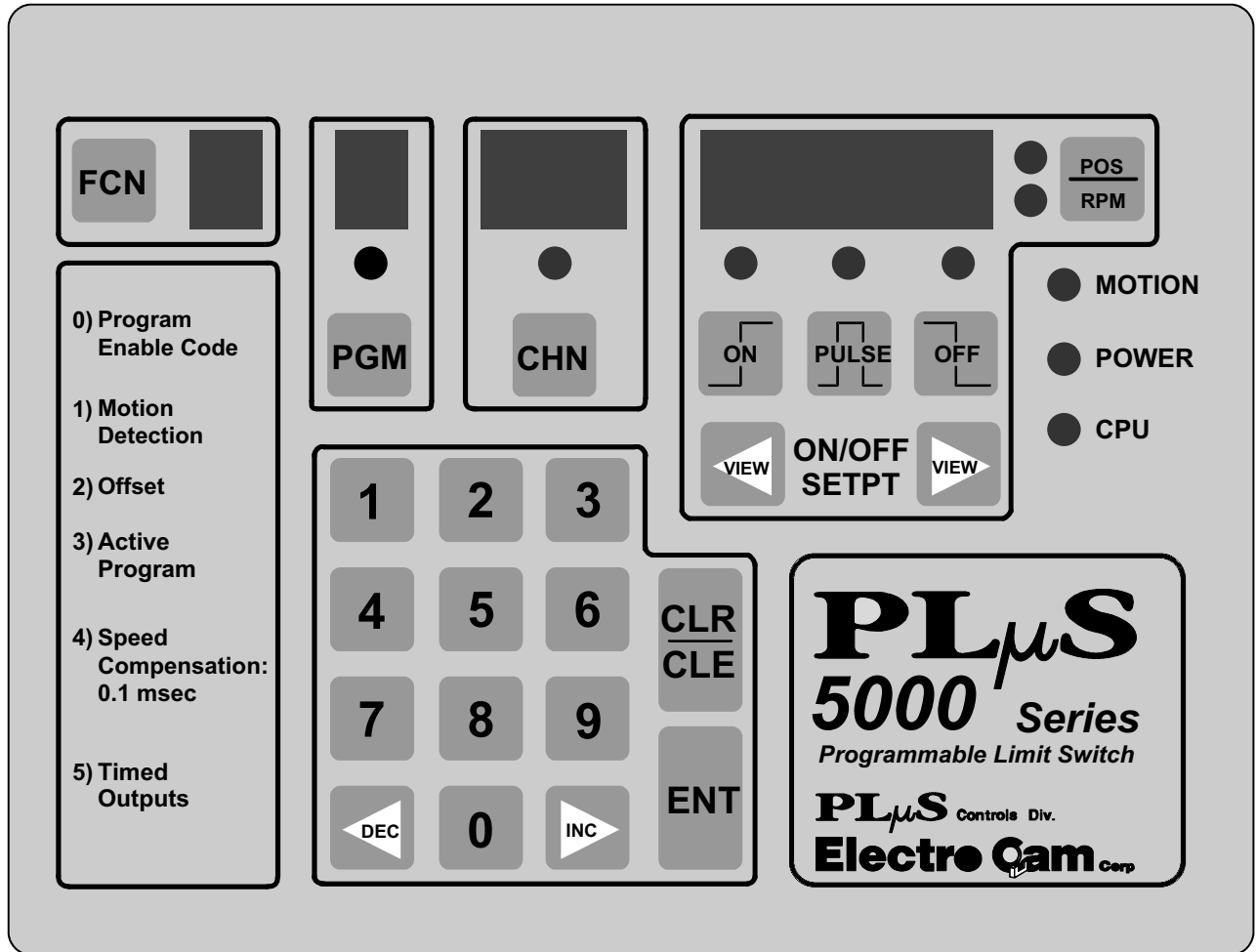


# PL $\mu$ S<sup>®</sup> PS-5144 Series Programmable Limit Switch



## Programming & Installation Manual

August 2000



**Electro Cam Corp.**

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# About This Manual

This manual is organized in a manner that minimizes the amount of material that has to be read to perform specific tasks. A detailed table of contents and an index by topic (at the end of the manual) simplify the job of locating needed information. The top of each page in the manual is labelled with the topic(s) covered on that page. Section and page number information is on the bottom of each page. An appendix section is used to house detailed / optional information in a place where it doesn't get in the way when it isn't needed.

The "Product Introduction" and "Getting Started" sections will be especially helpful to people who do not have previous experience with Electro Cam programmable limit switches. It is recommended that all technical personnel read the product introduction section, since it does overview all of the standard and optional features available in the PS-5144 control.

**This PS-5144 Installation/Operation manual is organized into the following sections:**

## **Section 1 - Product Introduction**

Most people find it helpful to have an overall understanding of the system and its capabilities before jumping into the details of wiring and programming. This section gives an overview of cam switch operation, the components which make up a programmable limit switch system and the features/advantages of the PS-5144 system and specifications.

## **Section 2 - Getting Started**

This section describes the basic tasks which must be accomplished to get the system installed. These tasks include controller and resolver mounting. Dimensioned drawings of the controller and three common Electro Cam resolvers are also contained in this section.

## **Section 3 - Wiring**

Technical personnel responsible for wiring need to refer to this section. It gives detailed wiring illustrations for resolver cables, inputs, output modules, analog outputs, transistor outputs, and communication wiring.

## **Section 4 - Programming Introduction**

The information given on keyboard / display operation in this section is important for anyone that must program or adjust the control. This section describes the operation of the keyboard and displays, shows how to interpret information displayed, explains the three different levels of programming access, and shows how to program / adjust the outputs.

## **Section 5 - Operation Function Programming**

Personnel with programming responsibilities that go beyond simple output position adjustment will need some or all of the information covered in this section. It explains all of the standard functions and illustrates how to program them. Examples of functions in this section are: Motion settings, speed compensation, analog settings, and others.

## **Section 6 - Configuration Programming**

Technical personnel responsible for the initial setup and programming need to examine each of the functions described in this section. Once the Configuration Functions are correctly set, it is unlikely they will ever need to be changed. However, it is good to review them after the machine is up and running to insure that all of the features available have been utilized to their full advantage. Examples of Configuration Functions are: Direction of Rotation, Scale Factor, Display Default, and others.

## **Section 7 - Troubleshooting and Utility Functions**

This section provides a list of common problems and causes as well as a list of flashing error messages and what to do when they occur. Utility functions which can assist in troubleshooting are covered as well as instructions for troubleshooting and replacing the transistor outputs.

## **Section 8 - Communications**

This section covers PL $\mu$ SNET II, serial communications using Electro Cam Corp. Protocol, and error codes.

## **Appendix**

Technical personnel responsible for initial installation and maintenance may need to refer to specific topics in this section. Many of the topics and details included in the Appendix are not needed in most applications. Topics in the Appendix include: detailed information on output grouping and modes, program select input formats, system parts list, Gray Code output, and others.

## **Index**

An alphabetical index is provided at the end of the manual to assist with finding specific information.

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