

OB1 - <offline>

"Cycle Execution"

Name:

Author:

Time stamp Code:

Lengths (block/logic/data):

Family:

Version: 0.1

Block version: 2

01/23/2023 03:22:06 AM

02/15/1996 04:51:12 PM

01118 00872 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            store memories after stop

AN

FP

JCN

L

T

j2: NOP

"Stop"

M

j2

QW

MW

0

I1.2

6.4

10

0

10

0

Network: 2            restore memories after start

A

FP

AN

JCN

L

T

j3: NOP

"Start"

M

M

j3

MW

QW

0

I1.0

6.5

6.7

10

0

0

Network: 3            exception some actuators from stopping

A

FP

AN

//

//

//

R

R

"Start"

M

M

"PusherLimit"

"PlateLimit"

"clamped"

"Push"

"OpenPlate"

I1.0

7.0

6.7

//Z

Q1.0

Q1.3

```
R      "Clamp"                                Q1.2
R      "ElevatorUp"                          Q0.4
R      "ElevatorDown"                        Q0.5
R      "MoveLimit"                          Q0.3
S      "BoxFeeder"                          Q0.6
// S    "LoadBelt"
```

Network: 4      also exception

```
A      "Start"                                I1.0
FP M    7.1
AN M    6.7      //Z

A      "PusherLimit"                        I0.4
A      "PlateLimit"                        I0.5
AN     "clamped"                          I0.6
AN     "BoxEntry"                         I0.3

S      "LoadBelt"                          Q1.1
```

Network: 5

```
A      "PalletExit"    I0.1
FN M    7.4
R      M    7.3
```

Network: 6      load pallet after first start

```
A      "Start"            I1.0
A      M            0.0
A      M            7.3
S      "LoadPallet"    Q0.1
```

Network: 7      marker X

```
A      "Start"            I1.0
S      M            0.0

AN     "Stop"            I1.2
R      M            0.0
```

Network: 8      turn on the first 2 conveyors

```
A      "Start"                                I1.0
AN M    5.2      //Y
A      M            0.0
AN     "PalletLoaded"                        I0.2
S      "PalletFeeder"                      Q0.0
S      "BoxFeeder"                          Q0.6
```

Network: 9      marker for push start button one time, just after reset (Y)

```
A      "PalletFeeder"    Q0.0
O      M            0.0
S      M            5.2

A      "Reset"            I1.1
R      M            5.2
```

Network: 10

marker for push start button one time, just after stop (Z)

A "PalletFeeder" Q0.0

O M 0.0

S M 6.7

AN "Stop" I1.2

R M 6.7

Network: 11

marker for stop pallet feeder in the end of the line

// A "PalletEntry"

// FP M 4.5

// S M 4.6

// A "ElevatorMoving"

// FN M 4.7

// R M 4.6

Network: 12

A "PalletEntry" I0.0

FP M 0.1

// FN M 0.1

// A M 0.0

// A M 4.6

R "PalletFeeder" Q0.0

Network: 13

AN "PalletEntry" I0.0

// FN M 0.2

A M 0.0

// AN M 4.6

S "LoadPallet" Q0.1

Network: 14

new

// A "PalletEntry"

// FP M 5.0

// FN M 5.1

// A M 0.0

// A M 4.6

// R "LoadPallet"

Network: 15

A "PalletLoaded" I0.2

FP M 0.3

A M 0.0

S "ElevatorUp" Q0.4

S "MoveLimit" Q0.3

// R "LoadPallet"

Network: 16

new

```
A      "PalletLoaded"  I0.2
FP     M      5.6
//     A      M      0.0
//     S      "ElevatorUp"
//     S      "MoveLimit"
R      "LoadPallet"    Q0.1
```

Network: 17

```
//     A      M      0.0
A      "ElevatorMoving" I0.7
FN     M      1.7
R      "MoveLimit"      Q0.3
R      "ElevatorUp"     Q0.4
```

Network: 18

```
A      "BoxEntry"      I0.3
FN     M      0.4
A      M      0.0
S      "LoadBelt"      Q1.1
```

Network: 19

reset counter 0

```
A      "PusherLimit"   I0.4
FP     M      1.2
A(
L      C      0
L      2
==I
)
R      C      0
```

Network: 20

reset counter 4

```
A      "PusherLimit"   I0.4
FP     M      2.6
A(
L      C      4
L      3
==I
)
R      C      4
```

Network: 21

counter 0 up for 2\*3 boxes

```
A      "BoxEntry"      I0.3
FP     M      0.5
AN     "Turn"          Q0.7
//     A      M      0.0
CU     C      0
```

Network: 22

counter 4 up for 3\*2 boxex

```
A      "BoxEntry"      I0.3
FP     M      2.7
A      "Turn"          Q0.7
//     A      M      0.0
CU     C      4
```

Network: 23

normal for counter 0

```
A      "BoxEntry"  I0.3
FN     M          0.6
A(
L      C          0
L      2
==I
)
//     A      M          0.0
FP     M          1.3
//     A      M          0.0
//     R      "BoxFeeder"
//     R      "LoadBelt"
S      "Push"      Q1.0
```

Network: 24

new

```
A      "BoxEntry"  I0.3
FN     M          5.7
A(
L      C          0
L      2
==I
)
//     A      M          0.0
FP     M          6.1
A      M          0.0
R      "BoxFeeder"  Q0.6
R      "LoadBelt"   Q1.1
//     S      "Push"
```

Network: 25

reverse for counter 4

```
//     A      M          0.0
A      "BoxEntry"  I0.3
FN     M          3.0
A(
L      C          4
L      3
==I
)
//     A      M          0.0
FP     M          3.1
//     A      M          0.0
//     R      "BoxFeeder"
//     R      "LoadBelt"
S      "Push"      Q1.0
```

Network: 26

new

```
A      "BoxEntry"  I0.3
FN     M          6.0
A(
L      C          4
L      3
==I
)
//     A      M          0.0
FP     M          6.2
R      "BoxFeeder"  Q0.6
R      "LoadBelt"   Q1.1
//     S      "Push"
```

Network: 27

```
A      "PusherLimit"  I0.4
FP     M      0.7
//new  A      M      0.0
R      "Push"      Q1.0
```

Network: 28 reset counter 1

```
A      "PusherLimit"  I0.4
FN     M      1.4
A(
L      C      1
L      2
==I
)
R      C      1
```

Network: 29 counter 1 up when pusher limit counts 2 times

```
A      "PusherLimit"  I0.4
FP     M      1.0
//     A      M      0.0
CU     C      1
```

Network: 30

```
//     A      M      0.0
A(
L      C      1
L      2
==I
)
FP     M      1.1
A      M      0.0
S      "BoxFeeder"    Q0.6
S      "LoadBelt"     Q1.1
```

Network: 31 reset counter 2

```
A      "clamped"      I0.6
FN     M      2.3
R      C      2
```

Network: 32 reset counter 5

```
A      "clamped"      I0.6
FN     M      3.2
R      C      5
```

Network: 33 counter 2 up for clamp after normal boxes

```
A      "PusherLimit"  I0.4
FP     M      1.5
AN     "Turn"      Q0.7
//     A      M      0.0
CU     C      2
```

Network: 34

counter 5 up for clamp after revers boxes

```
A      "PusherLimit"  I0.4
FP     M      3.3
A      "Turn"         Q0.7
//     A      M      0.0
CU     C      5
```

Network: 35

for counter 2 for normal boxes

```
//     A      M      0.0
A(
L      C      2
L      6
==I
)
FP     M      2.1
//     A      M      0.0
//     R      "BoxFeeder"
//     R      "LoadBelt"
S      "Clamp"        Q1.2
```

Network: 36

for counter 2 for reverse boxes

```
//     A      M      0.0
A(
L      C      2
L      6
==I
)
FP     M      5.3
//     A      M      0.0
R      "BoxFeeder"    Q0.6
R      "LoadBelt"     Q1.1
//     S      "Clamp"
```

Network: 37

```
//     A      M      0.0
A(
L      C      5
L      4
==I
)
FP     M      3.4
//     A      M      0.0
//     R      "BoxFeeder"
//     R      "LoadBelt"
S      "Clamp"        Q1.2
```

Network: 38

new

```
//     A      M      0.0
A(
L      C      5
L      4
==I
)
FP     M      5.4
R      "BoxFeeder"    Q0.6
R      "LoadBelt"     Q1.1
//     S      "Clamp"
```

Network: 39

```
//      A      M      0.0
      A      "clamped"      I0.6
      FP      M      2.2
//      A      M      0.0
      S      "OpenPlate"      Q1.3
```

Network: 40

```
//      A      M      0.0
      A      "PlateLimit"      I0.5
      FP      M      2.0
      A(
      L      C      2
      L      6
      ==I
      )
      A      "clamped"      I0.6
//      A      M      0.0
      S      "ElevatorDown"      Q0.5
```

Network: 41

```
//      A      M      0.0
      A      "PlateLimit"      I0.5
      FP      M      3.5
      A(
      L      C      5
      L      4
      ==I
      )
      A      "clamped"      I0.6
//      A      M      0.0
      S      "ElevatorDown"      Q0.5
```

Network: 42

```
//      A      M      0.0
      A      "ElevatorMoving"      I0.7
      FN      M      1.6
//      A      M      0.0
      R      "ElevatorDown"      Q0.5
      R      "OpenPlate"      Q1.3
      R      "Clamp"      Q1.2
```

Network: 43

```
//      A      M      0.0
      A      "clamped"      I0.6
      FN      M      2.4
      A      M      0.0
      S      "BoxFeeder"      Q0.6
      S      "LoadBelt"      Q1.1
```

Network: 44 reset counter 3

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



Network: 45

counter 3 up for when the turn loads

```
A      "clamped"  I0.6
FN     M          2.5
//      A      M          0.0
      CU      C          3
```

Network: 46

```
//      A      M          0.0
      A(
      L      C          3
      L      1
      ==I
      )
      A      M          0.0
      S      "Turn"      Q0.7

//      A      M          0.0
      A(
      L      C          3
      L      2
      ==I
      )
      R      "Turn"      Q0.7
```

Network: 47

reset counter 6

```
A      "PalletExit"  I0.1
FP     M          4.4
R      C          6
```

Network: 48

counter 6 up for when the elevator loads after 3 times for clamp

```
A      "clamped"  I0.6
FN     M          3.6
//      A      M          0.0
      CU      C          6
```

Network: 49

```
//      A      M          0.0
      A(
      L      C          6
      L      3
      ==I
      )
      FP     M          4.0
//      A      M          0.0
//      R      "BoxFeeder"
//      R      "LoadBelt"
      S      "MoveLimit"      Q0.3
      S      "ElevatorDown"    Q0.5
      S      M          7.3      //marker for set load belt after elevator down
```

Network: 50

```
//      A      "PalletExit"
//      FN     M          7.4
//      R      M          7.3
```

Network: 51

new

```
//      A      M      0.0
      A(
      L      C      6
      L      3
      ==I
      )
      FP      M      5.5
      R      "BoxFeeder"  Q0.6
      R      "LoadBelt"   Q1.1
//      S      "MoveLimit"
//      S      "ElevatorDown"
```

Network: 52

```
//      A      M      0.0
      A      "ElevatorMoving"  IO.7
      FN      M      4.1
      A(
      L      C      6
      L      3
      ==I
      )
      A      M      0.0
      S      "LoadPallet"      Q0.1
```

Network: 53

```
//      A      M      0.0
      A      "PalletExit"      IO.1
      FP      M      4.2
      R      "LoadPallet"      Q0.1
```

Network: 54

```
//      A      M      0.0
      A      "PalletExit"      IO.1
      FN      M      3.7
      A      M      0.0
//      S      "ExitConveyor"
      S      "PalletFeeder"    Q0.0
      S      "BoxFeeder"       Q0.6
//      S      "LoadBelt"
```

Network: 55

```
//      A      M      0.0
      A      "PalletExit"      IO.1
      FN      M      7.2
      A      M      0.0
      S      "ExitConveyor"    Q0.2
      S      "LoadBelt"        Q1.1
```

Network: 56

```
//      A      M      0.0
      A      "clamped"         IO.6
      FP      M      4.3
      R      "ExitConveyor"    Q0.2
```

Network: 57

to stop all actuators

AN"Stop" I1.2

FP M 6.3

R"PalletFeeder" Q0.0

R"LoadPallet" Q0.1

R"ExitConveyor" Q0.2

// R "MoveLimit"

// R "ElevatorUp"

// R "ElevatorDown"

R"BoxFeeder" Q0.6

// R "Turn"

// R "Push"

R"LoadBelt" Q1.1

// R "Clamp"

// R "OpenPlate"

Network: 58

to reset all the system

A"Reset" I1.1

JCN j1

L 0

T QW 0

j1: NOP 0

Network: 59

to reset all the counters

A"Reset" I1.1

FP M 6.6

R C 0

R C 1

R C 2

R C 3

R C 4

R C 5

R C 6

Network: 60

reset all memories

A"Reset" I1.1

JCN j4

L 0

T MD 0

j4: NOP 0

A"Reset" I1.1

JCN j5

L 0

T MD 4

j5: NOP 0

A"Reset" I1.1

JCN j6

L 0

T MD 8

j6: NOP 0

A"Reset" I1.1

JCN j7

L 0

T MW 10

j7: NOP 0

Network: 61
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