

Description of Option:

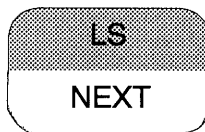
This option gives the iPLC-4 Controller three additional features.

- Expanded number of limits from 16 to 32.
- The number of outputs allocated to each transducer is user selectable. On the standard iPLC-4 with 32 outputs the number of limits assigned to each transducer is fixed at eight.
- Expanded number of programs from 4 to 8. Discrete inputs are available to select the running program from a remote location.

Keyboard Changes and Additions



This key is still used to enter and exit program mode, but eight programs are available instead of the standard four. Note: If a program select input is active, program mode can be entered but the running program cannot be changed.



In addition to changing the Program Code value and entering Limit Switch setpoint data, this key is used program the number of limits allocated to each transducer. This parameter is global to all programs. That is, the number of limits assigned to each transducer is the same for *each* program put can be changed from *any* program. Clearing Program 8 resets the number of limits allocated to each transducer to eight.

Programming Changes and Additions

Except for the example below, programming a iPLC-4-43 is identical to programming a standard iPLC-4 Controller.

Limit Switch Allocation

The iPLC-4-43 gives you the ability to allocate the number of limits assigned to each transducer. This example assumes default values for all parameters and continues on the following page. It sets the number of limits as follows:

Transducer 1: 20 Limits 1-20
 Transducer 2: 6 Limits 21-26
 Transducer 3: 6 Limits 27-32
 Transducer 4: 0

You program the last limit assigned to Transducers 1, 2, and 3 with the Limit Allocation display. The remaining limits are assigned to Transducer 4.

PRESS	DISPLAY	COMMENTS
[PROGRAM], [ENTER]	"PROGRAM x"	Currently running program.
[FUNCTION]	"PROGRAM x"	Green Function LED turns off.
[NEXT]	"P.CODE 0000"	Default Program Code Value.
[NEXT]	"R,- 08 - 16 - 24"	Default Limit Allocation Values.

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Additional Instructions: iPLC-4-43 Rev 1.

Programming Changes and Additions (cont'd)

Limit Switch Allocation (cont'd)

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PRESS	DISPLAY	COMMENTS
[2,0], [▶], [2,6], [▶], [3,2]	"R,- 20 - 26 - 32"	Programmed Values.
[ENTER]	"R,- 20 - 26 - 32"	Values stored, Blinking cursor removed.

Restrictions:

The Allocation Number for Transducer 1 must be between 8 and 30.

The Allocation Number for Transducer 2 must be between 16 and 31.

The Allocation Number for Transducer 3 must be between 24 and 32.

Even though this may seem quite restrictive, the iPLC-4-43 will function as a three of four channel limit switch as long as the largest number of limits is allocated to Transducer 1, the second largest number of limits is allocated to Transducer 2 and the third largest number of limits is allocated to Transducer 3.

Remote Program Select Operation

In order to safeguard against unexpected operation the iPLC-4-43 responds to program select inputs in the following manner:

- 1) The program select inputs are disabled if the iPLC-4-43 is in Program Mode.
- 2) If a remote input is active, the running program cannot be changed from the keyboard. However, you can still enter Program Mode.



WARNING

Activate only one program select input at a time. Activating two or more inputs at one time will usually load the wrong program into memory.

Power-up Sequence

- 1) If a remote input is active on power-up, the iPLC-4-43 loads the select program into memory.
- 2) If all program select inputs are inactive the iPLC-4-43 loads the last program selected by from the keyboard.

Hardware Connections

Connections for Limits 1 - 16 and the Program Select Inputs are made through the J1 40 pin I/O Connector found on the bottom of the iPLC-4-43 Controller. See Print B1012, iPLC Manual page 26 connection pinouts. Connections for Limits 17 - 32 are made through J5 40 pin I/O Connector found on the top of the iPLC-4-43 Controller. Pinout of the J5 Connector is identical to the J1 Connector.

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-4-43 if any high voltages are applied. An internal +12 Vdc supply that can be used to energize the inputs is available from the iPLC-4-43 under the following conditions:

- The iPLC-4-32 must have Sinking or TTL compatible Outputs for Limits 1 - 16. Sourcing Output Controllers do not have an accessible 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.)

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
Input 3	Pin 2	Pin 2	Pin 3 - TB7	Pin 3 - TB8
Input 4	Pin 4	Pin 4	Pin 4 - TB7	Pin 4 - TB8
Input 5	Pin 12	Pin 12	Pin 5 - TB7	Pin 5 - TB8
Input 6	Pin 10	Pin 10	Pin 6 - TB7	Pin 6 - TB8
Input 7	Pin 8	Pin 8	Pin 7 - TB7	Pin 7 - TB8
Input 8	Pin 6	Pin 6	Pin 8 - TB7	Pin 8 - TB8
GND*	Pin 16	Pin 16	Pin 9 - TB7	Pin 9 - TB8
+ 12Vdc	Pin 14	Pin 14	Pin 10 - TB7	External only

GND - Ground Connection. WARNING: This point is also internally tied to chassis ground.

Model Number and Checksum

A controller with this option displays the following model number and checksum:

Model #: IPLC4-43-1
Checksum: 9E9A

Additional Instructions: iPLC-4-43 Rev 1.

NOTES

Catalog Number C443-694M