	TYPE	Logic Function
1	ALIAS	There is room for more A items on collection point
2	ALIAS	Collection point A is full
3	ALIAS	There is room for more C items on collection point
4	ALIAS	Collection point C is full
5	ALIAS	Indicates sorter found an A product
6	ALIAS	Indicates sorter found an C product
7	ALIAS	Feeder is full, system can start
8	ALIAS	Operation stopped due to state of feeder. Overfilling or starting with feeder not full cause this light to blink.
9	ALIAS	Collected total amount of C products
10	ALIAS	Collected total amount of B products
11	ALIAS	Collected total amount of A products
12	ALIAS	System is off, personnel can interact
13	ALIAS	System is on, personnel should pay attention
14	ALIAS	Either a collection point is full or feeder is empty
15	ALIAS	Indicates the main system is operating
16	ALIAS	Indicates shutting off or recover system are operating
17	ALIAS	Immediatelly shutts off the system
18	ALIAS	Immediatelly shutts off the system
19	ALIAS	When system is off, feeds the feeder with one product
20	ALIAS	When system is operating, triggers the system to sort next item in the conveyor
21	ALIAS	Shutts off the main system and starts shuttof system
22	ALIAS	Triggers system boot
23	ALIAS	
24	ALIAS	Indicates next item in the conveyor is of type C
25	ALIAS	Helper variable used to avoid direct access to NC input. NC is necessary because there is NO for center position
26	ALIAS	Indicates next item in the conveyor is of type A
27	ALIAS	Indicates next item in the conveyor is of type C
28	TAG	Indicates collection point A is full. True if collection point is full or total amount of product As were sorted sorted.
35	TAG	Indicates collection point C is full. True if collection point is full or total amount of product As were sorted sorted.
29	TAG	Couter for how many products are in line A
36	TAG	Couter for how many products are in line C
31	TAG	Counter of total sorted products A
33	TAG	Counter of total sorted products B
38	TAG	Counter of total sorted products C
30	TAG	Counter of how many products were sorted A but did not go through to line A
32	TAG	Counter of how many products were sorted B but did not go through to line B

37 TAG	Counter of how many products were sorted C but did not go through to line C
34 TAG	Counter of how many items are in the conveyor
39 TAG	Counter for the maximum capacity of the feeder
40 TAG	Counter to verify whether the feeder became empty
42 TAG	Timer used to control when feeder should put products in the container
43 TAG	Prevents the feeder from counting multiple products when only one was added
44 TAG	Timer used to delay system activation to give personnel time to react to red lights and horns
45 TAG	Auxiliary variable true when state is correct and operator triggers a sorf of an A type product
46 TAG	Auxiliary variable true when state is correct and operator triggers a sorf of an B type product
47 TAG	Auxiliary variable true when state is correct and operator triggers a sorf of an C type product
55 TAG	Auxiliary variable true when system is on. Note that when system is shutting down, this is false
53 TAG	Auxiliary variable true when shutting is powering off
48 TAG	Auxiliary variable true when system is a recovery process
49 TAG	Delay used to simulate an actual recovery process
52 TAG	Delay used to simulate an actual shutoff process
50 TAG	Timer used to delay recover system activation to give personnel time to react to red lights and horns
51 TAG	Auxiliary variable used to control indicator light FEEDER_RED
54 TAG	Auxiliary variable true when SW4 is center

Name	I/O	DATATYPE	BaseTag
CONVEYOR_A_GREEN	OUTPUT	DIGITAL	Local:6:O.Pt05.Data
CONVEYOR_A_RED	OUTPUT	DIGITAL	Local:6:O.Pt06.Data
CONVEYOR_C_GREEN	OUTPUT	DIGITAL	Local:6:O.Pt07.Data
CONVEYOR_C_RED	OUTPUT	DIGITAL	Local:6:O.Pt08.Data
CONVEYOR_SOL_A	OUTPUT	DIGITAL	Local:6:O.Pt02.Data
CONVEYOR_SOL_B	OUTPUT	DIGITAL	Local:6:O.Pt03.Data
feeder_green	OUTPUT	DIGITAL	Local:6:O.Pt00.Data
feeder_red	OUTPUT	DIGITAL	Local:6:O.Pt01.Data
TRAFFIC_A_GREEN	OUTPUT	DIGITAL	Local:5:O.Pt07.Data
TRAFFIC_A_RED	OUTPUT	DIGITAL	Local:5:O.Pt05.Data
TRAFFIC_A_YELLOW	OUTPUT	DIGITAL	Local:5:O.Pt06.Data
tower_green	OUTPUT	DIGITAL	Local:6:O.Pt15.Data
tower_red	OUTPUT	DIGITAL	Local:6:O.Pt13.Data
tower_yellow	OUTPUT	DIGITAL	Local:6:O.Pt14.Data
motor_1	OUTPUT	DIGITAL	Local:4:O.Pt14.Data
motor_2	OUTPUT	DIGITAL	Local:4:O.Pt15.Data
e_stop_1	INPUT	DIGITAL	Local:1:I.Pt01.Data
e_stop_2	INPUT	DIGITAL	Local:2:I.Pt01.Data
PB1_NO	INPUT	DIGITAL	Local:1:I.Pt03.Data
PB3_NO	INPUT	DIGITAL	Local:1:I.Pt07.Data
PB4_NO	INPUT	DIGITAL	Local:1:I.Pt09.Data
PB5_NO	INPUT	DIGITAL	Local:1:I.Pt11.Data
SW3_NO_left	INPUT	DIGITAL	Local:2:I.Pt07.Data
SW3_NO_right	INPUT	DIGITAL	Local:2:I.Pt09.Data
SW4_aux1	INPUT	DIGITAL	Local:3:I.Pt05.Data
SW4_left	INPUT	DIGITAL	Local:3:I.Pt01.Data
SW4_right	INPUT	DIGITAL	Local:3:I.Pt00.Data
A_full		BOOL	
C_full		BOOL	
A_in_collection_point		COUNTER	
C_in_collection_point		COUNTER	
A_total		COUNTER	
B_total		COUNTER	
C_total		COUNTER	
A_in_D		COUNTER	
B_in_D		COUNTER	

C_in_D	COUNTER
conveyor	COUNTER
feeder_limit	COUNTER
feeder_not_empty	COUNTER
feed_timer	TIMER
fill_feeder_ons	BOOL
motor_start_delay	TIMER
operate_SOL_A	BOOL
operate_SOL_B	BOOL
operate_SOL_C	BOOL
system_on	BOOL
shutting_off	BOOL
recover	BOOL
recover_simulator	TIMER
shutoff_simulator	TIMER
recover_start_delay	TIMER
show_feeder_problem	TIMER
SW4_center	BOOL