-checking microprocessors.
- The FPC Control has redundant DC power supplies.
- The FPC Control has redundant and monitored ram advance with force guided output relays and external relay monitoring.
- The FPC Control monitors faults, including diminished performance faults. The control's fault detection has no dependency on external machine controls.
- The FPC Control returns the machine to a safe position whenever there is loss of pressure or other such event.
- The FPC Control stops the machine operation upon detection of a fault condition until such condition is corrected.
- The FPC Control contains a dedicated specific reset input which prohibits a machine reset by removing or re-applying the pneumatic or hydraulic power.
- The FPC Control requires that the machine reset(s) be operator actuated.
- The advanced platform engineering of the FPC control provides the end user field functionality upgrades or program modifications via an on board USB port for downloads. Ethernet is optional.

### Applications

- Pneumatic or Hydraulic Energy Based Machines
- Also applicable for powder metal presses, multi-slide/four slide machines, forging press controls and specialty or custom machine controls.

Consult the factory by phone at (412) 262-1115 or by email at [sales@pressroomelectronics.com](mailto:sales@pressroomelectronics.com) to review your project needs.

# Model FPC Control System Ordering/Proposal Guide

## Machine Control

Name \_\_\_\_\_  
 Company \_\_\_\_\_  
 Address \_\_\_\_\_  
 City, State, Zip \_\_\_\_\_  
 Phone \_\_\_\_\_  
 Fax \_\_\_\_\_  
 Email \_\_\_\_\_

### Machine Information

Manufacturer \_\_\_\_\_

Model # \_\_\_\_\_ Serial # \_\_\_\_\_

Shop # \_\_\_\_\_ Tonnage \_\_\_\_\_

Maximum Stroke of Machine: \_\_\_\_\_

Does Machine have a shut height adjustment?  
 N  Y

What is the Machines Open Height? \_\_\_\_\_

Machine Type:  Gap  Straight Side  
 4 Post  H-Frame

Maximum Number of Machine Operators:  
 1  2  3  4

Actuation:  Hand  Foot

### How does machine operate?

- Does the ram return when the actuating means (hand or foot) is released?  N  Y
- Does the ram stop at midstroke when the actuating means is released?  N  Y
- Does the ram automatically return when actuating means is held operated?  N  Y
- Does the ram change speed during stroke?  N  Y
- Does ram dwell at the bottom of stroke before returning?  N  Y

### Specify Sequence of Operation for the Machine.

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Specify Maximum Machine Stroke Length: \_\_\_\_\_

Machine Input Power \_\_\_\_\_  
Voltage \_\_\_\_\_ Cycle \_\_\_\_\_ Phase \_\_\_\_\_

### Location of Operator Controls on the NEMA 12 (IP 64) Control Panel

Left End  Panel Door  Right End  
**OR**

FPC Module only to be installed into an existing control panel. Requires 18" x 18" x 6" space to mount the pre-wired backplate.

### Fused Main Power Disconnect

Mounted on control panel \_\_\_\_\_ AMP  
Choose Style:  IEC  NEMA

### Main Motor Magnetic Motor Starter

Choose Style:  IEC  NEMA  
Choose:  Rev  Non-Rev  
\_\_\_\_\_ HP \_\_\_\_\_ Full Load Amps  
Includes on/off push buttons and keyed selector switch forward/reverse when applicable.

### Ram Adjust Magnetic Motor Starter

Choose Style:  IEC  NEMA  
\_\_\_\_\_ HP \_\_\_\_\_ Full Load Amps  
Includes up/down push buttons and keyed selector switch forward/reverse when applicable.

### Machine Cycle Timing Devices

- Rotary exposed with 1:1 ratio for resolver
- Linear Transducer (install new)
- Re-use existing linear cams or limit switches

### Machine Safety Valves

#### Safety Valves for Pneumatic Machines

- Machine has a dual safety valve
- Machine needs a dual safety valve

Specify current inlet port size (in) \_\_\_\_\_

#### Safety Valves for Hydraulic Machines

- Blocking valve (monitored dual valve required)

#### Specify voltage of existing Valve

24 VDC  230 VAC  
 110 VAC  460 VAC

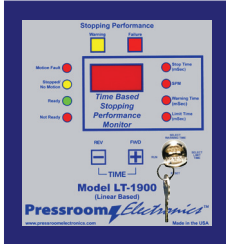
State inlet flow of Valve \_\_\_\_\_ GPM

State return flow of Valve \_\_\_\_\_ GPM

Email schematics and photos of the hydraulic system to sales@pressroomelectronics.com or fax them to (412) 262-1197.

# Time Based Stopping Performance Monitor

## Model LT-1900 (Linear Based) - Needed for Hydraulic Based Machines



The LT-1900 is a time-based stopping performance monitor that utilizes a high resolution linear transducer and controller to measure the machine stopping time in milliseconds and also the SPM of the press. The linear transducer is attached to the subject machine and is driven on a 1:1 linear ratio by the machine. The machine stopping time of the machine will be displayed on every stop and can be easily read on the bright red light emitting diode (LED) display on the front panel of the unit. The SPM of the machine will be displayed during the machine cycle.

LT-1900 Stopping Performance Monitor System includes:

- LT-1900 controller (LT)
- Linear transducer with mounting brackets and magnet
- 40' (12m) linear transducer cable
- Dimensions and technical data
- Installation and operation manual



LT-1900 in NEMA 12 (IP 64) steel enclosure.

### ORDERING PROCEDURE FOR LT-1900

1. Specify Mounting Style
  - E** ..... Front Panel Mounting to be installed in an existing control panel.
  - C** ..... Stand alone NEMA12 (IP 64) steel enclosure.
2. Specify Controller input power
  - 1** ..... 24VDC
  - 2** ..... 120VAC 50-60Hz
3. Specify Hydraulic Valve Coil Voltage
  - 1** ..... 24VDC
  - 2** ..... 120VAC 50-60Hz
4. Specify linear transducer length (must equal or exceed maximum machine stroke length)
  - 04** ..... 4" (101mm) active length
  - 08** ..... 8" (203mm) active length
  - 12** ..... 12" (305mm) active length
  - 16** ..... 16" (406mm) active length
  - 24** ..... 24" (609mm) active length

\*Over 24" (609mm) stroke required. Consult factory.

### EXAMPLE PART NUMBER



## Additional products to achieve your **Total Safety Solution!!!**

- Safety Light Curtains (All Types and Styles)
- Universal Safety Controller HUB / Safety PLC
- Safety Mat Systems and Controls
  - Area Guarding Systems
  - NSD Safety Mat Systems
  - STTS Safety Mat Systems
  - Direction of Travel Mats
  - High-Temp Welding Mats
- Ergonomic Palm Buttons
  - UltraTouch Palm Buttons
- Safety Interlock Switches (including explosion proof)
- Customized "control reliable" controls for dual solenoid activated pneumatic and hydraulic valve applications
- Fencing with Interlocks
- E-Stop Buttons
- Stack Lights

- Energy Isolation and Single Point Lockout Systems
- Plant Surveys, Risk Assessment & Installation Services
- Customized Control Panels; Stainless Steel enclosures available for all products

### **Punch Press / Metal Stamping Industry**

- Resolver or Rotary Cam Based Clutch / Brake Controls - OSHA/ANSI Compliant
- Punch Press Automation Controllers
- Time-Based Brake Monitors
- Programmable Limit Switches
- Die Protection & Tonnage Monitoring Systems
- Servo Feed Interfaces

### **Press Brake Guarding and Controls**

- Press Brake Guarding for Mechanical, Air Clutch and Hydraulic Press Brakes
- Press Brake Control Systems



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[www.pressroomelectronics.com](http://www.pressroomelectronics.com)

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