Example 8.2 Part tracking and stacking

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0 NOP

Generate FIFO shift pulse

1 M1 Conv_Tmr.DN /

TON
Timer Conv_Tmr
Preset 2000
Accum 0
EN
DN

Shift conveyor position, loading FIFO. When FIFO full, unload. If nonsero part number comes out of FIFO, load into LIFO.

2 Conv_Tmr.DN

FFL
Source Conv_Source
FIFO Conv_Que[0]
Control FIFO_Ctl
Length 20
Position 0
EN
DN
EM

FIFO_Ctl.DN

FFU
FIFO Conv_Que[0]
Dest Conv_Dest
Control FIFO_Ctl
Length 20
Position 0
EU
DN
EM

NEQ
Source A Conv_Dest
0
Source B 0

LFL
Source Conv_Dest
LIFO Stak_Que[0]
Control LIFO_Ctl
Length 10
Position 0
EN
DN
EM

When stack is ful, then start unstacking. When empty, stop unstacking.

3 LIFO_Ctl.DN LIFO_Ctl.EM / Unstacking

Unstacking

While unstacking, unload one item every second.

4 Unstacking

Unld_Tmr.DN /

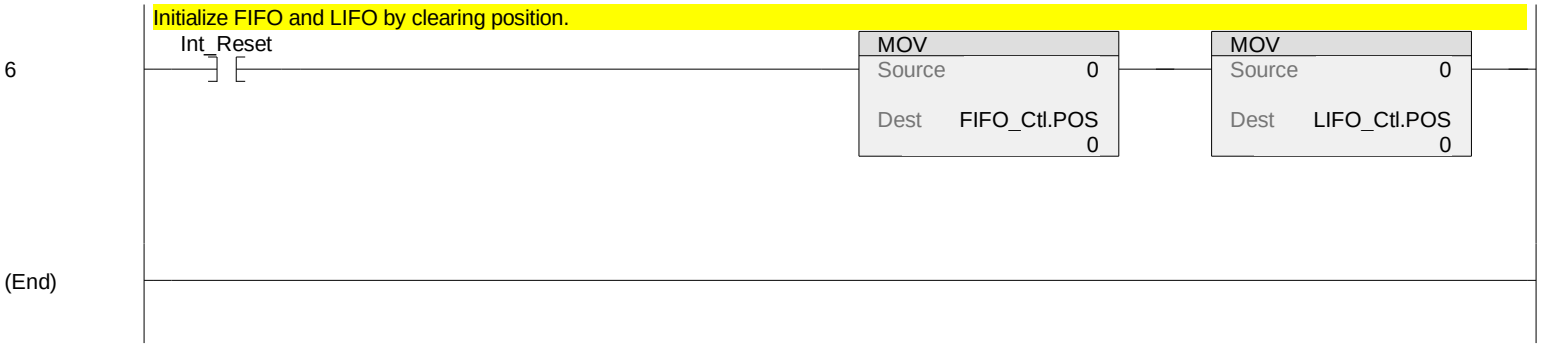
TON
Timer Unld_Tmr
Preset 1000
Accum 0
EN
DN

Unld_Tmr.DN

FFU
FIFO Stak_Que[0]
Dest Unstack_Dest
Control LIFO_Ctl
Length 10
Position 0
EU
DN
EM

Conveyor motor control. Do not run when unstacking.

5 Conv_Run Unstacking / M1


Initialize FIFO and LIFO by clearing position.
Int_Reset
6
MOV
Source 0
Dest FIFO_Ctl.POS
0
MOV
Source 0
Dest LIFO_Ctl.POS
0
(End)