OB1 - <offline>

"Cycle Execution"

Name: **Family:**
Author: **Version:** 0.1
Block version: 2
Time stamp Code: 02/03/2023 09:50:38 PM
Interface: 02/15/1996 04:51:12 PM
Lengths (block/logic/data): 01206 00974 00020

Name	Data Type	Address	Comment
TEMP		0.0	
OB1_EV_CLASS	Byte	0.0	Bits 0-3 = 1 (Coming event), Bits 4-7 = 1 (Event class 1)
OB1_SCAN_1	Byte	1.0	1 (Cold restart scan 1 of OB 1), 3 (Scan 2-n of OB 1)
OB1_PRIORITY	Byte	2.0	Priority of OB Execution
OB1_OB_NUMBR	Byte	3.0	1 (Organization block 1, OB1)
OB1_RESERVED_1	Byte	4.0	Reserved for system
OB1_RESERVED_2	Byte	5.0	Reserved for system
OB1_PREV_CYCLE	Int	6.0	Cycle time of previous OB1 scan (milliseconds)
OB1_MIN_CYCLE	Int	8.0	Minimum cycle time of OB1 (milliseconds)
OB1_MAX_CYCLE	Int	10.0	Maximum cycle time of OB1 (milliseconds)
OB1_DATE_TIME	Date_And_Time	12.0	Date and time OB1 started

Block: OB1 "Main Program Sweep (Cycle)"

Network: 1 to save all conditions after stop

```
//      AN    "Stop"
//      FP    M      3.5
//      JCN   j19
//      L     QB     0
//      T     MB    10
      NOP   0
```

Network: 2 to save some conditions after stop

```
      AN    "Stop"          I0.6
      FP    M      3.7
      A     "BoxConveyor"   Q0.0
      S     M      4.0

      A     "BoxPlace"      I0.0
      FN    M      5.1
      R     M      4.0




      AN    "Stop"          I0.6
      FP    M      4.1
      A     "ExitConveyor"  Q0.2
      S     M      4.2

//      A     "ExitConveyor"
//      FN    M      5.2
//      R     M      4.2
```

```
      AN    "Stop"          I0.6
      FP    M      4.3
      A     "PartConveyor"  Q0.1
      S     M      4.4

      A     "partPlace"     I0.1
      FN    M      5.3
      R     M      4.4
```

Network: 3 to restore all conditions after start again

```
//      A     "Start"
//      FP    M      3.6
//      JCN   j20
//      L     MB     0
//      T     QB     0
      NOP   0
```

Network: 4 to restore some conditions after start again

```
      A     "Start"         I0.4
      FP    M      4.5
      A     M      4.0
      S     "BoxConveyor"   Q0.0

      A     "Start"         I0.4
      FP    M      5.5
      A     M      5.6
      S     "BoxConveyor"   Q0.0


//

      A     "Start"         I0.4
      FP    M      4.6
      A     M      4.2
      S     "ExitConveyor"  Q0.2

//

      A     "Start"         I0.4
      FP    M      4.7
      A     M      4.4
      S     "PartConveyor"  Q0.1

      A     "Start"         I0.4
      FP    M      5.4
      A     "partPlace"     I0.1
      S     "PartConveyor"  Q0.1
```

Network: 5 to restore all conditions after start exception CTwist & Grab

```
//     A     "Start"
//      R     "CTwist"
//      R     "Grab"
```

Network: 6 set & reset marker X

```
      A     "Start"     I0.4
      S     M      0.0

      AN    "Stop"      I0.6
      R     M      0.0
```

Network: 7

```
      A     "Start"         I0.4
      A     M       0.0
      AN    M       5.0
      S     "PartConveyor"  Q0.1

      A     "partPlace"     I0.1
      FN    M       0.1
      R     "PartConveyor"  Q0.1
```

Network: 8

```
      A     "Start"        I0.4
      A     M      0.0
      AN    M      5.0
      S     "BoxConveyor"  Q0.0

      A     "BoxPlace"     I0.0
      FN    M      0.5
      R     "BoxConveyor"  Q0.0
```

Network: 9 just enable one start in the first

```
      A     "Start"     I0.4
      S     M      5.0

      A     "Reset"     I0.5
      R     M      5.0
```

Network: 10 reset counter 0

```
      A(
      L     C      0
      L     3
      ==I
      )
//      A     "CLimit"
      A     "Grab"                                          Q0.4
      FN    M      3.1
      R     C      0
      S     M      5.6  // set marker for counter


      A     "BoxPlace"                                      I0.0
      FN    M      5.7
      R     M      5.6  // reset marker for counter
```

Network: 11 countet 0 up

```
      A     "partPlace"  I0.1
      FN    M      2.0
      CU    C      0

//      AN    "Stop"
//      R     C      0
```

Network: 12 to move SPX for initial position

```
      A     "partPlace"  I0.1
      FN    M      0.3

//      A(
//      L     C      0
//      L     1
//      ==I
//      )
//      FP    M      0.7
//      A     M      0.0
      JCN   j1
      L     22671
      T     "SPX"        PQW256
j1:   NOP   0
```

Network: 13 to move SPY for initial position

```
      A     "partPlace"  I0.1
      FN    M      0.4

//      A(
//      L     C      0
//      L     1
//      ==I
//      )
//      FP    M      1.0
//      A     M      0.0
      JCN   j2
      L     15206
      T     "SPY"        PQW258
j2:   NOP   0
```

Network: 14 to move SPZ for initial position

```
//      A     "partPlace"
//      FN    M      0.2
//      FP    M      0.6

//      A(
//      L     C      0
//      L     1
//      ==I
//      )
      A(
      L     "Y"          PIW258
      L     15206
      ==I
      )
      FP    M      0.6
//      A     M      0.0
      JCN   j0
      L     13824
      T     "SPZ"        PQW260
j0:   NOP   0
```

Network: 15 to set the grab after initial SPZ

```
//      A(
//      L     C      0
//      L     1
//     ==I
//      )
      AN    "BoxPlace"  I0.0
      A(
      L     "Z"          PIW260
      L     13824
      >=I
      )
      FP    M      1.1
```

```
//      A     M      0.0
//new       AN    "BoxPlace"
      S     "Grab"      Q0.4
```

Network: 16 to move SPZ to 0 after initial position

```
//      A(
//      L     C      0
//      L     1
//      ==I
//      )
//new       A     "BoxPlace"
//new       FN    M      1.2

      A(
      L     "Z"         PIW260
      L     13824
      >=I
      )
//      FP    M      1.2
      A     "Grab"      Q0.4
      AN    "BoxPlace"  I0.0
//      A     M      0.0
      FP    M      1.2
      JCN   j7
      L     0
      T     "SPZ"       PQW260
j7:   NOP   0
```

Network: 17 to move first box by SPX

```
      A(
      L     C      0
      L     1
      ==I
      )
      A(
      L     "Z"       PIW260
      L     0
      ==I
      )
//     FP    M      1.3
      A     "Grab"    Q0.4
//      A     M      0.0
      JCN   j8
      L     8847
      T     "SPX"     PQW256
j8:   NOP   0
```

Network: 18 to move secomnd box by SPX

```
      A(
      L     C      0
      L     2
      ==I
      )
      A(
      L     "Z"       PIW260
      L     0
      ==I
      )
//      FP    M      2.2
      A     "Grab"    Q0.4
//      A     M      0.0
      JCN   j12
      L     8847
      T     "SPX"     PQW256
j12:  NOP   0
```

Network: 19 to move third box by SPX

```
      A(
      L     C      0
      L     3
      ==I
      )
      A(
      L     "Z"       PIW260
      L     0
      ==I
      )
//      FP    M      2.3
      A     "Grab"    Q0.4
//      A     M      0.0
      JCN   j15
      L     8571
      T     "SPX"     PQW256
j15:  NOP   0
```

Network: 20 to move first box by SPY

```
      A(
      L     C      0
      L     1
      ==I
      )
      A(
      L     "Z"       PIW260
      L     0
      ==I
      )
//      FP    M      1.4
      A     "Grab"    Q0.4
//      A     M      0.0
      JCN   j9
      L     8294
      T     "SPY"     PQW258
j9:   NOP   0
```

Network: 21 to move second box by SPY

```
      A(
      L     C      0
      L     2
      ==I
      )
      A(
      L     "Z"       PIW260
      L     0
      ==I
      )
//      FP    M      2.4
      A     "Grab"    Q0.4
//      A     M      0.0
      JCN   j13
      L     17971
      T     "SPY"     PQW258
j13:  NOP   0
```

Network: 22 to move third box by SPY

```
      A(
      L     C      0
      L     3
      ==I
      )
      A(
```

```
      L     "Z"       PIW260
      L     0
      ==I
      )
//      FP    M      2.5
      A     "Grab"    Q0.4
//      A     M      0.0
      JCN   j16
      L     12442
      T     "SPY"     PQW258
j16:  NOP   0
```

Network: 23 to move first box by SPZ

```
      A(
      L     C      0
      L     1
      ==I
      )
      A(
      L     "Y"       PIW258
      L     8294
      ==I
      )
      A     "Grab"    Q0.4
//      FP    M      1.5
//      A     M      0.0
      JCN   j10
      L     27648
      T     "SPZ"     PQW260
j10:  NOP   0
```

Network: 24 to move second box by SPZ

```
      A(
      L     C      0
      L     2
      ==I
      )
      A(
      L     "Y"       PIW258
      L     17971
      ==I
      )
      A     "Grab"    Q0.4
//      FP    M      2.6
//      A     M      0.0
      JCN   j14
      L     27648
      T     "SPZ"     PQW260
j14:  NOP   0
```

Network: 25 to move third box by SPZ

```
      A(
      L     C      0
      L     3
      ==I
      )
      A(
      L     "Y"       PIW258
      L     12442
      ==I
      )
      A     "Grab"    Q0.4
//      FP    M      2.7
//      A     M      0.0
      JCN   j17
      L     15206
      T     "SPZ"     PQW260
j17:  NOP   0
```

Network: 26

```
      A(
      L     C      0
      L     3
      ==I
      )
      A(
      L     "Y"          PIW258
      L     12442
      >=I
      )
      A     "Grab"       Q0.4
      FP    M      3.3
      S     "CTwist"     Q0.3
```

Network: 27 to reset grab after releasing first & second box

```
      A(
      L     C      0
      L     1
      ==I
      )
      O(
      L     C      0
      L     2
      ==I
      )
      A(
      L     "Z"        PIW260
      L     27648
      ==I
      )
//      FP    M      1.6
//      A     M      0.0
      R     "Grab"     Q0.4
```

Network: 28 to reset grab after releasing third box

```
      A(
      L     C      0
      L     3
      ==I
      )
      A(
      L     "Z"        PIW260
      L     15206
      >=I
      )
//      FP    M      3.0
//      A     M      0.0
      R     "Grab"     Q0.4
      R     "CTwist"   Q0.3
```

Network: 29 to move SPZ to 0 after releasing first & second & third box

```
//      A(
//      L     C      0
//      L     1
//      ==I
//      )
//      O(
//      L     C      0
//      L     2
//      ==I
//      )
//      O(
//      L     C      0
//      L     3
//      ==I
//      )
```

```
      A     "Grab"      Q0.4
      FN    M      1.7
////////////////      A     M      0.0
      JCN   j11
      L     0
      T     "SPZ"       PQW260
j11:  NOP   0
```

Network: 30

```
      A(
      L     C      0
      L     3
      ==I
      )
      A     "Grab"          Q0.4
//     AN    "Grab"
      FN    M      3.2
      A     M      0.0
      S     "BoxConveyor"   Q0.0
      S     "ExitConveyor"  Q0.2
```

Network: 31 to reset exit conveyor

```
      A(
      L     C      0
      L     2
      ==I
      )
      A     "Detected"      I0.2
//      A     "BoxPlace"
//      A     "Grab"
//new       FP    M      3.4
      R     "ExitConveyor"  Q0.2
      R     M      4.2
```

Network: 32 to move part conveyor after the first box

```
      A     "Grab"          Q0.4
      FN    M      2.1
      A     M      0.0
      S     "PartConveyor"  Q0.1
```

Network: 33 to reset SPZ

```
//      AN    "Stop"
      A     "Reset"  I0.5
      JCN   j3
      L     0
      T     "SPZ"    PQW260
j3:   NOP   0
```

Network: 34 to reset SPX

```
//     AN    "Stop"
      A     "Reset"  I0.5
      JCN   j4
      L     0
      T     "SPX"    PQW256
j4:   NOP   0
```

Network: 35 to reset SPY

```
//      AN    "Stop"
      A     "Reset"  I0.5
      JCN   j5
      L     0
      T     "SPY"    PQW258
j5:   NOP   0
```

Network: 36

```
//      AN    "Stop"
//      JCN   j6
//      L     0
//      T     QB     0
// j6:   NOP   0
```

Network: 37 to stop all actuators

```
      AN    "Stop"          I0.6
      FP    M      4.6
      R     "BoxConveyor"   Q0.0
      R     "PartConveyor"  Q0.1
      R     "ExitConveyor"  Q0.2
//      R     "Ctwist"
//      R     "Grab"
```

Network: 38 to reset all actuators

```
//      A     "Reset"
//      JCN   j18
//      L     0
//      T     QB     0
      NOP   0
```

Network: 39 to reset counter 0 by reset

```
      A     "Reset"   I0.5
      R     C      0
```

Network: 40 to reset markers M0

```
      A     "Reset"   I0.5
      JCN   j21
      L     0
      T     MB     0
j21:  NOP   0
```

Network: 41

```
      A     "Reset"                                          I0.5
      R     M      4.0  // BoxConveyor
      R     M      4.2  // ExitConveyor
      R     M      4.4  // PartConveyor
```

Network: 42 to reset aall actuators

```
      A     "Reset"   I0.5
      JCN   j22
      L     0
      T     QB     0
j22:  NOP   0
```