

CHAPTER 3 SOLVED PROBLEMS

P3-1. Draw a ladder diagram that will cause the output, solenoid SOL2, to be ON when push button switch PB1 is closed (pushed), and either limit switch LS2 or limit switch LS3 is closed. Do this problem for the ControlLogix, CompactLogix, Micro800, MicroLogix, and/or SLC-500 PLCs. Show the I/O address with the ladder contacts/coils.

- a) For a ControlLogix processor, the input/output devices are wired to:
 - SOL2: Output module, chassis 'REM_2', slot 6, channel 10
 - PB1: Input module, local chassis, slot 1, channel 0
 - LS2: Input module, chassis 'REM_1', slot 2, channel 8
 - LS3: Input module, chassis 'REM_1', slot 2, channel 9
- b) For a CompactLogix 5370 processor, the input/output devices are wired to:
 - SOL2: Output module, bank 1, slot 14, channel 10
 - PB1: Input module, bank 0, slot 1, channel 0
 - LS2: Input module, bank 0, slot 2, channel 8
 - LS3: Input module, bank 0, slot 2, channel 9
- c) For a CompactLogix 5380 processor, the input/output devices are wired to:
 - SOL2: Output module, chassis 'REM_2', slot 6, channel 10
 - PB1: Input module, local chassis, slot 1, channel 0
 - LS2: Input module, remote chassis 'REM_1', slot 2, channel 8
 - LS3: Input module, remote chassis 'REM_1', slot 2, channel 9
- d) For a Micro800, the input/output devices are wired to:
 - SOL2: Output module, expansion 2, channel 7
 - PB1: Input module, embedded, channel 1
 - LS2: Input module, plug-in 1, channel 2
 - LS3: Input module, plug-in 1, channel 3
- e) For a MicroLogix, the input/output devices are wired to (use the single-line format):
 - SOL2: Output module, slot 2, channel 10
 - PB1: Input module, base (slot 0), channel 0
 - LS2: Input module, slot 1, channel 8
 - LS3: Input module, slot 1, channel 9
- f) For an Allen-Bradley SLC-500, the input/output devices are wired to (use the single-line format):
 - SOL2: Output module, slot 16, channel 10
 - PB1: Input module, slot 2, channel 0
 - LS2: Input module, slot 13, channel 8
 - LS3: Input module, slot 13, channel 9

2 Basic Ladder Logic Programming