MainRoutine - Ladder Diagram

Lab5_Unit18:MainTask:MainProgram

Total number of rungs in routine: 7

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MainRoutine

Safety latch rung
Creates safety latch that controls the rest of the code

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Rung 0

Green_Flush_PB <Local:1:I.Data.2>
Red_Mushroomhead_PB <Local:1:I.Data.6>
Machine_Active
Machine_Active

Rung 1 — When machine is inactive, reset every single indicator and variable, while turning on white indicator

Machine_Active

MOV
Move
Source 0
Dest Tempvar 1999

MainCounter (RES)
Trigger (U)
Timer1 (RES)
Timer2 (RES)
Timer3 (RES)
Red_Indicator <Local:2:O.Data.5> (U)

Yellow_Indicator <Local:2:O.Data.2> (U)
Green_Indicator <Local:2:O.Data.1> (U)
Blue_Indicator <Local:2:O.Data.3> (U)
White_Indicator <Local:2:O.Data.4>

Rung 2 — Resets main counter if the accumulator is greater than 2

Machine_Active
White_Flush_PB <Local:1:I.Data.0>

GRT
Greater Than (A>B)
Source A MainCounter.ACC 2
Source B 2

MainCounter (RES)

Rung 3 — Incriments main counter when white flush pushbutton is pressed and machine is active

Machine_Active
White_Flush_PB <Local:1:I.Data.0>

CTU
Count Up
Counter MainCounter
Preset 2
Accum 2
(CU)
(DN)

Rung 4 — If machine is active and maincounter.ACC == 0, run task 1 (blinking green light)

Machine_Active

EQU
Equal
Source A MainCounter.ACC 2
Source B 0

JSR
Jump To Subroutine
Routine Name Task1

Rung 5 — If machine is active and maincounter.ACC == 2, run task 2 (carosel of lights)

Machine_Active

EQU
Equal
Source A MainCounter.ACC 2
Source B 1

JSR
Jump To Subroutine
Routine Name Task2

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If machine is active and maincounter.ACC == 3, run task 3 (stop light and crosswalk)

Machine_Active

EQU
Equal
Source A   MainCounter.ACC
                   2
Source B   2

JSR
Jump To Subroutine
Routine Name   Task3

(End)