DESCRIPTION OF OPTION:

This option gives the user 28 additional programs to bring the total number of programs to 32. Inputs on the iPLC1-W3 are available that allows the user to select the running program from a remote location. In addition to these two features, 6 additional outputs are available that output the number of the running program presently it the controllers memory, in binary form.

OPERATING CHANGES AND ADDITIONS:

1) The total number of available dual setpoints per program is decreased. Each limit has one dual setpoint permanently assigned to it. Thirty (30) additional dual setpoints are available and can be assigned to any limit.

2) In order to safeguard against un-expected operations, the remote input or the keyboard input can not be used to select the running program while the other input is active.

a) When **any** remote input is active, the keyboard can not be used to change the running program. All remote inputs must be inactive before the keyboard can be used to select the running program. All other functions that are available from the keyboard are still accessible, including Program Mode.

b) The remote inputs are disabled and the program number cannot be changed if the unit is in Program Mode.

3) Power Up Sequence:

a) If any remote input is active during power up, the controller will load the program that is selected by the state of the remote inputs as the running program.

b) If all of the remote inputs are inactive on power-up, the controller will load the program that was last selected by a **keyboard** input as the running program.

4) Program Number outputs are available on LS17 - LS22. The output drivers for these outputs are the same type as used for the Limit Switches.

HARDWARE CONNECTIONS:

The remote program select function uses 7 inputs on the iPLC1-W3. Inputs 1 through 6 are used to represent the program number in 1½ digit BCD format. Input 8 is used as a strobe to clock the BCD program data into the controller.

LOGIC LEVELS:

An input can have two different logic levels, a Logic "0" or a Logic "1". A logic 0 is an inputs normal "inactive" state. A Logic 1 is an inputs "active" state. Input Logic levels are defined as follows:

Logic "0" 0 to 1 Vdc.
Logic "1" 3 to 15 Vdc.

Note: 1) All inputs are referenced to GND
2) With Open Collector Sink and TTL output units, the internal +12Vdc unregulated supply can be used to supply a Logic "1" to the inputs.
3) With Open Collector Sourcing Units, an external power supply must be used.

The following table lists the pinout assignments of the inputs and the internal +12 Volt supply on various AMCI products.

	J1 CONN.	IM1	RB1	MRB
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 8	Pin 6	Pin 6	Pin 8 - TB7	Pin 8 - TB8
GND	Pin 16	Pin 16	Pin 9 - TB7	Pin 9 - TB8
+12 Vdc	Pin 14	Pin 14	Pin 10 - TB7	Pin 10 - TB8

HARDWARE CONNECTIONS: (cont'd)

INPUTS (1-6) and OUTPUTS (LS17 - LS22):

As stated on the preceding page, Inputs 1 - 6 are used to represent the program number in 1½ digit BCD format. Input 1 is the Least Significant Bit (LSB). Inputs 1 - 4 form the Least Significant Digit (LSD) and can have a value between 0 and 9. Inputs 5 and 6 form a half digit BCD number. This is the Most Significant Digit (MSD) and can have a value between 0 and 3.

As stated on the first page, the outputs LS17 - LS22 output a binary number that equals the number of the program presently running in the controllers memory. LS17 is the Least Significant Digit, (LSD), LS22 the MOSt Significant Digit, (MSD).

The following tables list the logic levels of the inputs and outputs and the program number that would be selected or represented by each combination. The table on the left shows the inputs. The table on the right shows the outputs.

65	4321	PROGRAM
00	0001	1
00	0010	2
00	0011	3
00	0100	4
00	0101	5
00	0110	6
00	0111	7
00	1000	8
00	1001	9
01	0000	10
01	0001	11
01	0010	12
⋮	⋮	⋮
01	1001	19
10	0000	20
10	0001	21
⋮	⋮	⋮
10	1001	29
11	0000	30
11	0001	31
11	0010	32

22 21	11 98	11 76	PROGRAM
0 0	0 0	0 1	1
0 0	0 0	1 0	2
0 0	0 0	1 1	3
0 0	0 1	0 0	4
0 0	0 1	0 1	5
0 0	0 1	1 0	6
0 0	0 1	1 1	7
0 0	1 0	0 0	8
0 0	1 0	0 1	9
0 0	1 0	1 0	10
0 0	1 0	1 1	11
⋮	⋮	⋮	⋮
0 1	0 0	1 1	19
0 1	0 1	0 0	20
0 1	0 1	0 1	21
⋮	⋮	⋮	⋮
0 1	1 1	0 1	29
0 1	1 1	1 0	30
0 1	1 1	1 1	31
1 0	0 0	0 0	32

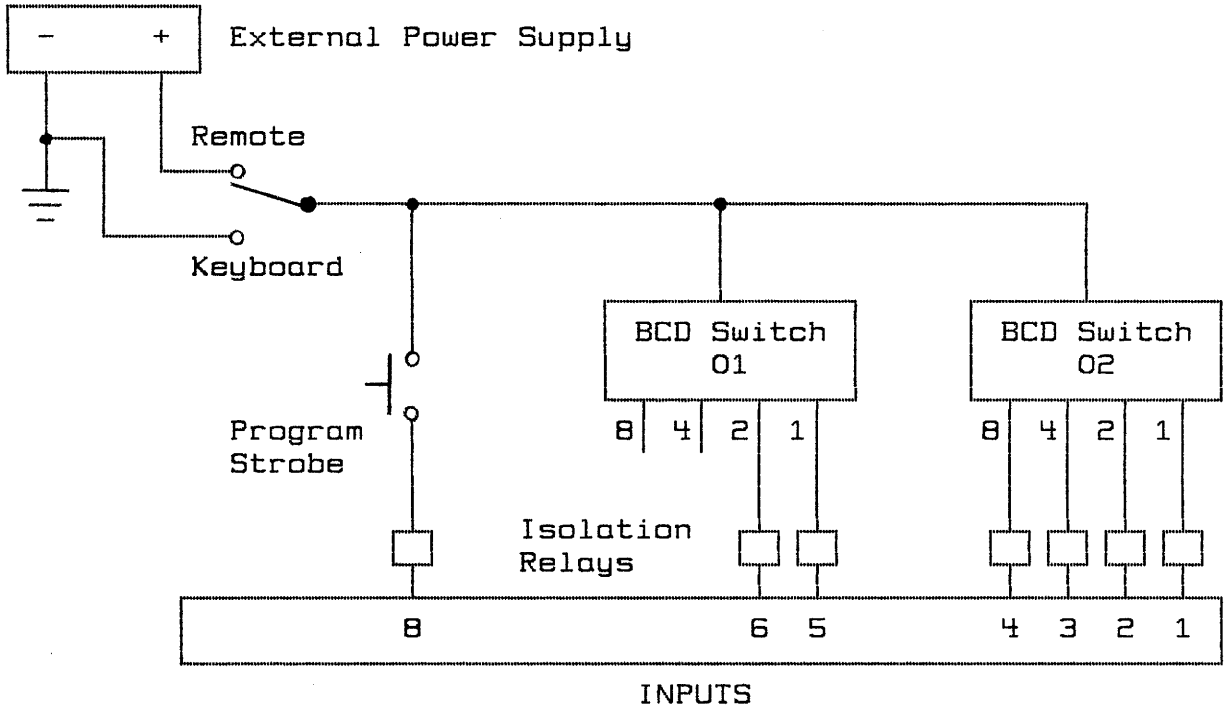
HARDWARE CONNECTIONS: (cont'd)

PROGRAM LOAD INPUT (8):

The program number selected by the remote inputs will not be loaded into the controllers memory until Input 8, "Program Load", is brought to a logic 1. Once Input 8 is brought to a logic 1, the controller will load and begin execution of the new program in under 250 mSecs. Note that input 8 is a "level" input. As long as input 8 is high, the unit will run the program defined by the other 6 inputs.

Steps should be taken to ensure that the BCD inputs can not be changed while Input 8 is high. If this is not done, the program may be changed before the operator is ready, possibly causing machine damage or personal injury.

SET-UP EXAMPLE:



NOTES:

1) Remote/Keyboard Switch. A SPDT Switch is used to determine which input device will be used.
2) Program Load Switch. This is a Normally Open, Momentary Contact Switch. When the switch is not pressed, input is at a Logic 0.
3) Isolation Relays. These should be used to isolate the controller from the external supply to guard against ground loops and noise coupling.

OUTPUT SPECIFICATIONS:

The power handling capabilities of the output drivers for the program number are the same as the output drivers for the limit switches. The Output Enable (pin 21 of J1) must be grounded before the output drivers will operate. Settling time for the outputs is equal to the time to load the new program into memory, no greater than 250 mSecs.

MODEL NUMBER AND SOFTWARE CHECKSUM:

This section of the additional instructions supplements SECTION 14.0) of the iPLC1 USERS MANUAL. The following keystrokes will display the model number and software checksum of an iPLC1/W3 unit.

PRESS	DISPLAY	COMMENTS
[PROGRAM]	"PROGRAM xx"	xx = Number of running program.
[NEXT]	"IPLC1-W3-3"	Model and Revision Number.
[NEXT]	"EPROM 35E9"	Checksum of Software.

AMCI is constantly improving the software it installs is its units. The above Revision Number and Software Checksum are current as of the first publication date of these instructions. The Revision Number and Software Checksum on your unit may not match.