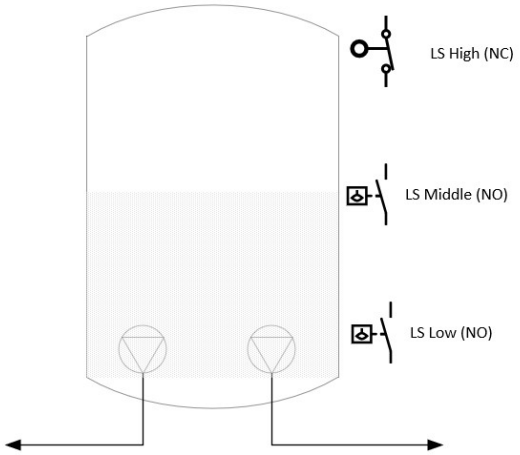
Two Pump Control

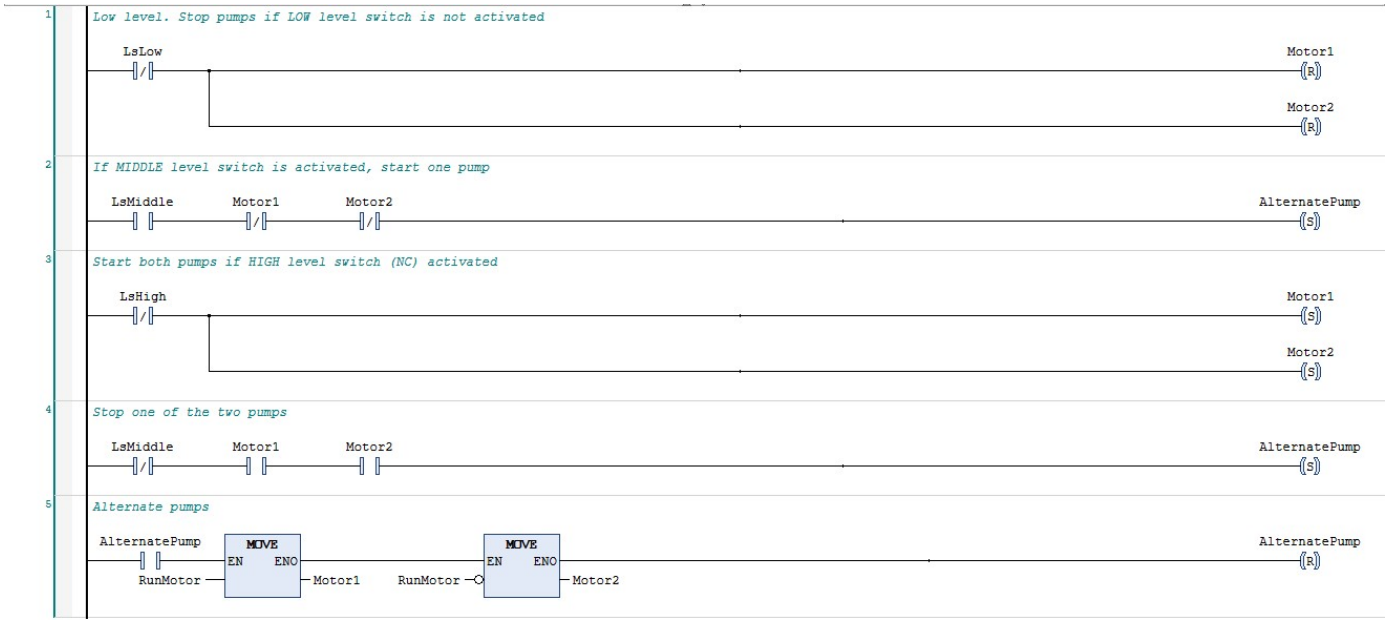
Signals from level switches determine when the pumps should start or stop.
If level in the well is betwen LS Low and LS Middle, one pump must be in operation.

If the level is above LS High, both pumps must run to pump at full capacity.
If the level is below LS Low, both pumps must be stopped to avoid dry run.
Pumps should be control in alternating operation mode.

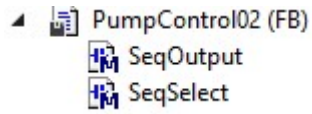


Version 01:

```
FUNCTION_BLOCK PumpControl01
VAR_INPUT
    LsLow                   :   BOOL;       // limit switch LOW (NO)
    LsMiddle                :   BOOL;       // limit switch MIDDLE (NO)
    LsHigh                  :   BOOL;       // limit switch HIGH (NC)
END_VAR
VAR_OUTPUT
    Motor1                  :   BOOL;       // motor 1 output
    Motor2                  :   BOOL;       // motor 2 output
END_VAR
VAR
    AlternatePump           :   BOOL;       // flag for pump alternation
    RunMotor                :   BOOL;       // pump alternation control
END_VAR
```



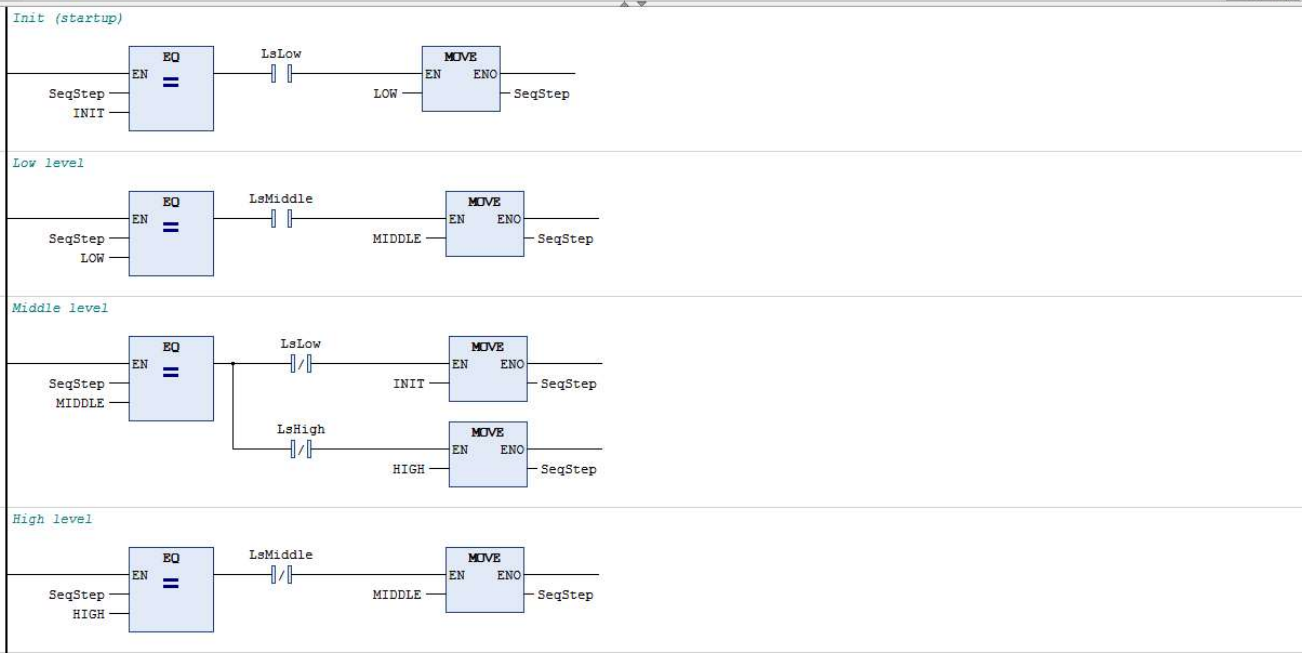
Version 02:




```
FUNCTION_BLOCK PumpControl02
VAR_INPUT
    LsLow                   :   BOOL;       // limit switch LOW (NO)
    LsMiddle                :   BOOL;       // limit switch MIDDLE (NO)
    LsHigh                  :   BOOL;       // limit switch HIGH (NC)
END_VAR
VAR_OUTPUT
    Motor1                  :   BOOL;       // motor 1 output
    Motor2                  :   BOOL;       // motor 2 output
END_VAR
VAR
    SeqStep                 :   (INIT, LOW, MIDDLE, HIGH) := INIT;
    RunMotor                :   BOOL;       // pump alternation control
END_VAR
```

```
SeqSelect();
SeqOutput();
```

```
METHOD SeqSelect : BOOL
VAR_INPUT
END_VAR
```



```
METHOD SeqOutput : BOOL
VAR_INPUT
END_VAR

VAR
    StepMiddleOneShot: R_TRIG;
END_VAR
```