AUTOMATED PACKAGING LINE; Start-Stop Control

000

I:1/0 STOP - START SWITCH — I:1/4 PALLET PRESENT PHOTOEYE — B3:0/0 SYSTEM RUN

DETERMINE TIME FOR ROBOT CASE REMOVAL

001

B3:0/0 SYSTEM RUN — I:1/1 CASE PRESENT PHOTOEYE — RTO Retentive Timer On, Timer T4:0, Time Base U.1, Preset 32767, Accum 0 — EN, DN — ROBOT CYCLE TIMER

RESET ROBOT CYCLE TIMER WHEN A NEW CASE IS SEEN AT THE END OF CONVEYOR #1.

002

B3:0/0 SYSTEM RUN — I:1/1 CASE PRESENT PHOTOEYE — B3:0/2 OSR ONE-SHOT #2 — T4:0 RES ROBOT CYCLE TIMER

MOVE THE ROBOT CYCLE TIME TO THE SPACING TIMER PRESET (T4:1.PRE) FOR EACH CYCLE.

003

B3:0/0 SYSTEM RUN — I:1/1 CASE PRESENT PHOTOEYE — B3:0/1 OSR ONE-SHOT #1 — MOV Move, Source T4:0.ACC, Dest T4:1.PRE — SPACING TIME

IF SPACING TIME LESS THAN SOME MINIMUM (SAY 2 SECs.), THEN MOVE 2 SECs. TO T4:1.PRE.

004

B3:0/0 SYSTEM RUN — LES Less Than (A<B), Source T4:1.PRE, Source B 20 — MOV Move, Source 20, Dest T4:1.PRE

MAKE SURE THAT CONVEYOR #2 WAITS AT LEAST THE SPACING TIME BEFORE RELEASING NEXT CASE.

005

B3:0/0 SYSTEM RUN — O:2/1 RUN CONVEYOR #1 — I:1/2 CONVEYOR #2 PHOTOEYE — T4:1/EN SPACING TIMER/ ENABLED — RTO Retentive Timer On, Timer T4:1, Time Base U.1, Preset 20, Accum 0 — EN, DN — SPACING TIMER

RUN CONVEYOR #2 UNTIL CASE IS UNDER LABELER, IF THE SPACING TIMER IS DONE.

006

B3:0/0 SYSTEM RUN — I:1/3 LABELER CASE PRESENT — T4:3/TT CONVEYOR #2 RESTART/ TT — T4:1/DN SPACING TIMER/ DONE — O:2/0 RUN CONVEYOR #2

RESET SPACING TIMER WHEN A NEW CASE IS SEEN AT THE END OF CONVEYOR #2.

007

B3:0/0 SYSTEM RUN — I:1/2 CONVEYOR #2 PHOTOEYE — B3:0/3 OSR ONE-SHOT #3 — T4:1 RES SPACING TIMER

RUN CONVEYOR #1 UNTIL CASE IS MOVED UNDER "CASE PRESENT" PHOTOEYE.

008

B3:0/0 SYSTEM RUN — I:1/1 CASE PRESENT PHOTOEYE — O:2/1 RUN CONVEYOR #1

GIVE THE LABELER A ONE-SHOT SIGNAL, WHEN THERE IS A CASE UNDER LABELER ON CONVEYOR #2.

009

B3:0/0 SYSTEM RUN — I:1/3 LABELER CASE PRESENT — B3:0/4 OSR ONE-SHOT #4 — B3:0/5 LABEL ONE-SHOT

010 ALLOW SOME SHORT TIME FOR LABELER TO FINISH (MAINLY SO OUTPUT WILL HAVE TIME TO GO ON).

B3:0/0 SYSTEM RUN
B3:0/5 LABEL ONE-SHOT
T4:2/TT LABELER TIMER/ TT
O:2/2 APPLY LABEL

011 ALLOW 0.5 SECONDS FOR LABELER TO FINISH.

B3:0/0 SYSTEM RUN
T4:3/DN CONVEYOR #2 RESTART/ DN
O:2/2 APPLY LABEL
T4:2/EN LABELER TIMER/ ENABLED
TON Timer On Delay
Timer T4:2
Time Base 0.1
Preset 5
Accum 0
EN
DN
LABELER TIMER

012 BYPASS THE "LABELER CASE PRESENT" PHOTOEYE ON RUNG 6 FOR 1.5 SECONDS FOR LABELED CASE TO CLEAR

B3:0/0 SYSTEM RUN
T4:2/DN LABELER TIMER/ DONE
TON Timer On Delay
Timer T4:3
Time Base 0.1
Preset 15
Accum 0
EN
DN
CONVEYOR #2 RESTART

013 RESET TIMERS WHEN NOT IN RUN MODE.

B3:0/0 SYSTEM RUN
T4:0 RES ROBOT CYCLE TIMER
T4:1 RES SPACING TIMER
T4:2 RES LABELER TIMER
T4:3 RES CONVEYOR #2 RESTART

014 END