

iPLC-1/45 ADDITIONAL INSTRUCTIONS

AMCI
Intelligent
Programmable
Limit Controller

Description of Option

These instructions assume a reader already familiar with the iPLC User Manual. Refer to the manual for most information on the iPLC-1/45. These instructions describe the functionality the /45 option adds to the iPLC-1 Controller.

The iPLC-1/45 is a software and hardware modification to the standard iPLC-1. The hardware change is the addition of inputs for two switches. The software modifications are outlined below.

- One Program instead of the standard four.
- One setpoint pair per limit switch. (16 Limit switch outputs)
- Scale Factor fixed at 360 counts per turn.

The two inputs perform the following functions:

Input 1: When active, LS1 and LS2 cannot be programmed.

Input 2: When active, limit switch setpoints and the position offset can be incremented and decremented only. Clearing them, or programming them by entering new values, is disabled.

Programming Changes and Additions



This key is still used to enter and exit program mode, but only one program is available instead of the standard four. The functionality of the remaining keys does not change from a standard iPLC-1 if the inputs are not active.

Input 1 Active

When input one is active, the cursor is not displayed when viewing the setpoints for limits 1 and 2. Therefore, you cannot change the setpoints of these two limit switches.

Input 2 Active

When input two is active, the numbered keys (0-9) are disabled when the Position Offset or Limit Switch Setpoints are displayed. Therefore you can only increment or decrement the data using the procedure outlined in the iPLC User Manual, Section 12.14, Pg. 17.

Input 1 takes precedents over Input 2. If Input 1 is active, you cannot modify Limits Switches 1 or 2 in any manner.

iPLC-1/45 Additional Instructions

Hardware Connections

An input is energized when it is connected to a voltage source between 3 and 15 Vdc.

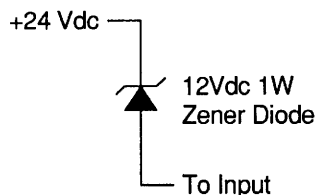
An input is de-energized when it is floating (no connection) or connected to a voltage source between 0 and 1 Vdc.

Isolation Relays should be used between the Controller and the external circuitry that activates the inputs. This will prevent Ground Loops in the system and protect the iPLC-1/45 if any high voltages are applied.

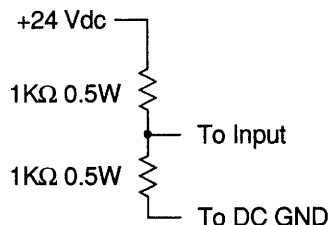
An internal +12 Vdc supply that can be used to energize the inputs is available under the following conditions:

- The iPLC-1/45 must have Sinking or TTL compatible Outputs. Sourcing Output Controllers do not have an internal 12 volt supply.
- An IM-1 Interface Module, IRB-1 Input Relay Board, or RB-1 Solid State Output Relay board must be used in the system.

All other system configurations require an external supply with an output voltage between 5 and 15 Vdc. (12 Vdc supply recommended.) **DO NOT apply 24 Vdc to the iPLC inputs.** If your system uses a 24 Vdc supply, place a 12 V zener diode in series with the input or use a resistor divider network.



**Zener Diode
Input Protection**



**Resistor Divider
Input Protection**

The following table lists the pinout assignments of the input pins and voltage sources.

	J1 Conn.	IM-1	RB-1	MRB-1
Input 1	Pin 3	Pin 3	Pin 1 - TB7	Pin 1 - TB8
Input 2	Pin 1	Pin 1	Pin 2 - TB7	Pin 2 - TB8
GND	Pin 16	Pin 16	Pin 9 - TB7	Pin 9 - TB8
+ 12Vdc	Pin 14	Pin 14	Pin 10 - TB7	External Pin 10 - TB8