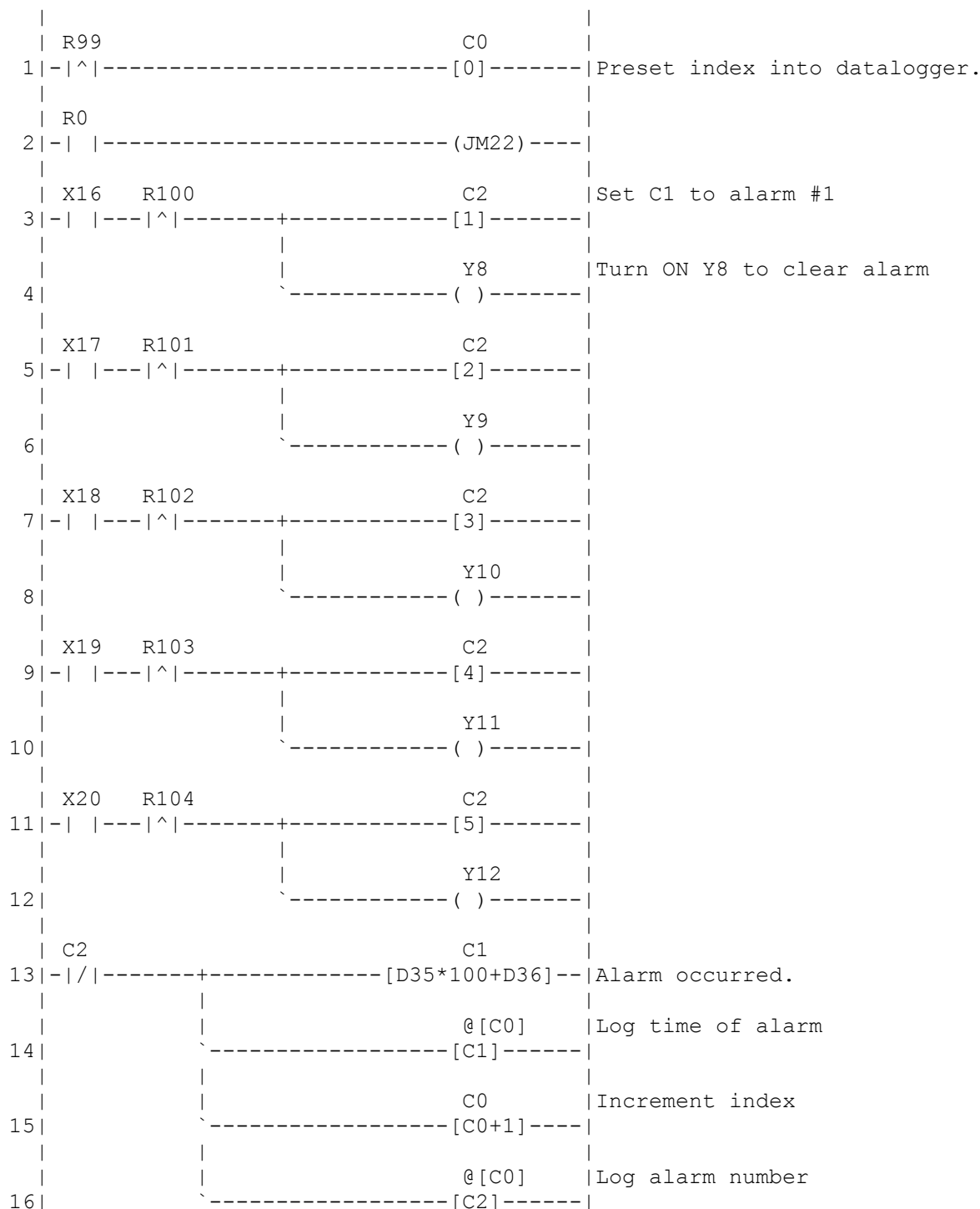


Datalogging of Alarms

The IP3416 has the ability to log up to 8192 registers. This could be very useful in keeping track when alarm conditions occur.

A machine turns on a specific output when an alarm condition occurs and waits until an input is pulsed to clear the alarm. An operator baby-sits the machine and waits until a light goes on and then records the time and alarm number. He then presses a switch to clear the alarm and then waits again. The IP3416 could easily be used to replace the operator. The following RLL waits for an alarm condition to happen, then it logs the time the alarm happened and then pulses the appropriate output to clear the alarm.

When the operator wants to retrieve the alarms that have happened, he would plug his laptop or serial printer to the PLC and press a button, which is connected to X23. The PLC then will transmit all the alarms that have occurred.



```

17 |           |           | C0 | Increment index
   |           |-----| [C0+1]-----|
18 |           |           | C31 |
   |-----| [8090-C0]-----|
19 | R31       |           | C0 | Make sure we do not overflow
   |-----| [8090]-----|
20 | X23       |           | R0 |
   |-----| (S)-----|
21 |           |           | (E)-----|
   | STR O    |           |           | OUTPUT ALARMS
   | R207     |           | C0 |
22 |-----| ( )-----| Not outputting strings, so
   |           |           |           | generate new string.
23 | R105     |           | C10 |
   |-----| [@[C0]]-----| C10 contains alarm #
24 |           |           | C0 |
   |-----| ( )-----|
25 | R106     |           | C11 |
   |-----| [@[C0]/100]-----| C11 contains HOUR
26 |           |           | C12 |
   |-----| [@[C0]-C11]-----| C12 contains MINUTES
27 |           |           |     |
   |-----| -"\2dC11\:\2dC12\ ALARM #\2dC10\"-----|
28 |           |           |     |
   |-----| "\0A\0D\0e\"-----|
29 | C2       |           | R0 |
   |-----| (R)-----|
30 |           |           | (E)-----|

```